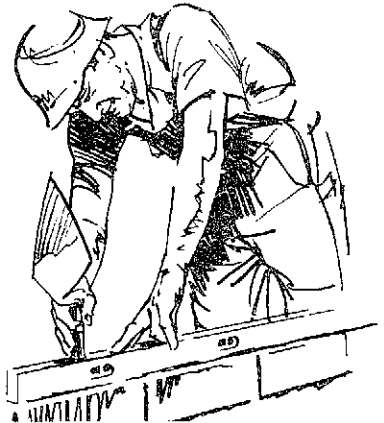
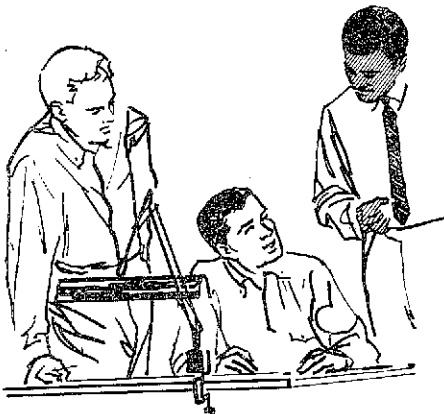




MEETING, B.C.

WASHTEENAW
COMMUNITY
COLLEGE
1966-1967



Approved by the
STATE DEPARTMENT OF EDUCATION
STATE OF MICHIGAN

A Member of
MICHIGAN ASSOCIATION OF JUNIOR COLLEGES

A Member of
COUNCIL OF NORTH CENTRAL JUNIOR COLLEGES

An Institutional Member of the
AMERICAN ASSOCIATION OF JUNIOR COLLEGES

SCHOOL CALENDAR 1966 - 1967

Fall Semester 1966

September 6 - 9	.....	Faculty Meetings
September 12 - 14	.....	Registration
September 15	.....	Classes Begin
September 21	.....	Last Day for Change of Course
November 18	.....	Mid Semester
November 21	.....	Withdrawal after this date results in failing grades
November 24 - 25 (Thanksgiving Vacation)	.....	No Classes
November 28	.....	Classes Resume
December 23 - January 3 (Christmas Vacation)	.....	No Classes
January 25 - 27	.....	Final Examinations
January 27	.....	Fall Semester Ends

Spring Semester 1967

February 6	.....	Faculty Meetings
February 7 - 8	.....	Registration
February 9	.....	Classes Begin
February 15	.....	Last Day for Change of Course
March 24 - April 2 (Easter Vacation)	.....	No Classes
April 3	.....	Classes Resume
April 21	.....	Mid Semester
April 24	Withdrawal after this date results in failing grades
June 14 - 16	Final Examinations
June 16	Spring Semester Ends

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BOARD OF TRUSTEES

Samuel T. Harmon, Jr.Chairman
Ralph C. WenrichVice-Chairman
Edward Adams, Jr.Treasurer
Richard C. CrealSecretary
Evert W. ArdisTrustee
Kenneth L. YourdTrustee

HISTORY OF THE COLLEGE

For many years residents of Washtenaw County have shown strong support for a high quality education for individuals of all ages. On January 15, 1965, the voters continued this tradition when they gave overwhelming approval to the establishment of a county-wide, community college, a public, tax-supported institution.

The history of Washtenaw Community College, is a story of the combined efforts and dedication of many people working toward a common goal. Literally dozens of civic minded citizens gave generously of their time and talent to develop a comprehensive study of the needs for a community college in this area. Results of this study when interpreted to citizens resulted in a positive commitment to the Community College concept.

Persons who played major leadership roles in this development were:

WASHTENAW COUNTY SCHOOL OFFICERS ASSOCIATION

1962 - 1963

Community College Survey Sponsors

<i>Official Representative</i>	<i>School District</i>
Robert W. Harrington	Ann Arbor Public Schools
Howard W. Flintoft	Chelsea Public Schools
William M. Marcus	Dexter Community Schools
Clyde Briggs	Lincoln Consolidated Schools
Clarence Fielder	Manchester Public Schools
Floyd Ernst	Milan Area Schools
William H. Groomes	Whitmore Lake Schools
Richard Banham	Willow Run Public Schools
John P. Montonye	Ypsilanti Public Schools
Robert Kruse	Bennett School, Superior Township #6
Cal Markham	Washtenaw County Board of Education

OUT OF COUNTY SPONSORS

<i>Official Representative</i>	<i>School District</i>
Donald Riddering	Lyon Township Schools
John C. Walton	Pinckney Public Schools

COMMUNITY COLLEGE SURVEY COMMITTEE

Executive Committee

Raymond J. Young, Chairman
William Buckingham
Curtis Baker

Norman Harris
Harlan Bloomer
Harold Dorr
Russell Wilson

Members and Supporting Organizations

<i>Official Representative</i>	<i>Organization</i>
John Paup	Ann Arbor Chamber of Commerce
Allan Grossman	Saline Chamber of Commerce
John Montonye	Ypsilanti Chamber of Commerce
Viola Blackenburg	Washtenaw Cty. Bd. of Supv., Ed. Comm.
Warren Eisenbeiser	Washtenaw Cty. Bd. of Supv., Ed. Comm.
Richard Wellman	Ann Arbor Legislative Comm. - P.T.O.
David Soule	Chelsea P.T.O.
Wayne Spike	Willow Run P.T.O.
Byron Soule	Dexter, P.T.O.
Frank Haggard	Washtenaw County Farm Council

CITIZENS STUDY COMMITTEE

Sub-Committees

History, Growth and Development

Curtis O. Baker, Chairman	Ypsilanti
Donna Hewitt, Secretary	Whittaker
John C. Ayers	Dexter
The Rev. Philip Rusten	Chelsea
Mary Walton	Manchester
Kenneth Heininger	Ann Arbor
Margaret Weamer	South Lyon
John M. McNamara	Whitmore Lake
Mel Reinhard	Dexter
Elaine St. Louis	Milan
Carl Scheffler	Ypsilanti

Educational Needs and Program

Harlan Bloomer, Chairman	Ann Arbor
June Reynolds, Secretary	Ypsilanti
William H. Allen	Wixom
William Fitz	Ypsilanti
Don Gibson	Pinckney
Elizabeth Grossman	Manchester
Shirley Hemmye	Saline
Sunny LaFave	Whitmore Lake
Florence Mayer	Chelsea

Fred Peters	Ypsilanti
Noah Pettit	Whitmore Lake
Marilyn Shirey	Milan
Ruth Williams	Ann Arbor

Site and Housing

William Buckingham, Chairman	Ypsilanti
Simon Eaglin, Secretary	Ypsilanti
Dean Bodley	Milan
Robert L. Richter	Willis
T. E. Roberts	Manchester
Louis A. Rogers	Pinckney
John Shugg	Whitmore Lake
Everett VanRiper	Whitmore Lake

Finance and Legal Basis

Harold M. Dorr, Chairman	Ann Arbor
Lee J. Talladay, Vice-Chairman	Milan
David H. Soule, Secretary	Chelsea
J. C. Cahill	South Lyon
Arthur Cox	Milan
Reno Feldkamp	Manchester
Peter Fletcher	Ypsilanti
Jesse Hill, Jr.	Ypsilanti
P. S. Kelley	Whitmore Lake
Herman Merte	Saline
George VanNorman	Portage Lake

EXECUTIVE COMMITTEE

for a

WASHTENAW COUNTY COMMUNITY COLLEGE

<i>Representative</i>	<i>District</i>
Wyeth Allen, Director	Ann Arbor
Robert Harrington, Chairman	Ann Arbor
C. W. Markham	Ann Arbor
Albert Coudron	Ann Arbor
Florence Mayer (Mrs.)	Chelsea
Paul R. Basel	Dexter
Elizabeth Grossman (Mrs.)	Manchester
Arthur J. Cox	Milan
Charles Applegate	Whitmore Lake
G. Wayne Spike	Willow Run
Allan Grossman	Saline
Fredrick J. Peters	Ypsilanti
Edward C. Wasen	Lincoln

Much progress has been made during the past several months to translate the policy goals of the Board of Trustees into concrete, useful, and meaningful courses of study for students with a variety of interests and aspirations. In addition, a 235 acre site has been purchased which is located between Ann Arbor and Ypsilanti. Educational specifications are being developed so that the new campus will house the great variety of courses needed to fill an educational gap which exists for skilled people in many occupations. In the meantime, college classes will be held in renovated and well-equipped facilities in several parts of the county.

The Faculty

All members of the Community College faculty have a fierce commitment to outstanding teaching and counseling. Staff members will develop appropriate procedures to insure that each student receives a generous amount of considerate help, understanding, and information as he pursues his occupational goal. All staff members will spend approximately one-third of their time teaching, one-third of their time in class-room preparation, the other third of their time working individually with students.

Classes are deliberately kept small to promote effective teacher-student relationships. Approximately fifty full-time faculty members will be available for a variety of courses.

The Board of Trustees has continued to enlist the assistance and support of citizens to plan and develop College programs. This advice has enabled Washtenaw Community College to develop a wide range of technical, industrial, and semi-professional programs, as well as college transfer courses of study.

Objectives Of The College

It is the intention of this College to open the doors of educational opportunity to students with a seriousness of purpose and an ability sufficient to profit from selected instruction. It is our intention that the College should be more interested in what the student is ready to do than in what he has done; that an applicant should have the opportunity to undertake those programs of instruction offered by the Community College for which he is properly prepared and for which he has aptitude and ability. Once enrolled, however, each student should demonstrate satisfactory performance; there should be no compromise with quality.

It is the objective of the College to develop:

1. One and two-year vocational, technical, and semi-professional education programs of organized, systematic instruction, designed to prepare individuals for employment.
2. A two-year general educational program for the social, cultural, and personal development of individuals desiring to continue their education beyond high school.

3. General educational and pre-professional programs, both one and two-years, transferrable to other colleges and universities.
4. Courses or complete programs which meet the cultural and vocational needs of adults.
5. College preparatory and developmental courses for adults and for those who need to make up deficiencies for college level work.
6. Personnel services including counseling for students of all backgrounds and abilities' which will assist them in selecting courses of study appropriate to their capabilities and ambitions, and guidance in their attainment of their educational goals.

ACCREDITATION

Washtenaw Community College is approved by the State Department of Education, State of Michigan. The College is a member of the Council of North Central Junior Colleges, the Michigan Association of Junior Colleges, and an institutional member of the American Association of Junior Colleges.

A student who plans on transferring to a baccalaureate-degree granting institution after completing the first two years of a four-year course can be confident that the college parallel credits earned at Washtenaw Community College will transfer.

The College has received written statements from admissions officials of Michigan, four-year colleges and universities stating that transfer students will be accepted and that transfer credit will be granted to students who have successfully completed applicable courses at Washtenaw Community College.

STUDENT SERVICES

The Student Services staff assists with counseling, student-initiated activities, financial aids, job placement, and admission.

Counseling

All staff members serve as counselors and have a major commitment to help each student pursue a course of study planned to fulfill his goals. In addition, full-time counselors assist students with educational programming, occupational planning, and personal problems. The aim of this service is to assist each student with self-direction, thereby enabling him to recognize his abilities, to form realistic goals, and to seek counseling assistance when it is needed.

An orientation program is an integral part of the total college program. Orientation sessions will provide an opportunity for students to informally discuss and to react to the college environment, activities, administration, and instructional program.

Counseling tests will be used by the counselors in assisting the student select an educational program which is compatible with his past achievements, capabilities, and interests.

Job Placement

Courses are offered when there is substantial evidence that a student, who successfully completes an occupational course, will be able to find employment in the general area.

College personnel, staff members teaching occupational courses as well as the college job-placement official, assist students, who complete a curriculum which prepares them for job-entry, to enter full-time employment.

Financial Assistance

Washtenaw Community College has applied for federal funds to be made available for loans to students through the National Defense Education Act. These loans feature liberal interest and time repayments.

The College has been approved for participation in the College Work-Study Program. Students who need to earn part or all of their college expense will be able to work on jobs related to their choice of occupational study. Part-time employment in public and non-profit agencies and organizations in the community or on the college campus will be provided through this program.

Counselors will attempt to help each student in need to find a way to get financial assistance: loans, scholarships, Trustee Awards, grants-in-aid, and placement in part-time jobs.

