1967-1968 CATALOG

AREA TEN COMMUNITY COLLEGE

First Revision - June, 1967

Administrative Offices:
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Telephone: 366-5321
Area Code: 319

AREA TEN COMMUNITY COLLEGE

Board of Directors

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- Lowell E. Sisson, B.S., Program Analyst

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- Martha Graham, M.A., Adult Basic Education Specialist
- Doris Hamilton, B.A., Adult Basic Education Specialist

Division of Student Personnel Services
- Donald Page, M.S., Director
- Ronald Napier, M.A., Coordinator of Admissions
- Hal Walter, M.S., Coordinator of Housing and Student Activities
- Calvin Hershner, M.A., Coordinator of Financial Aids and Placement

Library

SUPERINTENDENT'S MESSAGE

The institution described in the following pages is but one example of a rapidly developing educational movement, the two-year comprehensive community college.

Until rather recently, educational opportunities beyond high school were limited to junior and senior colleges and universities. The programs provided by these institutions served the needs of a relatively select group of individuals. As a result, the educational needs of many people went unmet, while the demand for better educated and more highly trained individuals continued to increase.

Comprehensive community colleges are being established with increasing frequency to serve such needs and demands. The programs provided therein vary widely in design and content, in order that the greatest number of people of widely diverse needs, interests and abilities may be served. Thus, comprehensive community colleges provide programs for the career-oriented and the college transfer student, for the mature adult and the recent high school graduate and for the individual who wishes to complete high school and the one who has completed college.

Area Ten Community College is such an institution. It provides many different educational programs for the people who live in Area Ten. These programs are described briefly in the pages which follow. I hope you will find something of interest and worth as you read through them.

Selby A. Ballantyne
Superintendent

Calendar 1967-1968

FALL QUARTER 1967-68

Registration	Aug. 30-1
Labor Day weekend	Sept. 1-4
Classes begin	Sept. 5
Last day of quarter	Nov. 22
Vacation	Nov. 23-26

WINTER QUARTER

Registration	Nov. 27-28
Classes begin	Nov. 29
Christmas	Dec. 23 - Jan. 2
Classes resume	Jan. 3
Quarter ends	Feb. 23
Vacation	Feb. 24 - Mar. 3

SPRING QUARTER

Registration	Mar. 4 5
Classes begin	Mar. 6
Easter Vacation	Apr. 12-15
Quarter ends	May 24
Vacation	May 25 - June 2

SUMMER QUARTER

Registration	June 3
Classes begin	June 4
Holiday	July 4
First session ends	July 12
Registration	July 15
Classes begin	July 16
Second session ends	Aug. 23

FALL QUARTER 1968-69

Registration	Sept. 3-4
Orientation	(Could be latter part of previous week, e.g., Aug. 28-30.)
Classes begin	Sept. 9
Quarter ends	Nov. 27
Quarter break	Nov. 28 - Dec. 1

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GENERAL INFORMATION

HISTORY

In January, 1965, county school board members in an eight-county area in east-central Iowa voted to establish a steering committee for the purpose of undertaking a comprehensive study of the area which would provide the basis for establishing a vocational school. Work on the study was begun almost immediately and by July, 1965, was completed. As a result, a proposal for a vocational-technical school was prepared and submitted to the State Department of Public Instruction.

Meanwhile, the state legislature had considered and passed legislation which provided for the establishment of a system of area vocational-technical schools and/or community colleges throughout the state. Educators and laymen in Area Ten recognized the need for a comprehensive community college which would permit the provision of college transfer curricula as well as vocational-technical curricula. Hence, the nine-man board of directors elected by the citizens of the area asked for and received permission to establish Area Ten Community College. The college was formally established on July 1, 1966.

Upon its establishment, the college assumed responsibility for the operation of the Cedar Rapids Vocational-Technical School, which had been provided since 1964 by the Cedar Rapids Public Schools. Additional vocational-technical programs were offered by the college during its first year. A college transfer program will be added in September, 1967.

PHILOSOPHY

Few would deny that the need and the demand for formal education is greater today than at any other period of time. The importance of secondary school education for the many and higher education for the few has long been accepted; yet, only in recent years has recognition been extended to the need for post-high school education for the vast majority of adults Institutions of higher education have traditionally been geared to serving a select few of the adult population and, hence, were not prepared to serve the variety of needs of the growing numbers of people who desired to participate in post-high school education. In many cases, the responsibility for serving these adults has been delegated to the comprehensive community college.

educational alternatives from among which each individual may choose on the basis of his interests and qualifications. An overriding concern, therefore, is to provide curricula and programs of sufficient breadth and quality so that any individual who enrolls may find educational experiences and opportunities which are suited to his interests and abilities. In so doing, the college hopes to stimulate each student to strive for excellence in whatever he undertakes and as a result, to grow towards greater self-fulfillment.

In implementing this charge the college provides a variety of educational opportunities including:

1. The first two years of college level study.
2. A broad range of technical-vocational curricula.
3. An extensive variety of continuing education opportunities. for adults, including vocational and avocational activities.
4. Student personnel services, including counseling and guidance and
5. Activities which enrich the cultural life of people in the Area Ten district.

ADMISSION POLICIES

Area Ten Community College will accept for admission all individuals with a high school diploma or its equivalent. Mature adults who have not not completed high school may be admitted, on an individual basis, to certain programs. Admission to the college does not, however, insure admission to all programs offered. The college reserves the right to guide the placement of students on the basis of counseling, examination, pre-enrollment interviews, and achievement in previous academic work. A student admitted to the college who does not meet the designated standards of a curriculum may be given an opportunity to enroll in certain appropriate classes in order to gain the necessary background for enrollment in the desired curriculum or course.

All applicants should submit the following material to the Admissions Office:

1. <u>New Students</u>

    a. <u>Application for Admission</u>

        An application form can be obtained from the Admissions Office of the Area Ten Community Collegeo The form

b. High School Transcript

A transcript must be sent to the college by the high school principal or counselor. Request that it be sent to Area Ten Community College.

c. Testing

Arts and Sciences Division

All applicants should complete the American College Tests, either in their junior or senior year in high school. ACT results are used by college officials in advising students concerning courses and programs. (Students can obtain information from American College Testing Program, Inc., Box 168, Iowa City, Iowa. Application materials are also available in most high school guidance offices. The code number for Area Ten is 1275.)

Vocational-Technical Division

Applicants are required to take the General Aptitude Test Battery from the Iowa State Employment Security Commission, unless they are applying for admission to one of the Health Occupations programs. This test is administered at regular intervals by the local Iowa State Employment Offices. Ask the Employment Office to send the results to the Director of Admissions, Area Ten Community College.

Special Testing

Additional tests may be required for specific courses of study, e.g., Health Occupations and Data Processing. Applicants will be notified on an individual basis regarding these tests.

Interview

A personal interview is required for entrance into the vocational-technical division courses of study. Applicants will be notified when all materials have arrived and will, at that time, be asked to make an appointment for a personal interview.

f. Health Certificate

All applicants must have the Area Ten Health Certificate completed by a licensed physician and forwarded to the Admissions Office. Practical Nursing candidates will be required to complete a special health certificate in lieu of the regular Area Ten certificate.

2. Transfer Students

In addition to the above, all applicants transferring to Area Ten from other colleges must submit complete transcripts of credits received at those colleges.

COURSE LOAD

Arts and Sciences Division

Individuals pursuing twelve or more quarter hours of credit during any quarter will be considered as full-time students. To earn a degree in six quarters students should plan to enroll for fifteen quarter hours per term. Special permission is needed to take more than eighteen hours in any given quarter.

Vocational-Technical Division

A student in the Vocational-Technical Division must enroll for the number of credit hours required in each program of studies. Refer to the section on vocational-technical programs in the latter part of this catalog for information concerning credits and/or course load.

GRADING SYSTEM

Grades will be based on students' levels of achievement in those courses in which they enroll. Following is the scale employed:

Letter Grade	Interpretation	Grade Points
A	Excellent	4
B	Above average	3
C	Average	2
D	Passing, but below	1

GRADUATION REQUIREMENTS

Area Ten Community College grants degrees, diplomas and certificates to those individuals who successfully complete programs in arts and sciences and vocational-technical areas. The following degrees are granted.

Associate in Arts
Associate in Science
Associate in Applied Science

Requirements for the Associate Degree in Arts or Sciences:

General Requirements:

1. Earn a minimum of 90 quarter hours of credit.
2. Earn a minimum of 36 quarter hours of credit at Area Ten if transferring from another college. Students should earn their last 30 credits on a degree program at Area Ten.
3. Maintain a minimum cumulative grade point average of 1.80.
4. Complete satisfactorily nine quarter hours in rhetoric and three quarter hours in speech.

Additional Requirements for the Associate in Arts Degree:

Complete general requirements indicated above.
Complete group requirements as follows:

I	Humanities	8 credit hours
II	Social Sciences	8 credit hours
III	Math-Science	8 credit hours

3. Complete satisfactorily a transfer curriculum with major emphasis in the humanities and/or social sciences.

Additional Requirements for the Associate in Science Degree:

1. Complete general requirements listed ab ve.
2. Complete group requirements as follows:

I	Hunanities	8 credit hours
II	Social Sciences	8 credit hours
III	Math-Science	30 credit hours

1 Definition of group requirements include: Group I Humanities; Introduction to Literature, Literature of the Western World, Introduction to Theatre, Art Appreciation, Music Appreciation, French, Spanish.

Requirements for Associate in Applied Science Degree:

This degree is issued to those individuals who satisfactorily complete a two-year technology curriculum. Since technical programs vary in terms of their content, each program should be checked for graduation requirements. A common requirement for all, however, is a cumulative grade point average of 1.80. In some cases credits earned toward an Associate in Applied Science degree may be transferable to baccalaureate degree-granting institutions.

Requirements for a Diploma in Vocational or Technical Education:

Diplomas are issued to individuals who satisfactorily complete vocational or technical curricula of less than two years' duration. They must maintain a cumulative grade point average of 1.80.

Requirements for a Certificate:

A certificate of completion is issued to signify that a student has satisfactorily completed a course of instruction other than those listed above. Certificates are generally issued to students at the completion of a specific short-term course of study.

SCHOLASTIC PROBATION AND SUSPENSION

Any student who does not achieve at least a 1.5 grade point average in a given quarter will be placed on probation for the following quarter. If, at the end of the probation quarter, he has brought his grade point average up to 1.5, he may be removed from probation for the following quarter. However, if the student's grade point is not 1.5 or higher for the probation quarter, his case will be reviewed by a faculty committee for whatever action it deems necessary.

WITHDRAWALS AND CHANGES IN REGISTRATION

A student who wishes to withdraw from the college must receive written authorization to do so from the Division of Student Personnel Services and follow the procedures for withdrawal as outlined therein. Failure to do so will result in a grade or grades of "F".

A student who wishes to drop and/or to add courses after registration must also receive written authorization to do so from

TUITION AND FEES

Tuition for all courses of study at Area Ten Community College is $67.00 per quarter for full-time students. (A full-time student is defined as one who is enrolled in twelve or more quarter hours of credit). Any individual carrying less than twelve hours is considered a part-time student, and his tuition is pro-rated accordingly.

In addition to tuition, other fees may be charged to help defray the cost of materials used by students, e.g., in lab and shop courses and of a portion of the cost of student activities.

Refund of Tuition

In case a student withdraws from the college prior to the end of a quarter, the following policy concerning refund of tuition and fees will be in effect:

Time of Withdrawal	Percentage of Refund
Before the end of the first week:	80
Before the end of the second week:	60
Before the end of the third week:	40
Before the end of the week:	20

No refund will be made after the fourth calendar week.

Students who must withdraw because of health reasons as certified by a physician or because of induction into the armed services, will receive either a full refund or they may elect to receive full credit toward tuition when applying for readmission to the college.

Textbooks

The estimated cost of textbooks for full-time students is $20-$25 per quarter in the arts and sciences and in the technical programs. Students enrolled in vocational-technical courses of study may invest up to $50 per year in books and tools. Students may purchase most of their textbooks through the Area Ten Community College book store.

LIBRARY AND BOOK STORE

A library is available to students at Area Ten. Included are basic reference materials and periodicals. Each department in the Vocational-Technical Division maintains an appropriate collection.

STUDENT SERVICES

Counseling Services

The college provides a staff of professional counselors to assist students in vocational and educational planning and in solving problems of a personal or social nature.

The counselors seek to help students discover the facts upon which students can make decisions and plans concerning a course of action. Upon admission to the college, each student has an individual conference with a member of the counseling staff to consider his high school background, his placement test results, his interests, his aptitudes and his goals. He is assisted in selecting an appropriate curriculum and in determining his course of study.

A student who experiences difficulty or dissatisfaction with the particular curriculum that he has selected is encouraged to make use of the counseling service for further discussion with the counselor and/or for individualized aptitiude, interest and personality testing.

Assistance is also available to all students who desire help in acquiring better study habits, developing satisfactory personal and social relationships, solving financial problems, selecting a transfer school, and learning about employment possibilities. The counseling service maintains a file of occupational information as well as catalogs of representative colleges and universities.

Students should understand, however, that the responsibility for meeting graduation requirements or requirements for transfer to other schools is one for which they must assume primary responsibility.

Counselors are also available prior to the beginning of the fall term for conferences with students if desired.

Financial Assistance

Area Ten Community College has been granted federal funds for the following financial aid programs:

National Defense Student Loan Program
College Work-Study Program
Educational Opportunity Grants
Vocational Education Work-Study Program

Housing Service

Area Ten Community College does not have dormitory facilities. However, students are assisted in locating appropriate housing in the Cedar Rapids area. All unmarried students who are under twenty-one years of age are required to live in college-approved housing. The Student Personnel Services Division inspects housing for cleanliness, appropriate lighting, ventilation, etc., and to insure that a responsible adult is living on the premises. Students can secure a list of approved housing from the Office of the Coordinator of Student Activities and Housing some time prior to their enrollment in classes.

Placement Service

Area Ten Community College provides students with free placement service for both part-time and full-time jobs. Students should contact the Coordinator of Financial Aids and placement for assistance and further information.