Under the Michigan Higher Education Assistance Authority state scholarships are available. Resident students of Michigan are permitted to write a competitive examination to fulfill the objective of earning a

state scholarship. High school students may obtain a brochure outlining the M.H.E.A.A. program from their counselors.

Graduates of Washtenaw Community College are eligible to apply for a variety of Community College Scholarships granted by many of the four-year colleges and universities.

Student Activities

The College encourages student activities which supplement the instructional program by providing recreational activities which will add to the students' enjoyment of life and stimulate his personal growth and social development. Opportunities for development of constructive leadership, cooperative planning, and special interests will be fostered through participation in student activities.

Student Government

The student body will elect the members of the student council. The council is responsible for student government at the College and promotes the ideals of intelligent self-direction and encourages the spirit of unity and cooperation in student activities. The council directs and coordinates all student affairs.

Intramural Athletics

Students will be instrumental in determining which athletic activities will be available; which activities are appropriate as to season and objective. Participation in intramural athletics is entirely voluntary. Opportunities for the active participation of men and women is provided.

The activities provided by a comprehensive intramural program constitute an effective means of maintaining interest in all-around physical fitness, establish standards of excellence in physical efficiency, afford experience in emotional control, and provide opportunities to think and act while under the pressure of strong competition. Activities provide a wholesome and natural interest as a focal point for college loyalties and institutional spirit. Students are encouraged to become active in intramural sports.

Student Organizations

The student council, with the assistance of the student body, encourages a diversity of student organizations. Participation in the organizations will enable students to discover friends and identify activities compatible with their interests and aptitudes. Service clubs, hobby clubs, professional groups and organizations related to occupational preparation, under the sponsorship of faculty members, will be available to all students.

Student Publications

A staff of students with the assistance of faculty sponsors will publish the official College newspaper.

Student publications serve as educational experiences in the field of

written communication as well as a source of information pertaining to Washtenaw Community College.

Housing

Washtenaw Community College is primarily an institution for commuting students; therefore, no dormitory facilities will be provided. Students who require living accommodations should contact the office of student services.

Bookstore

The College will serve the student body and enhance the instructional program through the bookstore.

Books, instructional aids, equipment, materials and supplies will be readily accessible at a central location convenient for students and staff. Costs will be kept to a minimum based on the college goal of service to students.

Student Center

The community center of the College is frequented by all members of the College family—students, faculty, administration, staff, and guests. A lounging area adjoins the food service area where light lunches and snacks are provided by vending machines.

Library

The library serves the student as a learning materials center. Appropriate reading and research areas, study carrels, reference and reserve book sections, and an audio-visual department will be included in the complex.

The resources of the library take a variety of forms. These are: general and specific reference books dealing with occupational and general studies, selected tapes and records, microfilm materials, a wide range of bound and unbound periodicals, and pamphlets.

By means of inter-library loans, the library is able to supplement the local collection by borrowing materials from other institutions to assist students with special research assignments.

An excellent staff is available for service to students and faculty. Student assistants will be provided to further extend the library service. Students are urged to acquaint themselves with the regulations which have been established for the interest of all who use the library.

RESIDENCY POLICY

Educational costs at Washtenaw Community College are based on a sharing by the student, the taxpayer of the district, and the state. District taxes supplement student tuition and state aid for *in-district* students; therefore, the tuition charged the student who lives outside the college

district but within the state is greater than the tuition charged the in-district student. Students who reside out-of-state are charged the highest tuition.

In-District Resident

A student who lives in the Washtenaw Community College District with his parents or legal guardian.

Out-of-District Resident

A student who lives outside the college district or whose parents reside outside the college district, but who is a resident of the state, is classified as an out-of-district student and will be charged the applicable tuition.

Out-of-State

A student who is a resident of, or whose parents reside in, another state is classified as an out-of-state student for tuition purposes.

ADMISSIONS

ADMISSIONS PROCEDURES

Admission of First-Time Students

Students must have completed high school, or its equivalent, as determined by the College.

1. Non-graduates of high school, 18 years of age or older, are eligible when:
 - a. a student submits an equivalency diploma, or
 - b. a student can profit from instructional programs for which he has the proper background, experience, and capability as determined by interviewing, testing, and work experience evaluation.
2. An applicant for admission as a full-time student must submit a health examination record prior to final acceptance.
3. After being admitted, all first-time entering, full-time students must take counseling and placement tests which will be used to advise, and in some cases, to determine courses and programs.

Admission and Registration Procedure for First-Time Students

1. An entering student must request the following forms from his high-school counselor or principal or from the college Student Services Office.
 - a. An application form including transcript of his high school record.
 - b. A health examination record to be completed by a physician.
2. After the student admission forms have been processed, the student will be given an appointment for a planning conference.
3. Students will complete the admissions procedure by reporting at the beginning of the registration session and paying their tuition and fees.

Advanced Placement or Standing

Students who have successfully completed college level courses while still in high school, may be eligible for advanced standing or placement.

Admission of Transfer Students

1. Students whose grades at other colleges and universities averaged a C (2.0) or better the preceding semester or session will be admitted in good standing, provided they are eligible to return to the former institution.
2. Students whose grades at other colleges and universities averaged below a C (2.0) in the last 15 credit hours of course work may be conditionally admitted as determined by the College.

Admission and Registration Procedure for Transfer Students

1. A transfer student must complete an application form and request a health examination record to be completed by his physician.
2. Request the college or university from which he is transferring to send a transcript of his academic record to the college Student Personnel Services Office.
3. After the student admission forms have been processed, the transfer student will be given an appointment for a planning conference with a counselor.
4. Students will complete the admissions procedure by reporting at the beginning of the registration session and paying their tuition and fees.

TUITION AND FEES

Tuition

District resident:

\$100 per semester

\$ 9 per credit hour for part-time students

Michigan, district non-resident:

\$200 per semester

\$ 18 per credit hour for part-time students

Out-of-State

\$300 per semester

\$ 27 per credit hour for part-time students

Courses, varying in length from several clock hours up to a semester (eighteen weeks), will be offered for part-time, adult students. Tuition for these courses will be determined by the subject content and the length of the course, but will be less than the district resident, credit hour, tuition charged.

Fees

Application fee\$10.00

Paid at the time of initial registration only (non-refundable).

Students registering for 8 credit hours or less are not required to pay the application fee.

Late registration fee\$ 5.00

Physical Education fee (per semester)\$ 1.50

Initially a student activity fee will not be charged.

Refunds

Refund of seventy-five per cent of tuition will be made to students who withdraw from the College during the first 10 days of classes. No tuition refunds will be made after the first 10 days of classes. The \$10.00 application fee is not refundable.

This policy also applies to the part-time student.

No refund will be made if a student drops a partial course load at any time.

GENERAL REGULATIONS

Students entering college for the first time will need to be reminded of the added responsibilities of the college environment.

The College must have a minimum number of rules if its objectives are to be accomplished. Regulations are based upon respect for the rights of others and observance of civil and moral laws. All who enroll in Wash-tenaw Community College must realize that success rests upon personal efforts, attitudes, honor, integrity, and common sense; that attendance at this institution is a privilege.

Credit Hours

Normally, one credit hour is earned by attending a non-laboratory class for a fifty minute period, once a week, for an eighteen-week session. In a laboratory course, one credit hour is granted for, from two to four, fifty minute periods per week in a laboratory.

Course Load

The normal course load for a full-time student is 15 credit hours or more. Special permission must be obtained from the Dean of Student Services for more than 18 credit hours unless the course of study necessitates more than 18 credit hours. A full-time course load for the summer session is six to eight credit hours. Special permission must be obtained from the Dean of Student Services to register for more than eight credit hours.

Employed students should consult with staff members of student services about their course load.

Classification of Students

Full-time — a student who carries twelve or more credit hours.

Part-time — a student who carries less than twelve credit hours.

First year (Freshman) — a student who has completed fewer than twenty-eight credit hours.

Second year (Sophomore) — a student who has completed twenty-eight or more credit hours, but has not received an associate degree or has not qualified for Upper Division Classification in a four-year college or university.

Unclassified — a student who may not have fulfilled the requirements for matriculation or who is enrolled in college-level courses for which he receives no credit (i.e., post associate degree students). Students who take special programs or short courses and who do not wish to pursue a degree or certificate of achievement are included.

Grading

A system of evaluation and a means of letting the student know the degree of progress he is making can be achieved in numerous ways.

One means is by testing, assigning of grades, completion of credit hours, and accumulation of grade points. Honor points or grade points measure the achievement of the student for the number of credit hours he has attempted.

<i>Grades</i>	<i>Grade points per credit hour</i>
A — superior	4
B — excellent	3
C — average	2
D — inferior	1
F — failure or improper withdrawal from class	0
I — incomplete — credit withheld	
X — withdrawal — failing	
Y — withdrawal — passing	

Students who enroll in college for the first time usually are not familiar with the terms grade points and grade-point average.

Grade points are determined by multiplying the grade points per credit hour by the credit hour value of the course. The following example will enable the student to compute his grade-point average:

<i>Classes</i>	<i>Credit Hours</i>	<i>Grade</i>	<i>Grade Points</i>
English	3	B	3 grade points (3 x 3) = 9
History	3	F	0 grade points (0 x 3) = 0
Mathematics	3	C	2 grade points (2 x 3) = 6
Electronics	2	A	4 grade points (4 x 2) = 8
Physics	5	C	2 grade points (2 x 5) = 10
Physical Education	1	D	1 grade point (1 x 1) = 1
	17		34

Divide the total grade points by the total credit hours $34 \div 17 = 2.00$ grade point average.

The cumulative grade-point average is the total number of grade points earned divided by the number of credit hours attempted. It includes the number of credit hours of F, even though no grade points are allowed for this grade. When a course is repeated, the original grade and the number of credit hours are not removed from the student's permanent record. The repeated course and the second grade received in the course are entered on the student's permanent record card, but the credit hours attempted are only entered on the permanent record for the initial enrollment.

Grade reports are issued at mid-semester, at the end of each semester, and at the respective period each summer session. The mid-semester grade is an indication of student progress and does not become a part of his permanent record.

All grade reports are mailed to the home address of the students, both mid-semester and final reports. The mid-semester grade reports are distributed to each student by his or her faculty advisor.

Incomplete

This grade is used by instructors to note that the student for good reason, has failed to complete the course requirements by the time final grades are recorded. The instructor has reason to believe that the student will receive a passing grade if he completes the required work.

The initiative for making the necessary arrangements with the instructor to complete the work rests with the student.

The incomplete grade becomes an F if the student fails to complete his work by the end of the fourth week of the following semester or summer session.

Honors

The names of all full-time students earning a grade point average of 3.0 or better during a semester are posted as the Dean's List.

Examinations

Final examinations are scheduled during the times and on the days listed on the examination schedule. A student who is absent from the final examination receives a grade I for the course or courses involved.

Attendance

Students are expected to attend all classes for which they are registered. A student who misses more than the number of weekly meetings of a class will be charged with excessive absences. All absences must be justified to the satisfaction of the instructor.

Absence from class for any reason in no way lessens the student's responsibility for meeting all the requirements of the class. It is the responsibility of the student to make arrangements for all assignments before participating in school-sponsored events which may necessitate absence from the campus.

Instructors submit the total number of absences of each student at the end of each semester and summer session to the Student Services Office.

Students are expected to report to class promptly. The faculty is authorized to refuse admittance to any student who is tardy.

Change of Courses

Students are expected to complete the courses for which they are registered. If a change is necessitated during the first week of classes (five school days), the student must report to the Student Services Office and complete a Drop-Add form.

Courses cannot be added after the first week of classes.

Withdrawals

Withdrawals from Class

After the first week of classes the student must:

- a. Report to the Student Services Office and obtain a Withdrawal form.
- b. Have the Withdrawal form approved by his teacher-counselor and by the director of the division in which he is enrolled.

Students who withdraw during the first nine weeks will receive a grade of X or Y depending upon the decision of his instructor. A student who withdraws after the ninth week will receive an F.

Withdrawal from College

A full-time student who wishes to withdraw from college before the end of the semester or session must confer with his teacher-counselor and have an interview with a counselor in the Student Services Office. He must complete a Withdrawal Request from the Student Services Office. Unless a student fulfills the procedures outlined for withdrawal from college his current grades are recorded as F's.

Dismissal

In the case of a violation of a serious nature, or in case of a repetitive pattern of irregular conduct, a student may be dismissed from the college.

Graduation

Commencement ceremonies for Washtenaw Community College graduates are held in the month of June. The conferring of associate degrees, certificates of achievement, and honors highlight the graduation exercises. Students receiving associate degrees and certificates of achievement are required to participate in the commencement.

To receive the associate degree a student must:

1. Complete a total of 60 credit hours (the last fifteen must be earned at Washtenaw Community College).
2. Earn a minimum cumulative grade point average at Washtenaw Community College of 2.0.
3. Complete three credit hours of English.
4. Complete three credit hours of Political Science.
5. File an application for graduation during registration for the final semester.
6. Participate in graduation exercises.

To receive the certificate of achievement a student must:

1. Complete 30 credit hours as officially specified by the division of specialization. (The last 15 must be earned at Washtenaw Community College).
2. Earn a minimum cumulative grade point average at Washtenaw Community College of 2.0.

3. Complete three hours in communication arts.
4. File an application for graduation during registration for the final semester.
5. Participate in graduation exercises.

A Certificate of Completion will be granted upon successful completion of a course varying in length from several clock hours up to a semester (eighteen weeks).

Graduation Honors

A student is graduated with *Honors* if he has completed his curriculum (associate degree and/or certificate of achievement) with a 3.0 cumulative grade point average.

A student who plans to graduate must complete the appropriate form in the Office of Student Services at the beginning of the semester in which he plans to complete his course work. Requirements may be completed during any semester or summer session.

Request for Transcript

A student who wants a transcript of his grades sent to an educational institution or to a prospective employer must complete the appropriate form in the Office of Student Services. There is no charge for the first transcript; there is a service charge of \$1.00 for each additional copy. A transcript is issued only after the student has fulfilled all financial obligations to Washtenaw Community College.

COURSE NUMBERS

1. The first digit of a course number indicates its classification according to the year it should be taken.
 - a. Courses numbered below 100 are college-level *preparatory* courses, which carry Washtenaw Community College Credit but are non-transferable to other colleges.
 - b. Courses numbered 100 to 199 are freshman-level courses which should be taken during the first year of college, as they usually are pre-requisite courses.
 - c. Courses numbered 200 to 299 are sophomore-level courses which should be taken during the second year of college.
2. The second digit of the course number indicates the semester the course usually is offered: 1, first semester; 2, second semester; 0, 3, 4, 5, 6, 7, 8, or 9, either semester.
3. The third digit of the course number indicates the number of the course in a sequence: 1, 2, 3, 4, 5, or 6—For numbers 0, 7, 8, 9 there is no sequence involved.

LIBRARY GIFTS

Washtenaw Community College will not conduct a community drive for gifts of books to the library. The College will accept unrestricted gifts of cash. The College will also accept gifts of books when in the opinion of the professional library staff the books will be beneficial to the College and the student body.

In accepting gifts of books, Washtenaw Community College reserves the right to make appropriate disposition of any donated materials which are not compatible with the college educational program.

PHYSICAL EDUCATION

Initially physical education will be offered as an elective. Those students wishing to take fitness or conditioning physical education may do so.

The use of existing facilities to house Washtenaw Community College will restrict offering a diversified physical education program the first two or three years. Therefore, only those students who wish to participate or those students who plan on transferring to a 4-year institution and must have physical education as a required course will elect the course.

Students should check with counselors in the Student Services Office to see if their transfer program requires physical education.

**GENERAL
STUDIES
PROGRAMS**

GENERAL STUDIES PROGRAM

Students who wish to transfer credits earned at Washtenaw Community College to a four-year college or university for the purpose of acquiring a baccalaureate degree will complete the requirements of one of the curricula listed below.

Each curriculum has its own particular requirement. Proper selection of course will be instrumental in transferring all credits to the baccalaureate degree-granting institution.

Staff members of the Student Services Office will assist students in selecting courses.

ARTS

Students who wish to major in art, business administration, education, foreign language, journalism, law, library science, literature and English, music, social sciences, social work, speech and dramatics, and theology will pursue a curriculum similar to the one outlined.

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English	3	English	3
United States History	3	United States History	3
Foreign Language	4	Foreign Language	4
Biological Science or Physical Science	3 or 4	Biological Science or Physical Science	3 or 4
Art Appreciation	3	Music Appreciation	3
Orientation	1		
	—		—
	17 or 18		16 or 17

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Literature	3	Literature	3
Mathematics	3	Mathematics	3
Foreign Language*	4	Foreign Language	4
Social Science**	3	Social Science	3
Elective***	3	Elective	3
	—		—
	16		16

*Most liberal arts curricula require the completion or the equivalent of two years college credit in a foreign language.

**Political Science, history, sociology, economics, general psychology, geography.

***Speech, science, mathematics, and art.

SCIENCE

Students who plan on majoring in agriculture, education, engineering, dentistry, forestry and conservation, homemaking, mathematics, medical technology, pharmacy, and sciences will follow a curriculum similar to the following:

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English	3	English	3
Mathematics	3	Mathematics	3
Science (Laboratory)	4	Science (Laboratory)	4
Foreign Language or Social Science	4 or 3	Foreign Language or Social Science	4 or 3
Speech (Fundamentals of) Orientation	3 1	General Psychology	3
	—		—
	17 or 18		16 or 17

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Mathematics	3 or 4	Mathematics	3 or 4
Science (Laboratory)	4	Science (Laboratory)	4
Foreign Language or Literature*	4 or 3	Foreign Language or Literature	4 or 3
Social Science**	3	Social Science	3
Elective***	3	Elective	3
	—		—
	17		17

*If foreign language is required, the completion of two years of college credit or its equivalent is suggested.

**Political science, history, sociology, economics, geography.

***Art appreciation, music appreciation.

General Education

The general education program is especially suited for those students who wish to gain broad understandings in various content fields and are not concerned specifically with acquiring job-entry skills, or securing college-parallel credit. The basic purpose of the following is intellectual, cultural and personal development of the individual.

GENERAL EDUCATION

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English	3	English	3
Mathematics or Science	3 or 4	Mathematics or Science	3 or 4
Social Science	3	Social Science	3
Foreign Language or Elective*	4 or 3	Foreign Language or Elective*	4 or 3
Music or Art Appreciation Orientation	3 1	Music or Art Appreciation	3
	<hr/>		<hr/>
	17		16

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Literature	3	Literature	3
Social Sciences*	6	Social Sciences	6
Art or Music	3	Art or Music	3
Foreign Language or Elective**	4 or 3	Foreign Language or Elective*	4 or 3
	<hr/>		<hr/>
	15 or 16		15 or 16

*Introduction to political science required for Associate degree.

**Journalism, social science, mathematics, science.

Washtenaw Community College offers a number of courses of study, one and two year occupational programs, which enable the student to enter employment immediately upon completion of the courses. Staff members of the Student Services Office will assist the student in finding a job. Instructors in the occupational programs, who are aware of employment opportunities in local businesses, industries, and agencies will also help students secure employment in their chosen occupational field.

**OCCUPATIONAL
PROGRAMS**

OCCUPATIONAL PROGRAMS

Division of Business and Management

ACCOUNTING TECHNICIAN

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	English 122	3
Introduction to Business 140	3	Business Machines 130	3
Principles of Accounting 111	4	Principles of Accounting 122	4
Business Mathematics 100	3	Fundamentals of Speaking 180	3
Introduction to Data Processing 111	4	Data Processing Machines 122	4
Orientation	1		
	<hr/>		<hr/>
	18		17

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Intermediate Accounting 200	3	Work Experience	3
Economics 111	3	Economics 122	3
Business Law 111	3	Business Law 122	3
Introduction to Political Science 100	3	Office Management 230	3
Data Processing Applications 213	4	Introduction to Programing Systems 224	4
	<hr/>		<hr/>
	16		16

Successful completion of this course of study can lead to employment as an accountant in a governmental agency, business or industry.

BUSINESS MANAGER

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	English 122	3
Introduction to Business 140	3	Business Machines 130	3
Economics 111	3	Economics 122	3
Business Mathematics 100	3	Fundamentals of Speaking 180	3
Salesmanship 160	3	Introduction to Data Processing 111*	3
Orientation	1		
	<hr/>		<hr/>
	16		15

*Student may elect additional courses in Unit Record Keeping.
Employment opportunities: Supervising or managerial responsibilities in business or industry.

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Principles of Accounting 111	4	Principles of Accounting 122	4
Business Law 111	3	Industrial Psychology 222	3
Personnel Management 240	3	Business Law 122	3
Principles of Marketing 260	3	Introduction to Political Science 100	3
Work Experience	3	Work Experience	3
	—		—
	16		16

CLERK TYPIST

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	Typewriting 122	2
Typewriting 111	2	Shorthand 122	3
Shorthand 111	3	Office Procedure 150	3
Business Mathematics 100	3	Business Machines 130	3
Fundamentals of Accounting 30	3	Introduction to Data Processing 111	3
Introduction to Business 140	3	Work Experience*	3
Orientation	1		—
	—		—
	18		17

*May be taken both semesters.

Employment opportunities: Every kind of business and industry, governmental agency, banks, unions, private offices as typist who performs related duties.

SECRETARY

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	English 122	3
Introduction to Business 140	3	Business Machines 130	3
Shorthand 111	3	Shorthand 122	3
Typewriting 111	2	Typewriting 122	2
Business Mathematics 100	3	Fundamentals of Speaking 180	3
Orientation	1	Work Experience*	3
	<hr/>		<hr/>
	15		17

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Shorthand 213	3	Shorthand 213	3
Business Law 111	3	Business Law 122	3
Office Procedure 150	3	General Psychology 107	3
Principles of Accounting 111	4	Principles of Accounting 122	4
Introduction to Data Processing 111	3	Introduction to Political Science 100	3
	<hr/>		<hr/>
	16		16

*May be continued second year.

Opportunities for employment: Business, industry, banks, unions, private offices, governmental agencies.

UNIT RECORD KEEPER

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	Principles of Accounting 122	4
Principles of Accounting 111	4	Data Processing Machines* 122	4
Introduction to Data Processing 111	4	Data Processing Applications 213	4
Business Mathematics 100	3	Introduction to Programming Systems 224	4
Fundamentals of Speaking 180	3		
Orientation	1		
	<hr/>		<hr/>
	18		16

*May include work experience.

Employment opportunities: Firms handling a large volume of data, reporting, record keeping and other paperwork. Employed by manufacturing, wholesale and retail and utility firms, as keypunch, sorting machines, or tabulating machine operator. Can lead to courses in programming or systems analyst work, related to a computer.

WHOLESALE & RETAIL SALES PERSON

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	Principles of Marketing 260	3
Introduction to Business 140	3	Fundamentals of Speaking 180	3
Salesmanship 160	3	Business Machines 130	3
Business Mathematics 100	3	Business Law 111	3
General Psychology 107	3	Work Experience	3
Orientation	1		
	<hr/>		<hr/>
	16		15

Opportunities for employment: Saleswork in wholesale or retail businesses.

WHOLESALE & RETAIL SALES PERSON

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	English 122	3
Salesmanship 160	3	Principles of Marketing 260	3
Business Mathematics 100	3	Fundamentals of Speaking 180	3
Introduction to Business 140	3	Business Machines 130	3
Introduction to Political Science 100	3	Introduction to Data Processing 111	3
Orientation	1		
	<hr/>		<hr/>
	16		15

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Economics 111	3	Economics 122	3
Business Law 111	3	Business Law 122	3
Principles of Accounting 111	4	Principles of Accounting 122	4
General Psychology 107	3	Sales Management 250	3
Work Experience	3	Work Experience	3
	<hr/>		<hr/>
	16		16

Employment opportunities: Sales, supervising, managerial trainee opportunities in a variety of retail and wholesale businesses.

DENTAL ASSISTANT

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	English 122	3
Orientation to Dental Assisting 111	1	Dental Science 123	3
Dental Science 112	3	Anatomy and Physiology 222	4
Anatomy and Physiology* 211	4	Microbiology 217	4
Orientation	1	Introduction to Political Science 100	3
Dental Secretarial Procedures** 117	4		
	<hr/>		<hr/>
	16		17

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Dental Roentgenology 211	3	Dental Roentgenology 222	2
Operatory Procedures 213	3	Operatory Procedures 224	3
Dental Laboratory Procedures 215	3	Dental Laboratory Procedures 226	3
General Chemistry 111	4	General Chemistry 122	4
Dental Materials 210	3	Clinical Practice 220	3
	<hr/>		<hr/>
	16		15

*Prerequisite: High school biology or zoology or General Biology during the first year.