Student Organizations and Activities

As the enrollment at Area Ten increases and as improved communications within the student body and among students, administration and faculty require, a plan for student participation in the government of the college will be developed. A major function will be to provide a channel of communication between students and the professional staff of the college. Student groups wishing to start an organization must apply to the Coordinator of Student Activities. Provisions will be made for social events, student publications, intramural and intercollegiate activities, and so forth.

ADULT AND CONTINUING EDUCATION

The Adult Continuation Division of Area Ten Community College offers a wide variety of credit and non-credit courses in both arts and sciences and vocational technical education for persons interested in preparing for certain technical and business specialties such as in-service training and/or skill improvement, improving work skills and enjoyment of leisure time. In this division no formal requirements for admission are set since many of the students will be registered as special enrollees. In certain cases some courses will require a special background of training or education; where such experiences are necessary they will be indicated in the course description. No minimum age is required; however, students who are enrolled in high school must receive permission from their high school principal in order to enroll in adult evening or adult continuation school courses.

Courses are offered as a community service to fulfill the educational needs of professions, business, industry and labor, as well as of other interested groups upon request. These courses may be of a varied duration to meet specific needs.

Examples include:

Foremanship and Supervisory Training
Mid-Management Training
Nurse Re-Orientation
Reading Improvement
Welding
Drafting
Machine Shop
Electronics
Office Education
Distributive Education
Trade and Industrial Education
Agriculture Education
Homemaking Education
A variety of avocational, cultural, and civic activities

In addition to college-level, vocational, and avocational courses, the division operates a high school completion program for those adults who have not graduated from high school. Details of the plan may be secured by writing to the Director of the Adult Division.

Courses are offered at various population centers scattered throughout the seven-county district as well as at the campus. In addition, itinerant instructors are available for on-site instruction in business and industry.

VOCATIONAL-TECHNICAL PROGRAMS

A wide variety of programs in vocational and technical areas is provided at Area Ten Community College" The programs provided during the 1966-67 school year are described on the following pages. Additional programs are being planned in health occupations and in business occupations for the 1967-68 school year. Descriptions of these programs are currently being developed. Contact the Coordinator of Admissions for information concerning these programs of study.

DATA PROCESSING (Computer Oriented)

The computer oriented student may be trained as: (1) computer operator, (2) programmer's assistant, (3) programmer, or (4) programmer-analyst, all of whom start with the same course schedule" The computer operator training is two quarters in length, the programmer's assistant three quarters, the programmer four quarters, and the programmer-analyst eight quarters.

COMPUTER OPERATOR — Total Credits: 39

First Quarter

Unit Record Data Processing	5
Data Processing and Computer Concepts	3
Applied Programming I	8
Introduction to Data Processing	1
Electives	2
	19

Second Quarter

Applied Programming II	12
Testing and Debugging Programs	4
Programming Projects I	3
Introduction to Data Processing	1
	20

PROGRAMMER'S ASSISTANT — Total Credits: 59

First and se.cond-quarters as outlined above plus a third quarter as follows:

Third Quarter

Applied Programming III	8

PROGRAMMER Total Credits: 77

First three quarters as outlined above, plus a fourth quarter as follows:

Fourth Quarter

Documentation II	3
Applications & Systems Analysis II	3
Programming Projects III	3
Related Equipment II	1
Data Communications	3
Electives	5
	18

PROGRAMMER-ANALYST Total Credits: 149

First fourquarters as outlined above, plus four additional quarters as follows:

Fifth Quarter

Accounting I	3
Programming Projects IV	3
Applications and Systems Analysis III	6
Business Organization & Management	3
Communication Skills I	3
	18

Sixth Quarter

Applications & Systems Analysis IV	6
Communication Skills II	3
Programming Projects V	3
DP Math II (Calculus)	3
Electives	3
	18

Seventh Quarter

Applications & Systems Analysis V	6
DP Math III	3
DP Math IV	3
Technical Writing	3
Applied Programming IV	3
	18

DATA PROCESSING (Non-computer Oriented)

A wide range bf occupations involving a basic understanding of data processing combined with some knowledge of office-type training is available. These non-technical occupations fall under the program of Data Processing Supporting Services and include training for men and women in such careers as records, auditor, documentation specialist, tape librarian, scheduler, and materials preparation specialist. A common core of courses supplemented by electives prepares students for these occupations. The length of training is generally two quarters.

DATA PROCESSING	Total Credits:	32
First Quarter		
Keypunching		3
Introduction to Data Processing		4
Unit Record Data Processing I		3
Office Automation		3
Electives		3
		16
Second Quarter		
Communication Skills I		3
Data Processing and Computer Concepts		3
Documentation I		3
Electives		7
		16

ELECTRONICS TECHNOLOGY

Electronics Technology is a two-year curriculum designed to prepare individuals to work as industrial electronics technicians. The basic requirement for admission to this program is at least two years of mathematics, preferably two years of algebra. However, a year of algebra and a year of geometry are sufficient. The class consists of both laboratory and classroom experiences. People who complete it are able to find employment in one of the following areas: industrial engineering; development of new electronics equipment; computer repair; or in the communications industry as engineering technicians.

ELECTRONICS TECHNOLOGY (Continued}

FRESHMAN Total Credits: 117

Fall Quarter	
Electric Circuits I (formerly DC Circuits)	10
Tech, Math I	5
Shop Processes	2
Communfoa.tion Skills I	3
	20
Winter Quarter	
Electric Circuits II (formerly AC Circuits)	7
Technical Mathematics II	5
Technical Drawing I	2
Communication Skills II	3
Electronics I (formerly Circuit Analysis & Design)	3
	20
Spring Quarter	
Communications Electronics	8
Technical Drawing II	2
Psychology and Human Relations	3
Electronics II (formerly Circuit Analysis & Design)	5
	18

During the summer students are assisted in securing employment for on-the-job training under the supervision of qualified technicians.

SOPHOMORE

Fall Quarter	
Transistor Analysis and Design	9
Industrial Electronics	3
Phys:Lcs I (formerly Engineering Science)	4
·Electronics Calculus	4
	20
Winter Quarter	
Pulse and Switching Circuits	6
Advanced Electronic Problems	6
Applied Physics II (formerly Engineering	4

ELECTRONICS TECHNOLOGY (Continued)

Spring Quarter	
Electronic Computers	7
Microwave Theory and Measurement	5
Special Projects	4
Technical Reporting	3
	19

MECHANICAL ENGINEERING TECHNOLOGY

This course is two school years in length, designed to prepare people to work as engineering technicians in the design and development of new products. All students considering this course of study should have completed either algebra and geometry or two years of algebra in high school Courses in industrial arts, especially drafting, are particularly helpful. Course work is academic yet practical. Following is an outline of the courses studied.

FRESHMAN — Total Credits: 116

Fall Quarter	
Communications Skills I	3
Engineering Drawing I	5
Technical Mathematics I	8
Manufacturing Processes I	2
	18
Winter Quarter	
Communications Skills II	3
Engineering Drawing II	5
Technical Mathematics II	8
Manufacturing Processes II	2
	18
Spring Quarter	
Technical Reporting	3
Engineering Drawing III	5

MECHANICAL ENGINEERING TECHNOLOGY (Continued)

SOPHOMORE

Fall Quarter

Psychology and Human Relations	3
Engineering Drawing IV	2
Kinematics of Mechanisms	9
Dynamics	7
	21

Winter Quarter

American Institutions	3
Electricity and Magnetism	3
Strength of Materials	7
Tool Design	7
	20

Spring Quarter

Engineering Materials	2
Heat; Light and Sound	6
Design Problems	9
Industrial Organizations	3
	20

AUTOMOTIVE TECHNOLOGY MECHANICS

The automotive program is planned to provide three quarters of basic auto mechanics for post-high school age students. It is developed for the student who wishes to become a first-class auto mechanic.