**Prerequisite: High school typewriting and satisfactory completion of typewriting proficiency test or Typewriting 111.

Employment opportunities: A chairside assistant to the dentist in addition to office responsibilities.

MEDICAL CLERK

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Orientation to Medical Assisting 110	1	Medical Assisting 121	3
English 111	3	Medical Laboratory Technique 212	3
Medical Terminology and Speech 117	3	Medical Assisting 223 (Work Experience)	3
Typewriting* 111	3	Medical Office Record Keeping 224	3
Medical Shorthand and Transcription** 170	3	Business Machines 130	3
Business Mathematics 100	3		
Orientation	1		
	<hr/>		<hr/>
	17		15

*Prerequisite: High school typewriting and satisfactory completion of typewriting proficiency test or Typewriting 111.

**Prerequisite: High school shorthand and satisfactory completion of shorthand proficiency test or Shorthand 111.

Employment opportunities: Office responsibilities in a clinic, medical private practice, hospital, medical school or health agency.

MEDICAL SECRETARY

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Orientation to Medical Assisting 110	1	Medical Assisting 121	3
English 111	3	Business Machines 130	3
Medical Terminology and Speech 117	3	English 122	3
Typewriting* 111	3	Introduction to Political Science 100	3
Medical Shorthand and Transcription** 170	3	Medical Shorthand and Transcription 170	3
Business Mathematics 100	3		
Orientation	1		
	<hr/>		<hr/>
	17		15

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Medical Laboratory		Medical Assisting 223	
Technique 212	3	(Work Experience)	3
Anatomy and		Medical Office Record	
Physiology*** 211	4	Keeping 224	3
Chemistry 111	4	Anatomy and Physiology 222	4
Sociology 111	3	Chemistry 122	4
Medical Assisting		Sociology 122	3
(Work Experience)	3		
	<hr style="width: 100%;"/>		<hr style="width: 100%;"/>
	17		17

*Prerequisite: High school typewriting and satisfactory completion of typewriting proficiency test or Typewriting 111.

**Prerequisite: High school shorthand and satisfactory completion of shorthand proficiency test or Shorthand 111.

***Prerequisite: High school biology or zoology or General Biology during the first year.

Opportunities for employment: A girl "Friday" to a professional person in the medical field.

MEDICAL LABORATORY ASSISTANT

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Orientation to Medical		Typewriting 111	2
Assisting 110	1	English 122	3
Mathematics (Elective)	3	Fundamentals of Speaking 180	3
English 111	3	Anatomy and Physiology 222	4
Anatomy and Physiology 211	4	General Chemistry 122	4
General Chemistry 111	4		
Orientation	1		
	<hr style="width: 100%;"/>		<hr style="width: 100%;"/>
	16		16

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Work Experience	3	Work Experience	3
Organic Chemistry 211	5	Organic Chemistry 222	5
Introduction to		Microbiology 217	4
Political Science 100	3	Elective	3
Report Writing 140	3		
	<hr style="width: 100%;"/>		<hr style="width: 100%;"/>
	14		15

Employment opportunities: Assists a medical technologist with chemical, microscopic or bacteriological tests in a medical laboratory.

X-RAY TECHNOLOGIST

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
English 111	3	English 122	3
Orientation to X-Ray Technology 110	1	Principles of X-Ray Technology 122	3
Fundamentals of X-Ray Technology 111	3	Anatomy and Physiology 222	4
Anatomy and Physiology 211	4	General Physics 122	4
Mathematics (Elective)	3	Office Procedures 150	3
Orientation	1		
	<hr/>		<hr/>
	15		17
 <i>Summer Term</i>	 <i>Hours</i>		
Clinical X-Ray Experience 123	9		
X-Ray Departmental Administration 124	2		

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Clinical X-Ray Experience 214	7	Introduction to Political Science 100	3
Radiation Therapy 216	4	Clinical X-Ray Experience 225	8
Fundamentals of Speaking 180	3	Report Writing 140	3
General Psychology 107	3		
	<hr/>		<hr/>
	17		14

Employment Opportunities: Perform diagnostic X-Ray work by using X-Ray equipment to take pictures of internal parts of the body. Employed in hospitals, medical and research laboratories.

LIBRARY ASSISTANT

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Library Practice 111	4	Library Technical	
Fundamentals of Speaking 180	3	Processes 122	
Typewriting 111	2	(Work Experience)	4
Shorthand 111	4	Business Correspondence 100	3
Business Mathematics 100	3	Typewriting 122	2
Orientation	1	Shorthand 122	4
		Introduction to Data	
		Processing 111	3
	<hr/>		<hr/>
	17		16

Employment opportunities: Assist a librarian with classifying and cataloging books and serving clientele in public libraries and in libraries maintained by public and private schools, colleges and universities, government agencies, educational and research associations, and business and industrial firms.

LIBRARY TECHNICIAN

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Library Practice 111	4	Library Technical	
Fundamentals of Speaking 180	3	Processes 122	5
Typewriting 111	2	Business Correspondence 100	3
English (Elective)	3	Typewriting 122	2
Business Mathematics 100	3	Shorthand 122	4
Orientation	1	Introduction to Data	
		Processing 111	4
	<hr/>		<hr/>
	16		18

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Work Experience	5	Work Experience	5
General Psychology 107	3	Business Law 111	3
Shorthand 213	4	Art Appreciation 130	3
Principles of Sociology 111	3	Data Processing Machines 122	4
Introduction to Political		Principles of Sociology 122	3
Science 100	3		
	<hr/>		<hr/>
	18		18

Opportunities for employment: See preceding page.

AUTOMOTIVE
AUTOMOTIVE MECHANIC

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Power Sources 111	3	Automotive 122	5
Automotive 111	5	Welding and Fabrication 118	5
Parts, Manuals & Warranty 117	1	Psychology of Human Relations 211	3
English (Elective)	3	Salesmanship 160	3
Mathematics (Elective)	3		
Orientation	1		
	<hr/>		<hr/>
	16		16

Employment opportunities: As a mechanic in a dealership, independent garage or maintenance department of a large business or industry.

AUTOMOTIVE MAINTENANCE MANAGER

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Power Sources 111	3	Automotive 122	5
Automotive 111	5	General Psychology 107	3
Parts, Manuals & Warranty 117	1	Auto Body Repair 111	5
English (Elective)	3	Personnel Management 240	3
Mathematics (Elective)	3		
Orientation	1		
	<hr/>		<hr/>
	16		16

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Auto Air Conditioning & Refrigeration 210	5	Principles of Marketing 260	3
Fundamentals of Accounting 30	3	Introduction to Data Processing 111	4
Salesmanship 160	3	Sales Management 250	3
Introduction to Political Science 100	3	Fundamentals of Speaking 180	3
Introduction to Business 140	3	New & Used Car Reconditioning 220	3
	<hr style="width: 100%; border: 0.5px solid black;"/>		<hr style="width: 100%; border: 0.5px solid black;"/>
	17		16

Employment opportunities: Service manager in an automotive dealership or maintenance department of a large business or industry.

AUTOMOTIVE SERVICE STATION MECHANIC

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Auto Service Station Mechanic 111	5	English (Elective)	3
Power Sources 111	3	Auto Service Station Mechanic 122	5
Mathematics (Elective)	3	Parts, Manuals & Warranty 117	1
Introduction to Business 140	3	Salesmanship 160	3
Orientation	1	Fundamentals of Accounting 30	3
		Psychology of Human Relations 211	3
	<hr style="width: 100%; border: 0.5px solid black;"/>		<hr style="width: 100%; border: 0.5px solid black;"/>
	15		18

Opportunities for employment: Inspect, service, and replace parts of an automobile for any service business including the traditional gasoline service stations.

AUTOMOTIVE BODY REPAIRMAN

One Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Auto Body Repair 111	5	Auto Body Repair 122	5
Welding and Fabrication 118	5	Alignment and Collision 120	5
English (Elective)	3	Personnel Management 240	3
Mathematics (Elective)	3	New and Used Car	
Orientation	1	Reconditioning 220	3
	<hr/>		<hr/>
	17		16

Employment opportunities: Body repair and maintenance in a dealership or independent body shop.

AUTOMOTIVE BODY REPAIR MANAGER

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Auto Body Repair 111	5	Auto Body Repair 122	5
Welding and Fabrication 118	5	Alignment and Collision 120	5
English (Elective)	3	Personnel Management 240	3
Mathematics (Elective)	3	New and Used Car	
Orientation	1	Reconditioning 220	3
	<hr/>		<hr/>
	17		16

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Introduction to Business 140	3	Fundamentals of Speaking 180	3
Alignment and Collision 120	5	Introduction to Political	
Fundamentals of Accounting 30	3	Science 100	3
Business Mathematics 100	3	Auto Air Conditioning and	
Psychology of Human		Refrigeration 210	5
Relations 211	3	Salesmanship 160	3
	<hr/>	Elective	3
	17		<hr/>
			17

Employment opportunities: Manager or mechanic in an automotive dealership body shop or maintenance department of a large business or industry.

DRAFTING AND DESIGN
DRAFTSMAN - DETAILER

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Drafting 111	6	Drafting 122	6
Blueprint Reading 110	3	Algebra & Trigonometry 140	4
Introductory Algebra 40	3	Welding & Metal	
Shop Orientation 111	1	Fabrication 118	3
General Physics 111	4	Power Sources 122	3
Orientation	1	Shop Orientation 122	1
	—		—
	18		17

Employment opportunities: As a detailer who takes the layout prepared by the design draftsman and prepares working drawings of a particular part to be built or manufactured.

ARCHITECTURAL DRAFTSMAN

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Architectural Drawing 111	10	Architectural Drawing 122	10
English (Elective)	3	Mathematics (Elective)	3
Elementary Typewriting 111	2	Personnel Management 240	3
Orientation	1		
	—		—
	16		16

Employment opportunities: A draftsman who specializes in architectural detailing or drawings.

ARCHITECTURAL DRAFTING TECHNICIAN

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Architectural Drawing 113	4	Architectural Drawing 124	4
Construction Materials 117	3	Mechanical Equipment 120	2
History of Architecture 118	2	Fundamentals of Speaking 180	3
General Physics 111	4	Plane and Solid Geometry 130	4
Algebra and Trigonology 140	4	English (Elective)	3
Orientation	1		
	—		—
	18		16

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Architectural Drawing 215	5	Architectural Drawing 226	5
Structural Design 210	2	Personnel Management 240	3
Graphic Reproduction Processes 217	2	Specifications 220	1
Surveying 219	3	Industrial Psychology 222	3
Report Writing 140	3	Introduction to Political Science 100	3
Design Fundamentals 218	2		
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	17		15

Opportunities for employment: Interpret the ideas of the architect into complete and accurate working plans which are used by the craftsmen in building the desired housing or commercial structure!

ELECTRICAL TECHNOLOGY

ELECTRICAL MECHANIC

One-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Introductory Algebra 40	3	Algebra and Trigonometry 140	4
General Physics 111	4	Industrial Electricity 120	4
Basic Technical Drawing 110	3	Graphics 127	3
English (Elective)	3	Fundamentals of Speaking 180	3
Electrical Fundamentals 111	3	Electrical Fundamentals 122	3
Electrical Applications 113	1	Electrical Applications* 124	1
Orientation	1		
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	18		18

*May include work experience.

Employment opportunities: Servicing household appliances and automobile electrical systems or pre-apprentice training for the electrical trades.

ELECTRONICS TECHNOLOGY
ELECTRONICS TECHNICIAN

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Introductory Algebra 40	3	Algebra and Trigonometry 140	4
General Physics 111	4	Industrial Electricity 120	4
Basic Technical Drawing 110	3	Graphics 127	3
English (Elective)	3	Fundamentals of	
Electrical Fundamentals 111	3	Speaking 180	3
Electrical Applications 113	1	Electrical Fundamentals 122	3
Orientation	1	Electrical Applications 124	1
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	18		18

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Electronic Switching and Control 217	3	Elective*	3
Shop Technology 210	2	Radio, Television, and Circuits Repair** 229	5
Blueprint Reading 110	3	Electronics 222	4
Introduction to Political Science 100	3	Industrial Electronics 228	4
Electronics 211	4		
Audio Frequency Transmission 210	3		
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	18		16

*Introduction to Statistics, Management, or Economics.