Students enrolled in this program will spend 20 to 25 per cent of their time in formal classroom instruction, and the balance of their time will be spent in one of Iowa's largest and best-equipped automotive shops. Included in the program are the fol owing topics:

Total Clock Hours: 1080 TOtal Credits: 45

Engine tune-up, testing and trouble shooting	220 200
Engine rebuilding and maintenance	
Clutch, standard transmissions, automatic transmission service	150 30
Drive line service	180
Brakes and front end service	20
Body services, air conditioning	
Customer relations and employer-employee relations	30

AUTOMOTIVE COLLISION REPAIR

The automotive collision repair course is devoted to a study of shop safety; body and frame construction; painting; auto glass, hardware and trim, sealing procedures; principles of measurement, panel adjustment and accessory service; tools and supplies required; and trade opportunities. Students will receive practice in metal bumping and dinging, oxy-acetylene and arc welding, metal shrinking, leadings, grinding and sanding, and preparation for painting. Proper use of power grinders, power drills and hydraulic body and frame jacks is emphasized. Related information is presented through lectures, discussions and visual aids. The class also uses standard 'supplies and equipment, automotive collision textbooks, and manufacturers' service and shop manuals. Job operations are presented to the students in demonstrations performed by the instructor.

Students work on "live" vehicles in accordance with instruction sheets and shop manuals and under the supervision of the instructor. Working in groups of two or three, they alternate in performing the various operations. Hence, while one performs an operation, the others observe and/or assist as appropriate. Following are the topics included in the program:

Total Clock Hours: 1080 Total Credits: 45

Safe use and care of equipment	50
Auto body construction and materials	25
Working of metal	100
Filling (lead and plastic)	100
Welding	50
Chassis and body shell	200
Glass and interior trim	120
Preparation and refinishing	300

MACHINIST

The machine shop curriculum is planned to prepare the student to become a skilled machinist or machine tool operator. Related instruction is provided in mathematics, blueprint reading, human relations, and communications. Students also study heat treatment of various metals and other basic metallurgical procedures. They have the opportunity to learn the proper care and use of measuring and layout tools, and hand tools, swell as to develop skills on the following machines: drill press, engine lathe, turret lathe, horizontal and vertical milling machines, grinders, shaper, tracer lathe, numerically controlled machines, and other types of production machine tools. Included in the program are the following topics:

Total Clock Hours: 1080 Total Credits: 45

Mathematics and blueprint reading	200
Safety procedures	40
Measuring tools	60
Bench work	55
Drill press	40
Sawing	40
Lathe operation	250
Turret lathe	75
Milling machine	200
Grinding	80
Special production machines	40

WELDING

The welding program consists of two sixteen-wee training periods. The first training period is centered around metallic arc welding. Arc welding in the following positions is covered: joint, lap-joint, butt-joint, horizontal, vertical-up inside corner, vertical-up outside corner and vertical-up butt. In addition, manual oxy-acetylene cutting is included. Related instruction in shop safety, welding symbols, blueprint reading, basic metal lurgy, welding techniques, welding defects and their causes is also included in the 480 hours of instruction. A student satisfactorily completing this training period has the necessary skills required in heavy equipment welding for major industries, and is

required in this training period include heliarc, semi-automatic and oxy-acetylene welding of both ferrous and non-ferrous materials. Related instruction pertaining to this phase of welding is included, totaling about twenty percent of the course.

The total clock hours for the two training periods equal 960; total credits equal 40,

PRACTICAL NURSE EDUCATION

The licensed, graduate practical nurse is a person who is qualified to practice nursing. The practical nurse makes an effective contribution to the care of others within the limits of her preparation and ability and is recognized as a valuable member of the health team.

Practical nursing is not a substitute for professional nursing. It is a distinct profession of its own. The needs of the patient determine the function of the person assisting him.

Following the twelve-month program in practical nursing at Area Ten, graduates are qualified to take the licensure examination given by the State Board of Nurse Examiners. Obtaining a license does not mean the end of learning but the beginning of practice, a practice which will be enhanced in months and years to come. Courses of study in the program include:

Nursing care of the adult patient I, II, III
Medical - surgical nursing I and II
Body structure and function
Family and life span
Personal, vocational and community relations
Normal nutrition and diet therapy
Administration of madications
First aid, disaster and emergency nursing
Nursing care of children
Nursing care of mothers and infants

Students also receive clinical experiences in nearby hospitals.

MEDICAL ASSISTANT EDUCATION

The medical assistant curriculum is designed to help students prepared for employment in a physician's office. The curriculum is divided into the following phases: health and disease and the human body, medical ethics and etiquette, laboratory orientation and techniques, and clinical practice. The latter phase is completed in .a physician's office under the guidance of the physician and his assistant. This twelve month curriculum will begin in early September, 1967.

The medical assistant curriculum at Area Ten Community College is one of the first of its kind in the State of Iowa and has the support of the State Medical Society and the local medical societies located within Area Ten.

Topics covered in the curriculum include:

Personal Adjustment and Human Relations
Medical Ethics and Etiquette
Communication Skills
Medico-legal Jurisprudence
Human Body in Health and Disease
Medical Terminology
Medical Office Practice
Office Education
Laboratory Procedures

DENTAL ASSISTANT EDUCATION

The trained dental assistant's job is to help the dentist to better serve his patients. She enables the dentist to better utilize his time and she contributes to a more efficient office routine.

The dental assistant is a part of the dental health team. The aim of this program is to prepare dental assistants for two roles: chair-side assistant and office manager. As a chair-side assistant she aids directly in the production of dental services at the chair. As an office manager she performs those duties which do not require the specialized skill of the dentist - duties which would interrupt his actual production of dental work for patients.

Dental Office Management
Professional Orientation
Dental Office Bookkeeping
Dental Laboratory Procedures
Dental Theory
Principles of Dental Assisting
Personal Development
Psychology of Human Relations
Clinical experience at the College of Dentistry, SUI Iowa City

OFFICE EDUCATION PROGRAMS

The programs in office education are designed to prepare people for careers in the modern business office. These programs provide the student the opportunities to choose between job preparations in either the clerical or secretarial area.

CERTIFICATE PROGRAM, BASIC OFFICE EDUCATION CURRICULUM, Two Quarters

This curriculum is designed for the student who desires a short training period to prepare themselves for initial clerical positions in business. Upon completion of this curriculum the student may choose to enroll for further study or may obtain a beginning clerical position in business.

Course	Hours
*Typing I	5
Typing II	5
Communication Skills	3
Personal Development	3
Introduction to Business	3
Filing Procedures	2
Office Machines	3
Machine Transcription	2
Business Math	2
	29
Elective	5

DIPLOMA PROGRAM, CLERICAL-RECEPTIONIST CURRICULUM, Three Quarters

This curriculum is designed for those students who desire a more intensive training program which will equip them with necessary skills for gainful employment in a clerical position.