**May include work experience.

Opportunities for employment: Technician in an engineering laboratory, computer, research, aircraft or missile industry; radio and television serviceman; will have the technical background necessary to meet the Federal Communication Commission element requirements.

MECHANICAL TECHNOLOGY
MAINTENANCE TECHNICIAN

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
General Physics 111	4	General Physics 122	4
Algebra 110	3	Graphics 127	3
Electrical Fundamentals 111	3	Trigonometry 120	2
Blueprint Reading 110	3	Electrical Fundamentals 122	3
Shop Orientation 111	1	Blueprint Reading 120	3
Typewriting 111	2		
Orientation	1		
	—		—
	17		15

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Electronics 211	3	Electronics Switching and Control 217	3
Shop Orientation 111	1	Report Writing 140	3
English (Elective)	3	Machinery Construction and Repair 220	4
Welding & Fabrication 118	3	Introduction to Political Science 100	3
Shop Technology* 210	5	Fundamentals of Speaking 180	3
Psychology of Human Relations 211	3		
	—		—
	18		16

*May include work experience.

Employment opportunities: Industrial plants which use large amounts of machinery and equipment. When breakdowns occur, the trouble must be determined and necessary adjustments and repairs must be made. The maintenance technician is required to adjust, trouble shoot, and repair semi-automatic and automated production equipment and to supervise those who operate such equipment.

TEST TECHNICIAN

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
General Physics 111	4	General Physics 122	4
Algebra 110	3	Graphics 127	3
Electrical Fundamentals 111	3	Trigonometry 120	2
Blueprint Reading 110	3	Electrical Fundamentals 122	3
Typewriting 111	2	Blueprint Reading 120	3
Orientation	1		
	—		—
	16		15

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
Report Writing 140	3	Electronics Switching and Control 217	3
Electronics 211	3	Data Processing Machines 122	4
Welding & Metal Fabrication 118	3	Introduction to Statistics 127	3
Psychology of Human Relations 211	3	Introduction to Political Science 100	3
Typewriting 213	2	Fundamentals of Speaking 180	3
Introduction to Data Processing 111	4		
	—		—
	18		16

Employment opportunities: Industrial plants which require testing in operation and testing and checking as workmen build or manufacture new products. The test technician works in the area of product performance and improvement, automotive safety and engine performance.

DEVELOPMENTAL TECHNICIAN

Two-Year Program

FIRST YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
General Physics 111	4	General Physics 122	4
Algebra 110	3	Graphics 127	3
Electrical Fundamentals 111	3	Trigonometry 120	2
Blueprint Reading 110	3	Electrical Fundamentals 122	3
Shop Orientation 111	1	Blueprint Reading 120	3
Typewriting 111	2		
Orientation	1		
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	17		15

SECOND YEAR

<i>First Semester</i>	<i>Hours</i>	<i>Second Eemester</i>	<i>Hours</i>
Electronics 211	3	Electronics Switching and Control 217	3
Shop Orientation 111	1	Shop Technology 210	5
English (Elective)	3	Machinery Construction and Repair 220	4
Welding & Metal Fabrication 118	3	Introduction to Political Science 100	3
Report Writing 140	3	Fundamentals of Speaking 180	3
Psychology of Human Relations 211	3		
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	16		18

Opportunities for employment: Large industries where prototypes are developed. The developmental technician is part of the engineering team building prototype (first of its kind) equipment and products.

**COURSE
DESCRIPTIONS**

COURSE DESCRIPTIONS

The following descriptions of course offerings are listed alphabetically within the responsible general division. The course number, prerequisites if any, hours of credit and pertinent summary of the course are included. In the parenthesis following the description the first number indicates the number of lecture-discussion hours per week while the second number indicates the number of laboratory hours per week. The College reserves the prerogative to assign classes to specific semester sessions and to withdraw a course or courses at any time. Related instruction classes will be designed as needed.

DIVISION OF COMMUNICATION ARTS

ART

100 Introductory Art2 credit hours

Basic methods utilized in artistic creation are explained with practical experiences for the student in drawing and painting for the purpose of individual enrichments. (1-2)

130 Art Appreciation3 credit hours

Significant works of art in varied forms which exemplify major cultural patterns from the time of the Greeks to the present are studied. (3-0)

111 Basic Drawing3 credit hours

This is an initial course in drawing in varied media using several techniques. Essentials of visual form, analysis of structure and texture are studied. (0-6)

122 Basic Design — Two and Three Dimensional3 credit hours

Basic elements of design are studied with experimentation in line, form, space, value, texture and color utilizing a variety of basic materials.

ENGLISH

30 Developmental English3 credit hours

This course includes elements of diction, grammar, punctuation, and usage. Written assignments in sentence and paragraph development will be involved. Diagnostic tests are utilized to assist the individual student in study concentration. The program is designed for students with inadequate preparation for English Composition and who are enrolling in college transfer program. (3-0)

40 Developmental Reading3 credit hours

Diagnostic reading battery is utilized to assist in determining student's placement in program. A variety of teaching techniques employing a number of projection devices and learning sources will emphasize gaining general reading skills. Laboratory setting. (3-0)

50 Reading Improvement2 credit hours

Course is designed to assist capable students in reading more efficiently with instructional emphasis upon purposeful reading rate, vocabulary, comprehension, and study methods. (2-1)

111 English3 credit hours

Prerequisite: Satisfactory high school English credit or satisfactory completion of Developmental English 30.

This course is for the development of reading and writing skills. Careful analysis of varied compositions is made which demonstrate organization and development of ideas. Theme preparation is involved, both formal and informal, stressing clear, logical, and correct expression. Usage and mechanics will be reviewed as needed. (3-0)

122 English3 credit hours

Prerequisite: English 111

This is a continuation of English 111, and will stress the elements of collateral reading, material assemblage, annotative work in developing a research paper. Selected readings in exposition, argumentation, and fiction will be analyzed and evaluated. (3-0)

140 Report Writing3 credit hours

This course includes the principles and techniques of writing reports, articles, memoranda, and abstracts. Applications are made to specific business, technical and professional needs. Using essential language structures in clear, simple, and precise communication and collecting and organizing facts, interpreting them graphically are interrelated. The relation of good report writing to getting facts and ideas accepted is involved. (3-0)

JOURNALISM

150 Journalism1 credit hour

The emphasis is placed upon elements of newswriting, feature articles, and editorials. Students automatically are members of the College newspaper and are responsible for its publication.

FOREIGN LANGUAGE

111 First Year French4 credit hours

This introductory French course places emphasis on elements of pronunciation; fundamental grammatical principles in speaking, and understanding French with essential vocabulary. Supervised laboratory assignments are involved. (4-0)

122 First Year French4 credit hours

Prerequisite: French 111 or one year high school French.

This is a continuation of French 111 with stress on speaking and comprehending the language through the use of graded materials. Written composition and supervised laboratory assignments are involved. (4-0)

213 Second Year French4 credit hours

Prerequisite: French 122 or two years of high school French.

This course deals with the review and application of essential principles of French grammar through use of oral and written exercises with intensive practice of the spoken language. Reading of representative prose for comprehension with subsidiary reading to develop ability to read rapidly at sight will be included. Supervised language laboratory assignments are involved. (4-0)

224 Second Year French4 credit hours

Prerequisite: French 213 or three years of high school French.

This is a continuation of French 213 involving more difficult materials with emphasis on oral skill, discussion of contemporary life and literature, and reading. Supervised language laboratory assignments are involved. (4-0)

111 First Year Spanish4 credit hours

The introductory Spanish course emphasizes elements of pronunciation; fundamental grammatical principles in speaking, and understanding Spanish with essential vocabulary. Supervised laboratory assignments are involved. (4-0)

122 First Year Spanish4 credit hours

Prerequisite: Spanish 111 or one year high school Spanish.

This is a continuation of Spanish 111 with stress on speaking and comprehending the language through use of graded materials. Written composition and supervised laboratory assignments are involved. (4-0)

213 Second Year Spanish4 credit hours

Prerequisite: Spanish 122 or two years of high school Spanish.

This course deals with the review and application of essential principles of Spanish grammar through use of oral and written exercises and intensive practice of the spoken language. Reading of representative prose for comprehension with subsidiary reading to develop ability to read rapidly at sight are included. Supervised language laboratory assignments are involved. (4-0)

224 Second Year Spanish4 credit hours

Prerequisite: Spanish 213 or three years of high school Spanish.

This is a continuation of Spanish 213 involving more difficult materials with emphasis on oral skill, discussion of contemporary life and literature, and reading. Supervised language laboratory assignments are included. (4-0)

MUSIC

160 Music Appreciation3 credit hours

This course is designed to acquaint the student with the major works of musical composition through recordings. Presentations will deal with rudiments of music, their function in a variety of works, different styles and the growth and development of musical forms. The course is open to all students. (3-0)

170 Music Theory4 credit hours

The introductory music theory course involves the study of science of acoustics; harmonic principles; melodic, harmonic, and rhythmic dictation drills; sight singing and keyboard harmony. (4-0)

SPEECH

180 Fundamentals of Speaking3 credit hours

Instruction in essential speech processes and skills are offered. Organization of speeches and effective delivery will be studied through the use of practical problem situations. (3-0)

PHYSICAL EDUCATION

100 Physical Education - Fitness1 credit hour

Stress will be on fitness through the use of calisthenics and self-testing exercises. Physical fitness tests will be given and individual improvement records maintained. (0-2)

130 Physical Education - Conditioning1 credit hour

Fitness will be emphasized through use of calisthenics and selected sport activities. (0-2)

**DIVISION
OF
BUSINESS
AND
MANAGEMENT**

BUSINESS AND MANAGEMENT

ACCOUNTING

- 30 Accounting, Fundamentals of3 credit hours
A non-professional accounting course which introduces the theory of double-entry bookkeeping. Emphasis is on understanding of basic financial records and forms and on ability to apply elementary accounting procedures. (2-3)
- 111 Accounting, Principles of4 credit hours
An introductory course in the principles of accounting which includes the accounting cycle, financial statements, controlling accounts, special column journals, and the vouchers system. (3-2)
- 122 Accounting, Principles of4 credit hours
Prerequisite: Principles of Accounting 111
This is an introduction to partnership, corporation, and manufacturing accounting. This course is required of all Business Administration transfer students. (3-2)
- 200 Accounting, Intermediate3 credit hours
Prerequisite: Accounting 111 and Accounting 122
This course includes a detailed study of specialized phases of accounting, such as the treatment of cash and temporary investments, receivables, inventories, investments, plants and equipment, intangibles, deferred charges, liabilities, capital stock and surplus, financial statements. (3-0)

SECRETARIAL & MANAGEMENT

- 100 Business Correspondence3 credit hours
Prerequisite: High school typewriting and satisfactory completion of typewriting proficiency test, or Typewriting (may be taken concurrently).
This course deals with the development of necessary writing skills for clear communication. Stress is placed upon the public relations function of business correspondence in addition to its prime purpose of transmitting information and persuading. (3-0)
- 111 Business Law3 credit hours
Text and case study of the general laws applicable to business covering the nature of law, courts and court procedures, crimes and taxes, contracts, agency, labor relations, and partnerships are included. (3-0)

- 122 Business Law3 credit hours
 Prerequisite: Business Law 111
 This is a study of corporations, property, sales, negotiable instruments, insurance, and bankruptcy. (3-0)
- 130 Business Machines3 credit hours
 Prerequisite: Business Mathematics 100 (may be taken concurrently)
 Study and use of rotary calculators, ten-key and full-key adding-listing machines, and printing calculators are included in this course. The operation and application of machines to problems in computation for business and industry are learned. (3-0)
- 111 Data Processing, Introduction to4 credit hours
 This is an introductory course to the field of data processing: Included are an introduction to problem organization, coverage of data processing and its role in business and elementary programming techniques. (3-2)
- 122 Data Processing Machines4 credit hours
 Prerequisite: Introduction to Data Processing 111
 This is a survey of unit record equipment and the machines used in data processing. The emphasis is placed on laboratory exercises and the relationship of the various pieces of equipment to the computer. (2-4)
- 213 Data Processing Applications4 credit hours
 Prerequisite: Data Processing Machines 122
 This course is designed to acquaint students with data processing applications. The emphasis is placed upon machine and system combinations and the advantages to be realized from mechanization. Some of the applications studied will include inventory control, payroll, accounts receivable, and accounts payable. (2-4)
- 224 Introduction to Programming Systems4 credit hours
 Prerequisite: Data Processing Machines 213
 This is designed to teach the basic concepts of programming systems necessary for understanding topics presented in the advanced programming course. The emphasis is placed on the purpose and function of the various types of programming systems. (3-2)
- 140 Introduction to Business3 credit hours
 The functions, objectives, organization and structure of business and its importance in a free-enterprise system are studied. Understanding the relationships of business, government, and the consumer are emphasized. (3-0)

230 Management, Office3 credit hours

The applications of the principles of management to the planning, organization, and controlling of office work are emphasized. The direction and control of services and performance, simplification of procedure and methods, and the establishment of standards and planning of physical facilities and business forms are also included. (3-0)

240 Management, Personnel3 credit hours

Prerequisite: Introduction to Business 140.