Course	Hours
*Typing I	5
Typing II	5
Typing III	5
Communication Skills I	3
Communication Skills II	3
Personal Development	3
Introduction to Business	3
Filing Procedures	2
Business Math	3
Machine Transcription	2
Introduction to Data Processing	3
Office Procedures	3
Office Machines	3
	43
Electives	8
Total	51

*Student enrolls in class commensurate with his ability.

DIPLOMA PROGRAM, PROFESSIONAL SECRETARY CURRICULUM, Four Quarters

This curriculum is designed to prepare the student for positions as professional secretaries in business and industry. The designated courses offer a combination of skill-building courses and some general business courses which will prepare the student for more responsible secretarial positions.

Course	**Hours**

OFFICE EDUCATION PROGRAMS (Continued)

Records Management	2
Calculating and Duplicating Machines	3
Machine Transcription	2
Business Math	3
Principles of Accounting I	3
Office Procedures	3
Office Supervision	3
Introduction to Business	3
Economics I	3
Introduction to Data Processing I	3
Business Law	3
General Psychology	4
	54
Elective	9
Total	63

FLORICULTURE PROGRAM

The floriculture program is a specialized training program designed to prepare people for careers in the floral industry. This forty-week program provides the student with thirty weeks of classroom and laboratory instruction in all phases of floriculture and two five-week periods of on-the-job instruction in a floral shop.

The classroom and laboratory time is devoted to commercial flower forcing (greenhouse growing and operation), retail florist shop operation and business management. During this time the

FLORICULTURE PRCGRAM (Continued)

job situation. While completing this phase of the program, each student works full time and is paid the prevailing wage in the community where he is assigned. The student is supervised and directed by both the employer and the teacher-coordinator during this phase of the program.

Total Clock Hours: 1270 Total Credits: 45

Commercial flower forcing	360
Greenhouse structure and maintenance	
Basic botany	
Soils	
Plant propagation	
Basic growing methods	
Crop studies	
Retail florist shop operation	360
Sales	
Purchasing and pricing	
Care of flowers and plants	
Basic floral design	
Construction of floral pieces	
Business management	150
Basic business economics	
Occupational relations	
Sales management	
Merchandising	
Inventory management	
Customer credit and collection	
Personnel	
Financial and administration control	
Sales promotion	
Legal and governmental relationships	
Business mathematics	
On-the-job instruction	400

COURSE DESCRIPTIONS

Following are descriptions of courses provided in technical and in arts and sciences programs. Note that in some cases credits are separated with a hyphen and in others with a comma. Where a hyphen is used, this denotes that courses must be taken in sequence; where a comma is used, courses need not be taken in sequence.

Courses in arts and sciences which are normally taken by freshmen students will be provided during the 1967-68 school year; those normally taken by sophomore students will be added during the 1968-69 school year. The college reserves the right to cancel, add or revise courses without prior notice as is made necessary by unanticipated circumstances.

TECHNICAL COURSES

DATA PROCESSING

Office Automation — 3 credits

Uses of latest office equipment and techniques for automation of office activities. 1967-68

Keypunching — 3 credits

Prerequisite: Typing

Training in operation of keypunch and verifier. This is similar to typing and is for girls not in programming. 1967-68

Introduction to Data Processing I, II, III — 3-3-3 credits

Orientation, concepts and applications of data processing oriented towards the non-data processor in the business occupations. This is non-technical training. 1967-68

Unit Record Data Processing I, II, III, IV, V — 3-3-3-3-3 credits

Basic operation, wiring of control panels and uses of

Data Processing and Computer Concepts 3 credits

Concepts, devices and applications of data processing. 1967-68

Related Equipment I, II 1,1 credits

Types and uses of equipment used in conjunction with data processing. Covers microfilming, paper handling, copying and paper tape devices. 1967-68

Applied Programming I, II, III 3-3-3 credits

Prerequisites or corequisite: Data Processing and Computer Concepts

Beginning through advanced areas of programming oriented around the IBM 1440 and 360. Includes programming of card, tape and disk computers. 1967-68

Advanced Languages I, II, III, IV 3,3,3,3 credits

Prerequisite: Applied Programming II

Fortran, Cobol, etc. - computer languages. Includes writing and testing of programs. 1967-68

Testing and Debugging Programs I, II, III 3-3-3 credits

Prerequisites: Applied Programming I

Lab and lecture on operation and techniques of checking-out programs, and the use of the computer in testing. 1967-68

Numerical Control of Production Equipment I, II 3-3 credits

Uses of computers to control mills, lathes and factory equipment. Includes preparation of instructions to produce paper tape for equipment control. 1967-68

Data Communications 3 credits

Prerequisites: Applied Programming I
Data transmission terminals and communications equipment and their uses for data processing. Cover teletype and telephone lines and facilities available to transmit tape,

Programming Projects 3 credits

Assigned and self-initiated programming projects on problems similar to those found in business world. May be repeated for a total of fifteen credits. 1967-68

Applications and Systems Analysis I, II, III, IV 6,6,6,6 credits

Prerequisites: Applied Programming I

Considerations for and uses of data processing in business activities such as: payroll, personnel, material control and project control. 1967-68

Systems Projects 6 credits

Students select and complete projects in systems analysis similar to on-the-job work activities. The project is flow charted and designed with supporting documentation. 1967-68

Data Processing Accounting I, II 3-3 credits

Introductory and advanced accounting, oriented toward larger corporations. Relationship of data processing to accounting operations. 1967-68

Data Processing Organization and Management 3 credits

Structure and operation of a large business. Govern the relationship of people and departments controlling a business. 1967-68

Data Processing Mathematics I, II, III, IV 3-3-3-3 credits

Specialized math courses oriented around programming - ranging in level from college algebra through calculus, elementary statistics and numerical analysis. 1967-68

Operations Research I, II 3-3 credits

Prerequisites: Data Processing Mathematics III

Govers theory and applications of operations research techniques of simulation and linear programming applied to business problems. 1967-68

ELECTRONICS TECHNOLOGY

Technical Mathematics I — 5 credits

Provides principles of slide rule, algebra, logarithms, and basic trigonometry for the technical student, Emphasis is placed on application of mathematics to electronics. 1967-68

Electric Circuits I (formerly DC Circuits) — 10 credits

A study of the fundamentals of the physics of electricity, Ohm's law, Kirchoff's laws, Thevenin's theorem, Norton's theorem, Delta-wave transformation, magnetic circuits and meter movements, Emphasis on problem solving, A study of time varying circuits, reactance, and impedance. 1967-68

Technical Mathematics II — 5 credits

A continuation of Technical Mathematics I with advanced methods of trigonometry and algebra, Theory of equations, inequalities, analytic geometry and statistics. 1967-68

Electric Circuits II (formerly AC Circuits) — 7 credits

A study of impedance networks, resonance, coupled circuits, three-phase systems and harmonics. Special attention is given to vector analysis. 1967-68

Electronics Calculus — 4 credits

A study of the elements of derivatives, integration and differential equations. Emphasis on application to electronics. 1967-68

Shop Processes — 2 credits

'A course designed to help the individual student develop skills in the overall use of hand tools, machine tools, equipment and various types of materials which he will encounter in his work as a technician. Shop safety is stressed, The student will spend approximately one hour per week in classroom and five hours per week in laboratory. 1967-68