This course is an exposition of the fields of activity covered in modern personnel work. Topics covered are employment techniques, wages and hours, job evaluation, training, employer ratings, collective bargaining, employment, counseling and collateral benefits such as pensions and fringe benefits. (3-0)

150 Office Procedure3 credit hours

Prerequisite: High school typewriting and satisfactory completion of typewriting proficiency test, or Typewriting 111.

The fundamentals of general office operation procedures are studied. Duties of office workers, personal qualifications, systems of filing, preparation of reports, machine transcription, and the operation of duplicating machines most commonly found in business offices are included. (2-3)

250 Management, Sales3 credit hours

Prerequisite: Introduction to Business 140 and Salesmanship 160

This course involves the planning of sales effort; the management of sales and services. Personnel and controlling sales operations are emphasized. (3-0)

260 Principles of Marketing3 credit hours

This is a study of the institutions and methods developed for carrying on trade operations; retail and wholesale agencies; elements of marketing efficiency; the cost of marketing; price maintenance; unfair competition; and the relationship of government to marketing. (3-0)

160 Salesmanship3 credit hours

Prerequisite: Introduction to Business 140

This is a review of selling techniques, job applications and interviews, merchandise display, stocking, advertising, and sales demonstrations. (3-0)

SHORTHAND

- 111 Shorthand, Elementary4 credit hours
This is a course in the development of elementary skills in reading and writing Gregg Shorthand. (2-3)
- 122 Shorthand, Intermediate4 credit hours
Prerequisite: Elementary Shorthand 111
This course deals in the instruction and practice in skills and knowledge essential to sustained shorthand writing; and introduction to transcription techniques. (2-3)
- 213 Shorthand, Advanced4 credit hours
Prerequisites: Intermediate Shorthand 122
This course involves timed dictation and transcription with the development of intelligent and accurate transcription. Vocabulary and nomenclature in specialized areas such as law, insurance, medicine, engineering and special industries are studied. (2-3)
- 170 Medical Shorthand and Transcription3 credit hours
Prerequisite: High School shorthand and satisfactory completion of shorthand proficiency tests or Shorthand 111
This course involves the transcribing of business and medical dictation records. Dictation of case histories, medical abstracts, scientific articles are included. (2-3)

TYPEWRITING

- 111 Typewriting, Elementary2 credit hours
This course involves the improvement of skill in the use of the typewriter and development of skill in the manipulation of the operative parts of the typewriter. Practice in paragraph and page writing, simple letter writing, and care of the typewriter are included. (1-4)
- 122 Typewriting, Intermediate2 credit hours
Prerequisite: Typewriting 111
This course involves the improving of manipulative skills, writing rate, and accuracy. Instruction and practice in business letter writing, manuscript writing, tabulation, rough draft, business forms, stencil cutting and mimeographing are included. (1-4)

213 Typewriting, Advanced2 credit hours

Prerequisite: Intermediate Typewriting 122

This course includes the study of business practices and office problems in advanced letter and manuscript writing, direct dictation, tabulation, rough draft, legal matter, business forms and English usage and the attainment of commercially valuable rate and quality products. (1-4)

**DIVISION
OF
EXACT
SCIENCES**

DIVISION OF EXACT SCIENCES

MATHEMATICS

100 Business Mathematics3 credit hours

This is a study of the application of the mathematical processes as applied to business problems, and includes fractions, decimals and percentages. (3-0)

30 Basic Mathematics3 credit hours

This is a review of mathematics involving whole numbers, fractions, decimals and percentage. Fundamental properties of algebra and geometry and basic set notions will be introduced. Diagnostic tests will be utilized to determine level and areas of study for the individual student. (2-2)

40 Introductory Algebra3 credit hours

Prerequisite: Mathematics 30

This is intended for the student who has not had high school algebra or who needs basic review. Basic concepts of algebra such as symbols, complex numbers, solution of linear equations, simultaneous equations, factoring, fractions and fractional equations are studied. (3-0)

110 Algebra (College Parallel)3 credit hours

Prerequisite: Math 40 or 1 year of high school algebra; 1 year of high school geometry and $\frac{1}{2}$ year of high school trigonometry.

Fundamental algebraic operations are reviewed and extended. Linear and quadratic equations, systems of equations and their graphs, exponents and radicals, determinants, factoring, imaginary numbers, ratio and proportion, binomial formula, progressions, and mathematical induction are included. (3-0)

130 Plane and Solid Geometry4 credit hours

Prerequisite: 1 year high school algebra.

The emphasis of the course is on plane geometry with topics included such as fundamental construction; geometric proof mensuration principles and formulas. Three-dimensional model elements are studied. (4-0)

140 Algebra and Trigonometry4 credit hours

Prerequisite: Introductory Algebra 40 or two units of high school algebra.

This is a course concentrating on some of the topics of algebra and trigonometry. Included topics would be: quadratic equations, logarithms, fundamental trigonometric functions and the solution of triangles; trigonometric applications of complex numbers. (4-0)

- 127 Introduction to Statistics 3 credit hours
 Prerequisite: Introductory Algebra 40 or completion of two units of high school algebra.
 This is the study of the tabulation of data, graphic representation, measures of central tendency and dispersion, probability, types of distributions, sampling, hypothesis testing, and elementary aspects of correlation. This is intended as a first course for students in Business Administration, Education, Psychology, Social Science Engineering, and in all other fields in which measurements and predictions are made. (3-0)
- 120 Trigonometry 2 credit hours
 Prerequisite: At least 1 year of high school algebra and 1 year of plane geometry or equivalent.
 This is a study of trigonometric functions, their inverses and graphs, identities, equations, radian measure and solution of triangles. (3-0)
- 111 Analytic Geometry and Calculus 4 credit hours
 Prerequisite: Math 110 or 2 years high school algebra, 1 year high school geometry, $\frac{1}{2}$ year high school trigonometry.
 This course involves basic terms and concepts in analytic trigonometry, analytic geometry, and differential calculus. Derivatives of algebraic and trigonometric functions, curve tracing, definite and indefinite integrals, applications and antiderivatives are included. (4-0)
- 122 Analytic Geometry and Calculus 4 credit hours
 Prerequisite: Math 111 or equivalent.
 This course involves the differentiation and integration of logarithmic and exponential functions; limits, continuity; definite integral with application to areas and volumes; curve sketching and polynomials; conic sections and the rotation of axes. (4-0)
- 213 Analytic Geometry and Calculus 4 credit hours
 Prerequisite: Math 122
 This course involves the methods of integration, polar coordinates, vectors and vector rotation; infinite series and cylindrical and spherical coordinates. (4-0)
- 224 Analytic Geometry and Calculus 5 credit hours
 Prerequisite: Math 213
 This is a study of partial differentiation and multiple integration and improper integrals with a section on differential equations included. (5-0)

SCIENCE

30 Personal and Community Health3 credit hours

This course is concerned with fundamental knowledge of effective health habits and disease prevention. Community health problems regarding water supply, housing, sewage and other related areas are studied. (3-0)

40 Physical Science3 credit hours

This is a general course which includes basic understanding of the scientific method with integration of astronomy, physics, and chemistry. The study of the history of science, and its contributions to society are involved. Field trips will be included.

111 General Biology4 credit hours

This is a study of the basic structure, development and function of living organisms. Survey of animal and plant kingdoms and classification systems are included. (3-3)

122 General Biology4 credit hours

Prerequisite: Biology 111

This is a study of the principles of genetics, modern cell biology, heredity and evolution. (3-3)

127 General Physiology4 credit hours

Prerequisite: $\frac{1}{2}$ year of College Biology or Zoology.

This is a study of the functioning of various systems of the human body and of the relationship of these systems. (3-3)

126 Botany4 credit hours

Prerequisite: Biology 111 or general college biology.

Chemistry is recommended.

This is a survey of the plant kingdom including structure and function in the higher plants. This course is designed for Biological Science majors. (2-6)

128 Zoology4 credit hours

Prerequisite: High school biology — chemistry recommended.

The classification, evolutionary relationships, and structure of major animal groupings are studied. (2-6)

211 Anatomy and Physiology4 credit hours

Prerequisite: High School biology

This course involves detailed studies of gross and microscopic anatomical structure of the human body and the function to structure relationships. This is designed for biological science students and health science programs. (2-6)

- 222 Anatomy and Physiology4 credit hours
 Prerequisite: Anatomy and Physiology 211
 This is a continuation of the detailed studies of human anatomical structure and physiological systems. (2-6)
- 217 Microbiology4 credit hours
 Prerequisite: General Biology 111, 122; Botany 126 or Zoology 128
 This is a study of the basic principles of microbiology. Historical and systematic viewpoint is developed. (2-6)
- 111 General Chemistry4 credit hours
 Prerequisite: 1 year of high school algebra, high school chemistry desirable.
 This is a beginning general college chemistry course which includes chemical combination laws, states of matter, atomic and molecular structure, bonding and other basic principles. (3-3)
- 122 General Chemistry4 credit hours
 Prerequisite: Chemistry 111
 This course involves study of chemical principles including ionic equilibria, elementary qualitative analysis. (3-3)
- 211 Organic Chemistry5 credit hours
 Prerequisite: Chemistry 122
 This course deals with nomenclature, chemical bonding, correlation of structure with physical properties and the study of aliphatic and aromatic series. (4-4)
- 222 Organic Chemistry5 credit hours
 Prerequisite: Chemistry 211
 This is a study of mechanisms of organic reactions and stereo chemistry. Laboratory work on preparation of organic compounds through multi-step synthesis is involved. (4-4)
- 111 General Physics4 credit hours
 Prerequisite: 2 years of high school algebra and ½ year of trigonometry or Introductory Algebra 40 (may be taken concurrently)
 A study of length, mass, and time measurements; mechanics, work, and power; motion, acceleration, and kinematics; properties of matter and heat are included. (3-2)

- 122 General Physics4 credit hours
Prerequisites: Physics 111; Algebra and Trigonometry 140. (may be taken concurrently)
This course includes units on electricity, light, and atomic physics. (3-2)
- 211 Engineering Physics5 credit hours
Prerequisite: High School physics or equivalent and $\frac{1}{2}$ year of analytic geometry and calculus.
This course is designed for engineering and science majors. Solution of problems dealing with mechanics, heat, and sound, utilizing physical principles and mathematical technique are involved. (4-4)
- 222 Engineering Physics5 credit hours
Prerequisite: Engineering Physics 211, and Analytic Geometry and Calculus 111 and 122.
This course places additional emphasis on problems dealing with electricity, light and atomic physics. (4-4)

**DIVISION
OF
HEALTH
SCIENCES**

HEALTH SCIENCES

DENTAL ASSISTING

111 Orientation to Dental Assisting1 credit hour

Prerequisite: Admission to dental assisting curriculum.

General orientation to college, history of dentistry and the Dental Assistant Association economics of dental assisting, code of ethics, certification of dental assisting, code of ethics, certification of dental assistants, observation in dental offices, dental jurisprudence and malpractice prevention are included in this course. (1-0)

112 Dental Science3 credit hours

Prerequisite: Orientation to Dental Assisting 111 (may be taken concurrently)

This course deals with dental terminology; histology; tooth growth, eruption and anatomy; physiology and anatomy of the head. (3-0)

123 Dental Science3 credit hours

Prerequisite: Dental Assisting 112

This is a study of the relation of oral health to general health, oral pathology, diet and nutrition, occlusions, drawing and wax carving of selected teeth to millimeter measurements. (2-2)

117 Dental Secretarial Procedures4 credit hours

Prerequisite: High school typing and satisfactory completion of typing proficiency test or Typing 111.