Technical Drawing I, II — 2-2 credits

Advanced Electronic Problems 6 credits

A review of basic circuit theory. The solution to comple)C electronic problems. Circuit design problems. 1967-68

Applied Physics I, II (formerly Engineering Science I, II) 4-4 credits

A course involving graphical and mathematical analysis of forces; laws of motion., machines, mechanical power, strength of mater;ial, fluid mechanics and thermal conductivity. Basic principles of physics are also covered. This course involves three hours of classroom instruction and two hours of laboratory each quarter. 1967-68

Electronics I (formerly Circuit Analysis and. Design) 3 credits

Provides the solid background in vacuum tubes and circuits necessary for the study of the more specialized aspects of electronics. Emphasis is placed on the analytical approach to cuircuit solution and design. Laboratory experiments prove the theory involved. 1967-68

Electronics II (formerly Circuit Analysis and Design) 5 credits

Introduction to semi-conductor theory, diodes, transistors, and transistor amplifiers are investigated. 1967-68

Communications Electronics 5 credits

A study of radio receivers, radio transmitters, television receivers, and audio equipment. Covered is the theory of operation, alignment, and troubleshooting. Competency is achieved by work in the laboratory on commercial units. 1967-68

Transistor Analysis and Design 9 credits

Develops the student's ability to analyze and design transistor circuits by graphical and equivalent circuit methods. Calculators and laboratory experiments are made of frequency response and temperature stability. 1967-68

Industrial Electronics 3 credits

A study of control circuits used by modern industry. Laboratory experiments are performed with thyratrons, photo-sensitve devices, motors, and synchros. 1967-68

Electronic Computers 7 credits

Principles of digital computer circuits, theory of programming, and application of Boolean algebra to logical design. 1967-68

Projects Research 1 credit

Ga:thering of· the infqrmation needed for the development of a special prdject of the student's own choosing. 1967-68

Microwave Theory and Measurement 5 credits

A study of basic microwave theory and techniques and the application of these techniques to measurement problems. This course presents a description of physical concepts, mathematical formations, measurements systems and procedures . 1967-68

Instrumentation and Control 5 credits

Encompasses the measurement of various energy levels and the control of the energy exchange which may take place. Instrumentation makes use of electrical, electronic, chemical, physical and mechanical devices and practices. 1967-68

Special Projects 4 credits

A course in designing, fabricating, and wiring a project researched in the course Projects Research. Included is a comprehensive re$earch report. 1967-68

MECHANICAL ENGINEERING TECHNOLOGY

Hydraulics 3 credits

A study of the basic components of hydraulic systems and how they are combined to build up various power transmission and control circuits. Hydraulic training units are used as a laboratory aid in constructing these circuits. 1967-68

Technical Mathematics I 5 credits

Introduction to and emphasis on slide rule operations. Basic

Engineering Drawing I 5 credits

A course involving: proficiency in the mechanics of drawing and lettering, basic understanding of orthographic projection, and skill in orthographic and pictorial drawing and sketching. 1967-68

Engineering Drawing II 5 credits

A continuation of Engineering Drawing I. Auxiliary and section views complete the kinds of views necessary to describe an object. Dimensioning, which is taught next, logically follows. 1967-68

Engineering Drawing III 5 credits

A continuation of Engineering Drawing II. Working drawing ranging from assemblies to detailed drawings and bills of material are produced" Experience in using handbooks and other resource material is stressed. 1967-68

Engineering Drawing IV 5 credits

Emphasis on special subjects. Charts and graphs, weld symbols, gears, piping, electrical circuits, intersections and developments are examples of the subjects covered. 1967-68

Design Problems 6 credits

Solution of design problems requiring both analysis and drafting. Group work ona singl,eproject, as well as individual problems, is organized. Students may either select their own projects or be assigned one by the instructor. 1967-68

Engineering Materials 2 credits

Investigations into the physical properties of a wide range of engineering materials with the emphasis on stress and strain. Metallurgical properties and processes are also studied. 1967-68

Manufacturing Processes I 2 credits

Familiarization with the machine tools and processes commonly in use in industry. Students actually use the machines and perform the machine tool operations in fabricating small projects. 1967-68

Heat, Light and Sound 6 credits

Embracing the aspects of the physical sciences which are not expanded in the rest of the ,curriculum -mainly heat, light and sound. Labs are used to familiarize the student with the physical phenomena and to introduce the scientific method. 1967-68

Tool Design 5 credits

A study of the basic elements of the broad field of machine and tool design, and the practical application of these basics to a specific project. Mechanical drives including gears, belts, clutches and shafts are discussed in depth. 1967-68

Statics 5 credits

A fundamental study in the mechanics of physics relating the forces of structures in equilibrium. Analytical and graphical solutions are presented with an emphasis on problems most commonly occurring in practice. Trusses are studied and analyzed. Free-body diagrams using vectors are highly emphasized in teaching the principles of force equilibriums. 1967-68

Electricity and Magnetism 3 credits

Combines lecture and discussion periods with student participation in laboratory experiments. Magnetism and electrostatics along with basic electric circuits, current sources are given analytically with lab proofs. A practical understanding of generators, motors, production and distribution circuits is also pursued. 1967-68

Dynamics 7 credits

The branch of mechanics of physics which relates unbalanced force systems to accelerations. Motion diagrams are used to relate displacements, velocities and accelerations. Inertia forces are equated with active unbalanced forces in order to solve problems through dynamic equilibrium. Impact and momentum, work and energy relationships are expended to an analytic level. 1967-68

Strength of Materials 5 credits

Analysis of stresses due to compressive, tensile and shear forces in joints, beams, columns and combined structures. Work with centers of gravity, centroid's and moments of inertia as well as shear

Kinematics of Mechanisms 6 credits

The graphical approach to dynamic mechanisms. An indispensable supplement to the solutions by analytical methods. Graphical constructions are very effectively used in finding displacements, velocities and accelerations involved in mechanisms. The analytical method is used in combination with graphics in order to more easily understand the mechanics of four bar linkages, cams and gearing. Motion curves are also studied. 1967-68

COURSES COMMON TO BOTH ELECTRONICS TECHNOLOGY AND MECHANICAL ENGINEERING TECHNOLOGY

Orientation No credit

A brief overview of the field of technical occupations is followed by discussion of the work of technical personnel, the parts that interests and aptitudes play in the successful attainment of vocational goals, and the methods of evaluating these qualities. Through the use of resource speakers, pamphlets and possible field trips, students are introduced to further knowledge of the role of a technician in industry. The class involves ten class meetings at the beginning of the year. 1967-68

Psychology and Human Relations 3 credits

A course for the development of a better understanding of the human mechanism, its motivations and learning ability as related to interpersonal relations on the job. Employee selection, intelligence and aptitude tests, supervision, industrial conflict and job satisfaction are considered. The course utilizes a lecture and discussion format. 1967-68

American Institutions 3 credits

A study of the effect of American social, economic and political institutions upon the individual as a citizen and as a worker. Current local, national and global problems are viewed in the light of our political and economic heritage. The class is confined to lecture and discussions. 1967-68

Technical Reporting 3 credits

A course required of all first-year Mechanical Technology and second-year Electronics Technology students. The course is offered to acquaint the student with types of technical reports used by business and industry. The student is also introduced to informal and memoranda report writing. A formal technical report is required at the conclusion of the course, This course includes five hours of lecture and discussion weekly. 1967-68

ARTS AND SCIENCES DIVISION

Persons wishing to complete a college level, four year program, e.g., in liberal arts, business, teacher education or who wish to enroll in a professional school, e.g., law, medicine, dentistry, may begin their course work in the Arts and Sciences Division at Area Ten Community College.