This course deals with general office management, telephone techniques, appointment scheduling, patient management, psychology of the dental patient, dental records, purchasing, inventory, banking procedures, correspondence, filing, collecting accounts, and tax returns. (3-4)

210 Dental Materials3 credit hours

Prerequisite: Dental Assisting 123

Chemical properties and uses of dental materials and solutions; manipulative techniques, dental pharmacology and anesthesia are included in this course. (3-0)

211 Dental Roentgenology3 credit hours

Prerequisite: Dental Assisting 112

Principles, practices, and precautions in the operation of dental x-ray units are studied. (2-3)

- 222 Dental Roentgenology2 credit hours
 Prerequisite: Dental Assisting 211
 This course involves instruction and practice in making intra-oral and extra-oral x-ray exposures. Processing and mounting x-ray film are included. (1-3)
- 213 Operatory Procedures3 credit hours
 Prerequisite: Dental Assisting 112; Dental Assisting 211 (may be taken concurrently).
 This is a study of the names and uses of dental instruments, preparation and care of patients, proper chairside assistance and operation of equipment, bacteriology and sterilization. (2-3)
- 224 Operatory Procedures3 credit hours
 Prerequisite: Dental Assisting 213
 Office practices as related to operating procedures, case history records, treatment planning, and estimates are involved in this course. (2-3)
- 215 Dental Laboratory Processes3 credit hours
 Prerequisites: Dental Assisting 123; 210; 224 (may be taken concurrently)
 This is a study of the practice of manipulation of cold cure acrylic material in making custom impression trays, retainers, and minor denture repairs; preparation of impression materials, use of dental laboratory equipment and storage of laboratory supplies. (2-2)
- 226 Dental Laboratory Processes3 credit hours
 Prerequisites: Dental Assisting 215
 This course involves carving inlay patterns, investing and casting inlay restorations; pouring of plaster and stone cases; making stone, amalgam, and copper electroplated dies. (2-2)
- 220 Clinical Practice3 credit hours
 Prerequisites: Dental Assisting 224; 226 (may be taken concurrently).
 This course deals with practical experience in dental assisting under the supervision of an instructor, with the assistance of dentists and/or dental assistants. (0-10)

MEDICAL - SECRETARIAL

110 Medical Assisting1 credit hour

Prerequisite: Admission to the medical assisting program.

This course involves enlightenment by cooperating physicians, technicians, nurses, medical assistants, and others concerning the requirements of the physician and the patient, the Medical Code of Ethics, local and state medical regulations, medical associations and facilities, and methods of anticipating the needs of the physician and the patient. (1-0)

117 Medical Terminology and Speech3 credit hours

Prerequisite: Medical Assisting 110

This is a study of the development of a basic medical vocabulary and fluency in speech so that the student may discharge her duties as a receptionist. Included is a familiarization of the student with the following: medical terminology; case histories; medical records; inter-communication and switchboard facilities; procedures for making appointments for patients, with hospitals and laboratories, for the physician, and for explaining these appointments to patients; the receptionist's duties in greeting patients and others calling at medical offices. (3-0)

121 Medical Assisting3 credit hours

Prerequisite: Medical Assisting 110

This course involves the instruction in assisting the preparation, examination, and treatment of patients as follows: assigning and conducting patients to examination rooms, weighing and measuring patients, draping and placing patients, taking temperatures, pulse rates, and blood pressure; giving tests for color blindness and visual acuity; assisting with minor surgery; applying and removing surgical dressings; ordering and inventorying medical supplies, drugs, and business supplies under the physician's supervision; reducing fear and tension in patients and in those directly interested in patients' welfare. (2-2)

212 Medical-Laboratory Techniques3 credit hours

Prerequisites: Medical Assisting 110; Medical Assisting 121 (may be taken concurrently).

This course involves instruction to familiarize the student with laboratory materials and methods to develop an understanding of the manipulation, care, and use of all materials used in the physicians' offices and medical laboratories. Student familiarization with the following is included: x-ray, electrocardiograph, microscope, bloodcount, and, urine-testing procedures; sterile techniques and methods of sterilization, including the care and handling of hypodermic needles; maintenance of the physician's office and equipment in a sanitary condition; proper maintenance of supplies in examination and treatment rooms and in the physician's bag. Opportunity is provided to observe these procedures in physician's offices, laboratories, hospitals, and/or clinics. (2-2)

223 Medical Assisting (Work Experience)3 credit hours
Prerequisites: Medical Assisting 117; Medical Assisting 212 (may be taken concurrently)

This course involves experience in dealing with patients and working with physicians and experienced medical assistants in physicians' offices and hospitals. The development of professional attitudes and skills in all phases of medical assisting is included. (2-3)

224 Medical Office Record Keeping3 credit hours

This is an introduction to the principles of accounting, medical record keeping, and office maintenance. (2-3)

X-RAY TECHNOLOGY

110 Orientation To X-Ray Technology1 credit hour

Prerequisite: Admission to the X-Ray Technology Curriculum

This course serves as an introduction to the medical profession and to x-ray technology. Included is a study of qualifications; professional ethics and legal problems; basic radiation and electrical protection. (1-0)

111 Fundamentals of X-Ray Technology3 credit hours

Prerequisites: X-Ray Technology 110 (may be taken concurrently)

This course includes the theoretical and practical aspects of medical x-ray technology; x-ray protection; basic x-ray physics; darkroom practice; nursing procedures and medical terminology pertinent to x-ray technology and hospital observation. (2-5)

122 Principles of X-Ray Technology3 credit hours

Prerequisite: X-Ray Technology 111

This course involves the principles of radiographic exposure; radiographic positioning; film analyses; and clinical x-ray experience. (2-4)

123 Clinical X-Ray Experience9 credit hours

Prerequisite: X-Ray Technology 122

This course includes a study of common radiographic examinations using contrast media; protection of patients and personnel; film analyses; and clinical x-ray experience. (3-30)

214 Clinical X-Ray Experience7 credit hours

Prerequisite: X-Ray Technology 123

This is a study of advanced roentgenological procedures with emphasis on pediatric radiography; film analyses; clinical x-ray experience. (2-20)

225 Clinical X-Ray Experience8 credit hours

Prerequisite: X-Ray Technology 214

This study involves special radiographic procedures with emphasis on principles of radiographic exposure; clinical x-ray procedures, film analyses; and topographic anatomy. (4-16)

216 Radiation Therapy3 credit hours

Prerequisite: X-Ray Technology 214

This course includes radiation therapy, intraoral radiography; survey of medical and surgical diseases; equipment maintenance, film analyses; and clinical x-ray experience. (2-4)

124 X-Ray Department Administration2 credit hours

This is a study of organizational and administrative factors involving departmental relationships; financial control; recompense for services rendered; service charges to patients; estimating cost of department; legal considerations; departmental records; filing systems; and preparation of schedules. (1-2)

**DIVISION
OF
PERSONAL
AND
HOSPITALITY
SERVICES**

DIVISION OF PERSONAL AND HOSPITALITY SERVICES

LIBRARY

111 Library Practice4 credit hours

This is an introductory course for General Library Aides, Medical Library Aides, and Legal Assistants. This course includes cataloging, shelving and display of materials. Inventory and circulating procedures, materials maintenance are studied. (2-4)

122 Library Technical Processes5 credit hours

This course includes library management and supervision, budgeting, requisitioning, updating, and materials preparation. (2-5)

**DIVISION
OF
SOCIAL
SCIENCES**

DIVISION OF SOCIAL SCIENCES

ECONOMICS

- 111 Basic Economics3 credit hours

This is a study of the American economic system as a mixed economy of free enterprise and free markets with elements of monopoly, governmental ownership, regulatory functions. The significant factors concerned with economic program and stability are included. (3-0)

- 122 Basic Economics3 credit hours

Prerequisite: Basic Economics 111

This is a continuation of study of the American economic system. (3-0)

GEOGRAPHY

- 101 Principles of Geography4 credit hours

This is a study of fundamental earth patterns and distributions with the underlying principles involved. Physical and cultural elements with relationship to people are included. (4-0)

- 132 World Regional Geography3 credit hours

This is a study of the world and its nations from a regional viewpoint. Physical and cultural elements involved in the various nations and their role in the contemporary world setting are included. (3-0)

- 152 Geography of Michigan2 credit hours

This is a regional study of the state with emphasis on survey and analysis of types including man's cultural adaptation to them. (2-0)

HISTORY

- 110 History of Michigan2 credit hours

This is a study of this state from the time of the earliest known inhabitants through French, British and American acquisition, territorial status and statehood. (2-0)

- 111 Western Civilization4 credit hours

The political, social, economic, and cultural aspects of Western civilization from its early beginnings are studied. General contributions made and effect on people are included. (4-0)

- 122 Western Civilization4 credit hours

Prerequisite: Western Civilization 111 or consent of instructor.

This is a survey of the important developments to the present time, giving emphasis to colonial, national, and democratic movements and their impact on society. (4-0)

111 United States History3 credit hours

This is a study of the United States from its immediate European backgrounds to the end of 1865. Survey of American models and modifications of European institutions are included. (3-0)

122 United States History3 credit hours

Prerequisite: U.S. History 111 or consent of instructor.

This is a study of the history of the United States from 1865 to the present, and the emergence of the United States and its leadership responsibilities. (3-0)

POLITICAL SCIENCE

100 Introduction to Political Science3 credit hours

This course provides the student with an understanding of the nature and scope of political science — theoretically and historically — with emphasis on American institutions. Federal and state governmental organizations including general principles of modern government are included. (3-0)

130 Michigan Government2 credit hours

This is a study of the State Constitution. Organization and powers of state government with emphasis on state - local and county - city organization are included.

120 Comparative Governments3 credit hours

Prerequisite: Political Science 100

This is a study of important European governments with emphasis on basic features of the parliamentary and presidential systems in England and the United States. This course provides the student with a broad understanding and appreciation of the common governmental problems of the world. (3-0)

PSYCHOLOGY AND SOCIOLOGY

107 General Psychology3 credit hours

This is an introduction to the scientific study of human behavior which includes history of psychology; sensory and perceptual processes and other basic concepts dealing with the total personality. (3-0)

211 Psychology of Human Relations3 credit hours

This is a basic course dealing with personal and group dynamics involving practical application of sociological and psychological principles in developing an understanding of forces operating in various sectors of society.

222 Industrial Psychology3 credit hours

Prerequisite: Psychology of Human Relations 211 recommended.

This course involves the principles to selection, placement, training, supervision, evaluation, motivation of personnel in an industrial setting. (3-0)

111 Principles of Sociology3 credit hours

This is a study of the behavior of human groups involving concepts of culture, community structures; social organization and control and basic processes of inter-action in sociological phenomena. (3-0)

122 Principles of Sociology3 credit hours

Prerequisite: Sociology 111

This is a continuation of study in fundamental concepts of social change with emphasis on selected social problems of the American community. (3-0)

**DIVISION
OF
TECHNICAL
AND
INDUSTRIAL**

AUTOMOTIVE MAINTENANCE MANAGEMENT

AUTOMOTIVE

110 Basic Automotive 3 credit hours

This is for the student with very limited automotive background. This is a survey course introducing history and principles of internal combustion, engine nomenclature, power transfer systems, friction, torque, effects of gravity, basic hand tools and manuals. (2-4)

111 Automotive 5 credit hours

Prerequisite: High school automotive equivalent or Basic Automotive 110.

This is for the student who will want to develop or improve skills leading to early employment as a mechanic. The course includes safety inspections, engine build up, fuel, electrical and cooling systems. This course is integrated to include suspension, steering, braking and transmission drive lines. Introduction to trouble shooting and diagnosis is involved. (3-12)

122 Automotive 5 credit hours

This is for the student continuing in automotive maintenance management at the service manager's level. Employed students who wish to upgrade their skills may elect this offering. This course is integrated to include advanced diagnostic equipment relating to automotive safety inspections, performable capability, and correction of related malfunctions, parts management, customer relations, elements of supervision at the introductory level. (3-12)

111 Automotive Service Station Mechanic 5 credit hours

This course is intended for the student who wishes employment or is employed in automotive service. This course leads to service station management training. Instruction is integrated to include skill development in automotive mechanical safety covering such items as lubrication, wiring, exhaust systems, cooling, springs and road leveling devices, tires and accessories, refueling. (3-12)

122 Automobile Service Station Mechanic 5 credit hours

Prerequisite: Automotive Service Station Mechanic III or equivalent.