The courses provided enable students to secure up to two years of credit transferable to other colleges and universities. Individuals who are not prepared for these courses but who wish to continue studying in the broad areas of the humanities, social sciences and natural sciences, may enroll in the General Studies program.

ARTS AND SCIENCES COURSES

ART

Art Appreciation 3 credits

An overview of art from an historical, contemporary and easthetic frame of reference. Studio experiences are provided. Recommended for non-art majors. Four hours each week. 1967-68

Materials and Techniques 3 credits

An introduction to forms and materials in art through studio experiences. Recommended for art majors, Two two-hour lecture-laboratory periods each week. 1967-68

Fundamentals of Drawing 3 credits

Prerequisite or co-requisite: Materials and Techniques or permission of instructor.

An introduction to drawing with work from life and nature. Three two-hour lecture-laboratory periods each week. 1967-68

Fundamentals of Design 3 credits

Prerequisite or co-requisite: Materials and Techniques or permission of instructor.

Principles of two and three dimensional design. Three two-hour lecture-laboratory periods each week. 1967-68

Fundamentals of Painting 3 credits

Introduction to Business — 3 credits

Survey of the organization; operation, functions, management and responsibilities of business in the United States. (Not recommended if transferring to University of Iowa.) Three periods each week. 1967-68

Business Law — 3 credits

Survey of principles of law as applied to business relationships and transactions. (Not recommended if transferring to University of Iowa.) Three periods each week. 1967-68

Elementary Business Statistics — 4 credits

Descriptive and inductive uses of statistics in business. Four periods each week. 1968-69

Principles of Marketing. — 4 credits

Institutions, process and problems in transferring goods from producers to consumers. Four periods each week. 1968-69

Principles of Selling — 4 credits

Principles of salesmanship, with particular emphasis on retail selling. Four periods each week. 1967-68

Typing I — 3 credits

For students with no typing skills. Three periods each week. 1967-68

Typing II, ·III — 3-3 credits

Prerequisite: Typing I or II or equivalent.

Development of advanced typing skills, especially for secretarial or business education majors. Courses must be taken in sequence. Three periods each week. 1967-68

Shorthand I, II , III — 4-4-4 credits

Basic principles, elementary vocabulary, beginning dictation and transcription. Courses must be taken in sequence. Four

Secretarial Procedures 4 credits

Prerequisite: Shorthand V or permission of instructor.

Integration of skills and knowledge necessary to perform stenographic duties. Includes practice with office machines and experience in records management. Not recommended if transferring to University of Iowa or State College of Iowa. Four periods each week. 1968-69

Principles of Accounting I, II, III 3-3-3 credits

Recording, reporting and interpreting business statements. Use of accounting as a tool of business management. Courses must be taken in sequence. Three periods each week. 1967-68

Intermediate Accounting I, II 3-3 credits

Prerequisite: Principles of Accounting I I I

Review of principles of accounting, introduction to accounting theory, including balance sheet analysis and supplementary statements. Courses must be taken in sequence. Not recommended if transferring to University of Iowa. Three periods each week. 1968-69

lementary Cost Accounting 3 credits

Prerequisite: Principles of Accounting III

Techniques of accounting control as applied to industrial enterprise. Critical appraisal of product, process cost systems, stand costs. Three periods each week. 1968-69

Personal Income Tax Accounting 3 credits

Prerequisite: Principles of Accounting III.

General tax procedures for individuals. Three periods each week. 1968-69

FOREIGN LANGUAGE

Elementary French I, II, III 4-4-4 credits

Intermediate French I, II, III 3-3-3 credits

Prerequisite: French. III or equivalent.

An overview of basic principles of French, continued emphasis on aural oral skills,..and practice in reading and writing French. Courses must be tak.en in sequence. Three periods each week. 1968-69

Elementary Spanish I, II, III 4-4-4 credits

An introduction to Spanish with emphasis on the development of e,ural-oral skills. Courses must be taken in sequence. Four periods each week. 1967-68

Intermediate Spanish I, II, III 3-3-3 credits

Prerequisite: Spanish III or equivalent.

A review of basic principles of Spanish, continued emphasis on aural-oral skills, and practice in reading and writing Spanish. Tqree periods each week. 1968-69

Elementary German I, II, III 4-4-4 credits

An introduction to German with emphasis on the development of aural-oral skills. Courses must be taken in sequence. Four periods each week. 1969-70

Intermediate German I, II, III 3-3-3 credits

Prerequisite: German III or equivalent.

A review of basic principles of German, continued emphasis on aural-oral skills, and practice in reading and writing German. Three periods each week. 1970-71

MATHEMATICS

Basic Algebra 5 credits

High school algebra. Credit not applicable toward associate degree. Five periods each week. 1967-68

Intermediate Algebra 5 credits

Prerequisite: One year each of high school algebra and geometry or equivalent.

Study of fundamental concepts of algebra, graphs, exponents, radicals, variation, projection and logarithms and binomial theorems. Five periods each week. 1967-68

College Algebra 5 credits

Prerequisite: Intermediate Algebra or one and one-half years of high school algebra and one year of geometry, or equivalent.

A standard college algebra course including exponents, radicals, quadratic equiations, variation, proportion, equations, determinants, inequalities, progressions, binomial theorem and probability. Five periods each week. 1967-68

Trigonometry 5 credits

Prerequisite: College algebra or equivalent.

Study of the properties of trigonometric functions, solution of triangles, logarithms, identities, equations, inverse functions; and applications. Five periods each week. 1967-68

Analytic Geometry 5 credits

Prerequisite: Trigonometry or equivalent.

Study of coordinate methods in plane geometry and an introduction to their uses in solid geometry. Five periods each week. 1967-68

Calculus I, II, III 4-4-4 credits

Prerequisite: Analytic geometry or equivalent.

Study of concepts of differentiation and integration, and an introduction to partial derivatives and double integrals. Courses must be taken in sequence. Four periods each week. 1968-69

Modern College Mathematics 5 credits

Prerequisite: One year each of high school algebra and geometry.

ENGLISH

Rhetoric I, II, III — 3-3-3 credits

Provides instruction in writing, listening and reading. Required of all freshmen students. Courses must be taken in sequence. Three periods each week. 1967-68

Writing Lab — No credit

Provides students who need or desire additional work in writing with an opportunity to secure it. Periods to be arranged. 1967-68

·Reading Lab — No credit

Provides students who need or desire additional work in reading with an opportunity to secure it. Periods to be arranged. 1967-68

Introduction Literature. I, II, III — 4,4,4 cred:i,ts

An introduction to major literary forms, emphasizing interpretation and' the development of critical attitudes needed for understanding arid enjoyment. Literary forms include: (1) novel, (2) short story, and (3) poetry and drama. Four periods each week. 1968-69

Literature of Western Civilization I, II, III — 4,4,4 credits

Prerequisite: Rhetoric III or equj,.valent.