This course is intended for the service station manager or potential manager. Instruction includes advanced diagnostic equipment, engine tune-up, carburetion and braking. (3-12)

111 Automotive Body Repair5 credit hours

This is for the student who wishes to become employable at the early level in body repair work or who may be employed and wishes to improve basic skills. This introductory course will include sheet metal repair in welding, leading, plastics, bumping and dinging, metal forming, filing, basic finishing, shrinking and layout of body material and some estimating. (3-12)

122 Automotive Body Repair5 credit hours

Prerequisite: Automotive Body Repair III or equivalent.

This is for the student who wishes to develop or upgrade advanced skills in auto body repair. Instruction includes body repair, welding, finishing, painting, estimating. (3-12)

120 Alignment and Collision5 credit hours

Prerequisite: Automotive Body Repair 111 or 122 or equivalent.

This is for the student who wishes to specialize in alignment and major collision service and management. Instruction includes safety inspections, steering, wheel alignment and balance, frame straightening, front and rear members. Estimating and work load control are an important part of this course. (3-12)

210 Auto Air Conditioning and Refrigeration5 credit hours

This is an introductory course to the principles of refrigeration and atmospheric control related to automotive equipment and includes servicing and trouble shooting of such equipment. (4-6)

220 New & Used Car Reconditioning3 credit hours

This course is recommended for those preparing for employment in automotive service facilities, preparing new cars for the customer or reconditioning second-owner cars for resale. Instruction will include safety inspection, minor maintenance, interior car cleaning, external preparation, lot maintenance, and security. (2-6)

117 Parts, Manuals & Warranty1 credit hour

This is an introductory course to parts manuals and service literature. Understanding of manufacturer's agreements and the service person and customer relation to these agreements is included. (1-2)

WELDING

118 Welding and Fabrication5 credit hours

The use of the welding process (arc and gas) in the fabrication of metal structure is stressed. All types of welded joints and welding in all positions are produced in the welding laboratory. Care and maintenance of welding equipment are practiced. Basic blueprint reading, shop mathematics application, and layout and development are included in the instruction. (3-12)

DRAFTING AND DESIGN

110 Basic Technical Drawing3 credit hours

Prerequisite: Plane Geometry 130 (May be taken concurrently)

This course involves graphic language, free hand sketching, lettering, pictorial drawing, revolutions, techniques and applications, geometry of technical drawing, and related technical terms. (2-4)

111 Drafting6 credit hours

Prerequisite: Basic technical drawing 110

This course involves practice and procedures, materials, tool design standards, commercial standards, cutting tools, production tooling. (2-10)

122 Drafting6 credit hours

Prerequisite: Drafting 111

This course involves detailing of jigs, fixtures, and dies. (2-10)

111 Architectural Drawing10 credit hours

A high intensity course designed to present line work, lettering, projection and pictorial skills using architectural media. A portion of the time will be spent studying construction materials and the history of architecture. (5-15)

122 Architectural Drawing10 credit hours

A continuation of the previous semesters work concentrating on the presentation and solution of specific problems using architectural drawing techniques and procedures. A portion of time will be spent studying mechanical equipment used in construction and surveying graphic reproduction processes. (5-15)

113 Architectural Drawing4 credit hours

Prerequisite: 2 years high school drawing or Basic Technical Drawing 110.

Specific drawing problems and the presentation of their solution in the architectural idiom are studied. (2-8)

- 124 Architectural Drawing4 credit hours
 Prerequisite: Architectural Drawing 113.
 Introduction to residential construction and requirements is studied with preparation of working drawings for building contractors and custom homes. (2-8)
- 215 Architectural Drawing5 credit hours
 Prerequisite: Architectural Drawing 124
 Major problems in architectural drawing (i.e., preparation of drawings and cost for a moderate sized building such as a school, church, etc.) are studied. (3-12)
- 226 Architectural Drawing5 credit hours
 Prerequisite: Architectural Drawing 215
 Major problems in architectural drawing (i.e., preparation of drawings and cost for a large size building such as a shopping center, multi-story, etc.) are studied. (3-12)
- 117 Construction Materials3 credit hours
 A survey of basic materials and methods used in the construction industry are studied. (3-0).
- 118 History of Architecture2 credit hours
 This course is a study of architectural development and influencing factors. (2-0)
- 120 Mechanical Equipment2 credit hours
 A survey of heating, ventilating, plumbing and electrical equipment used in building construction is reviewed. (2-0)
- 210 Structural Design2 credit hours
 This course is an introduction to the design of structural members (i.e., steel, reinforced concrete, etc.). (2-0)
- 217 Graphic Reproduction Processes2 credit hours
 A survey of reproduction equipment and materials and the specific values of each is reviewed. (1-2)
- 218 Design Fundamentals2 credit hours
 This course is an introduction to the theory of design, space composition, color, materials and textures. (2-0)
- 219 Surveying3 credit hours
 Prerequisite: Trigonometry 120
 This is a lecture and field course concentrating on the process of surveying and the analysis of the data. (2-4)

220 Specifications1 credit hour

This is an introduction to the organization and preparation of contract specifications for building construction. (0-3)

127 Graphics3 credit hours

Prerequisite: Basic Technical Drawing 110; General Physics 111; preceded or accompanied by Algebra and Trigonometry 140.

Principles of linkages, cams, centros, displacements, motions, velocities, mechanisms and vectors are studied and their solutions presented graphically. (2-6)

ELECTRONICS TECHNOLOGY

111 Electrical Fundamentals (Power Sources 11)3 credit hours

Prerequisite: High School Math. (Those students majoring in the Electrical Mechanic or the Electronic Technology program must have previously completed the requirements of, or be simultaneously enrolled in, Introductory Algebra).

This is an introductory course dealing with the fundamentals of Electricity through the study of electric current generation, measurement, and application.

A general coverage is presented, covering magnetic phenomena, A.C. wave generation and measurement, Alternating Current transfer, time constants (circuit breakers; ignition), relays and regulators; an introduction to commutation, A.C. Rectification, batteries, and switches. An introduction to hydraulic control and refrigeration theory will be presented. The electrical instrumentation used will include: oscilloscopes; A.C. current, volt, and watt meters; tachometers; V.O.M.; and impedance bridge. (2-3)

113 Electrical Applications1 credit hour

Prerequisite: Accompanied by Electrical Fundamentals 111.

The course consists of sets of programmed laboratory exercises applying electrical theory and measurements.

Required only of those students in the Electrical Mechanic and Electrical Technology programs. (0-3)

122 Electrical Fundamentals (Power Sources 22)3 credit hours

Prerequisite: General Physics 111; preceded or accompanied by Algebra and Trigonometry 140).

This course presents a study of alternating current generation, commutation, and rectification; exercises in the solutions of series, parallel, and complex circuits are presented. A study is made of relay sequencing and logic. Common motor starting and speed controls are covered. An introduction to solid state and vacuum tube diodes and triodes is presented. (2-3)

124 Electrical Applications1 credit hour

Prerequisite: Electrical Fundamentals 122.

A continuation of Electrical Applications; simultaneous on the job training may be substituted with the permission of the director of the division. Required of those students in the Electrical Mechanic and Electrical Technology programs only. (0-3)

120 Industrial Electricity4 credit hours

Prerequisite: Electrical Fundamentals 111; preceded or accompanied by Algebra and Trigonometry 140 and General Physics 111.

The study and application of single and three phase transformers and motors; servos and synchros; motor controls; switch boxes; wiring, and codes is included. (2-6)

211 Electronics4 credit hours

Prerequisite: Electrical Fundamentals 111 and 122.

The study and applications of transistor and vacuum tube theory and equivalent circuits; principles of amplifier circuits and applications; familiarization with electronic components and instrumentation are involved. (3-3)

222 Electronics4 credit hours

Prerequisites: Electronics 211; preceded or accompanied by Audio Frequency Transmission 210.

This course deals with the theory and use of Oscillators; detectors; amplitude, frequency, and phase modulation; multiplexing and telemetering systems. (Often called "Communications Electronics") (3-3)

210 Audio and Intermediate Frequency Transmission3 credit hours

Prerequisite: Electrical Fundamentals 111 and 122.

A presentation of network theorems; series, parallel, and tuned resonance (IF) circuits; impedance transformation and matching; A.C. and D.C. coupling methods is included. (3-0)

217 Electronic Switching and Control (Logic)3 credit hours

Prerequisite: Electrical Fundamentals 111 or 122 or consent of the instructor.

A presentation of the theory of electronic logic accompanied by problems using "AND" gates, "OR" gates, shift registers, time delays, and counters; M.I.L.: and machine printed logic symbols are used. The binary number system and algebra are applied. Magnetic storage systems are discussed. (3-0)

228 Industrial Electronics4 credit hours

Prerequisite: Electronics 211; preceded or accompanied by Audio Frequency Transmission 210.

The study and use of silicon controlled rectifiers; special solid state devices; gas filled tubes is covered. Industrial applications of electronics to such problems as light regulation, motor speed control, and welding are made. A study is made of printed circuitry, micro-module, and other packaged circuits. JEDEC, NEMA, and EIA standards are discussed. (3-3)

229 Radio, Television, and Circuits Repair5 credit hours

Prerequisite: Preceded or accompanied by Electronics 222 and Industrial Electronics 228.

A study is made of circuits—including those used in radio and television. Sets are deliberately made inoperative by the instructor and then assigned to a student to "Debug". Wiring schematics and service manuals are used. Each student is to design, layout, fabricate, and wire a project agreed upon with the instructor. (2-9)

MECHANICAL TECHNOLOGY

220 Machinery Construction and Repair4 credit hours

Prerequisites: Shop Orientation 111 and 122

Basic machinery construction and mechanisms are studied. Overhaul, inspection testing and checking parts are involved. Parts replacement and adjustments are included. (2-8)

111 Shop Orientation1 credit hour

Function and usage of all small tools and measuring devices are involved. Films on toolroom machinery operations are shown and studied. Field trips to tool shops and production shops are made. Shop theory and safety are included. (2-2)

122 Shop Orientation1 credit hour

Prerequisite: One year high school shop or Shop Orientation 111.

Shop layout problems on steel are studied using surface plate, sine bar, and height gage. Techniques and usage of various checking instruments such as: gages, indicators are included. Field trips to foundry and die casting shops are made. (2-2)

210 Shop Technology5 credit hours

Prerequisite: Shop Orientation 122 or consent of instructor.

Machine operations involved with Lathe, Shaper, Milling Machines, Grinders and other shop machines. Construction of simple jigs, fixtures and gages are included. (3-12)

111 Power Sources(See Electrical Fundamentals - 111)

122 Power Sources(See Electrical Fundamentals - 122)

110 Blueprint Reading3 credit hours

This course includes elementary blueprint reading for: pre-engineer, machine operator, machine repairman, electronic technician, metal fabricator. (3-0)

120 Blueprint Reading3 credit hours

Prerequisite: Blueprint Reading 110

Advanced blueprint reading is studied. (3-0)

Administrative Officers

WASHTENAW COMMUNITY COLLEGE

David H. Ponitz President

A.B.—University of Michigan
M.A.—University of Michigan
Ed.D.—Harvard University

Leland B. Luchsinger Executive Assistant

B.S.—Texas Agriculture & Mechanical University
M.S.—Texas Agriculture & Mechanical University
Ed.D.—The University of Texas

Paul R. Hunt Dean, Occupational Studies

B.S.—Wayne State University
M.A.—Wayne State University
Ed.D.—Wayne State University

Norman C. Olmsted Dean, General Studies

A.B.—University of Michigan
M.A.—University of Michigan

David S. Pollock Dean, Student Personnel Services

A.B.—University of Michigan
Graduate Study—University of Michigan

Lloyd H. VanBuskirk Business Manager

Graduate—General Motors Institute
B.S.—Eastern Michigan University
M.A.—Eastern Michigan University

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