Students analyze selected literary masterpieces of Western Civilization, ranging from the Homeric to the Modern era. Four periods each week. 1968-69

SPEECH

Speech I — 3 credits

·Study of fundamentals of speaking, with emphasis on the development of skill in oral communication. Three periods each week.

Oral Interpretation 3 credits

Prerequisite: Speech I or equivalent
Contributes to understanding and appreciation of literature through greater awareness of oral basis of language. Three periods each week. 1968-69

Introduction to the Theater 3 credits

An historical overview of the role of theater in the life of man. Three periods each week. 1968-69

ENGINEERING

Engineering Graphics I, II 3-3 credits

Study of sketching, lettering, freehand drawing; the use of drawing instruments, triangles, etc.; principles of projection. Three two-hour lecture-laboratory periods each week. (Tentative)

Engineering Problems 2 credits

Prerequisite:' College algebra and Engineering Graphics.

Use of the slide rule and computer and the utilization of problem-solving techniques in engineering. Two periods each week. (Tentative)

MUSIC

Music Appreciation 3 credits

Elements and types of music; major periods and composers. Three periods each week. 1967-68

Fundamentals and Harmony I, II, III 3-3-3 credits

Ear Training and Sight Singing, I , II, III. 1-1-1 credits

Co-requisite: Fundamentals and Harmony

Skill development in listening and sight singing. Meets twice weekly. 1968-69

Advanced Harmony Ear Training and Sight Singing I, II, III 3-3-3 credits

Prerequisite: Fundamentals Harmony III
Ear Training and Sight Singing III

Continuation of first year sequence. Five periods each week. 1968-69

Applied Music-Vocal 1 credit

Prerequisite: Permission of instructoro

Instruction for beginning, intermediate and advanced students. May be repeated for a total of six credits. Periods to be arranged. 1967-68

Applied Music -Instrumental 1 credit

Prerequisite: Permission of instructor.

Instruction for beginning, intermediate and advanced students. May be repeated for a total of six credits. Periods to be arranged. 1968-69

Chorus 1 credit

Mixed chorus which meets two times weekly. May be repeated for a total of six credits. 1967-68

Band 1 credit

For students with the ability and desire to play in a band. Meets three times weekly. May be repeated for a total of six credits. 1968-69

General Biology I, II, III — 4-4-4 credits

Introduction to living things, both plant and animal, and to major biological concepts. Structure, function, classification and evaluation of organisms. Courses must be taken in sequence. Three lectures and one two-hour laboratory each week. 1967-68

Anatomy and Physiology I, II, III — 4-4-4 credits

Prerequisite: General Biology III or permission of instructor.

Study of the human body, its parts and their functions. Courses must be taken in sequence. Three lectures and one two-hour laboratory each week. 1968-69

General and Inorganic Chemistry I, II, III — 4-4-4 credits

Prerequisite: High school algebra or equivalent

Fundamental principles of inorganic chemistry. Courses must be taken in sequence. Three lectures and one two hour laboratory each week. 1967-68

Organic Chemistry I, II, III — 4-4-4 credits

Prerequisite: General and Inorganic Chemistry III

Fundamental principles of organic chemistry, including important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. Courses must be taken in sequence. Two lectures and one four-hour laboratory each week. 1968-69

Introduction to Chemistry — 4-4-4 credits

A three quarter course, primarily for students who do not intend to major in chemistry but who wish or need some inorganic and organic chemistry. Eighteen weeks are alloted to general inorganic chemistry and eighteen weeks to organic chemistry. Three lectures and one two-hour laboratory each week. 1968-69

Quantitative Analysis — 5 credits

Prerequisite: General Chemistry III

General Physics I, I , III 4-4-4 credits

Prerequisite or corequisite: College Algebra

For non-physics or non-engineering majors. Topics covered include mechanics, heat, electricity, sound and light. Three lectures and one two-hour laboratory each week. 1968-69

General Physics IV, V, VI 4-4-4 credits

Prerequisite or corequisite: Calculus I

For physics majors and pre-engineering students. Topics covered include mechanics, heat, sound, light, electricity and magnetism. Three lectures and one two-hour laboratory each week. 1968-69

The Physical Sciences 4 credits

For non-science majors. An introduction to the physical sciences, including astronomy, meterology, geology and mechanics. Four lecture-demonstration and discussion periods each week. 1967-68

SOCIAL SCIENCES

History of Western Civilization I, II, III 4,4,4 credits

Development of Western Civilization from prehistoric to modern times. Four periods each week. 1968-69

U.S. History I, II, III 4,4,4 credits

Survey of social, political economic history of the United States with emphasis on forces resulting in the emergence of modern America. Four periods each week. 1967-68

Sociology I: Principles 4 credits

Analysis and explanation of culture, personality and social organization. Four periods each week. 1967-68

Sociology II: Social Problems 4 credits

Contemporary social problems, with special emphasis on social change and social disorganization. Four periods each week. 1967-68

Economics I, II, III 3,3,3 credits

Basic principles of economics. Topics include national income, money and banking, business cycles, international trade, demand and supply, competition and monopoly and income distribution. Three periods each week. 1967-68

Political Science I: Federal Government 4 credits

Political Science II: State & Local Government 4 credits

Analysis of principles, organization, procedure, and functions of government in the United States national, state and local. Four periods each week. 1968-69

Political Science III: World Politics 4 credits

An analysis of major world regions and current international problems. Four periods each week. 1968-69

Geography I: Physical 4 credits

Major features of distribution patterns of climate, relief, vegetation and soils. Regional difference in problems of physical development. Four periods each week. 1968-69

Geography II: Human 4 credits

Geography of population and principal ways of life; capacity of the earth for future population. Four periods each week. 1968-69

EDUCATION AND PSYCHOLOGY

General Psychology 4 credits

General introduction to the study of human behavior. Four periods each week. 1968-69

Psychology of Child Development 4 credits

American Public Education 4 credits

An overview of the field of education with special emphasis on sociological; political and economic factors. Four periods each week. 1998-69

Children's Literature 4 credits

A survey of children's books; reading and discussion of children's interests and reading abilities. Four periods each week. 1968-69

GENERAL STUDIES

The General Studies program is designed to provide educational opportunities for the student whose academic ability and/or educational background suggest that his probability for success in a college transfer program at the time that he enrolls in the college, is limited or non-existent.

Although the program provides some opportunities of a remedial nature which may enable a student to qualify for a college-transfer curriculum, its primary goal is to provide meaningful educational experiences in general education which lead toward employment or occupational training.

The program extends over three quarters and consists of two basic ingredients: (1) course content selected from the fields of communications, e.g., English and speech; from mathematics and science; and from the social sciences, e.g., sociology, economics and psychology; and (2) counseling services.

Each student takes courses in the areas mentioned in (1) above. In addition, each has an opportunity to develop and improve basic skills, e.g., in reading and in math. Each also works with a counselor toward the objective of making decisions concerning future educational and occupational plans.

While the program extends over three quarters, every student is constantly re-evaluated in terms of his performance. Changes may be made in his educational program whenever appropriate.