

# Isothermal Community College

GENERAL CATALOG 1972-74



Spindale, North Carolina 28160

VOLUME V

JULY, 1972

Published biennially by Isothermal Community College. Entered as third class matter at the Post Office at Spindale, North Carolina. Third class postage paid in Spindale, North Carolina 28160.



## Table of Contents

College Calendar .....	1
Message From The President .....	6
History Of The College .....	8
Purpose And Objectives .....	8
Accreditation .....	9
Library .....	9
Learning Lab .....	9
Administrative Regulations .....	10
Evening Division .....	11
Admissions .....	11
Guided Studies Program .....	13
Testing .....	14
Registration .....	15
Tuition And Fees .....	15
Academic Matters .....	16
Schedule Changes .....	19
Division And Program Changes .....	20
Withdrawal From College .....	20
Graduation .....	20
Honors .....	21
Student Services .....	22

## Table of Contents

Student Activities . . . . .	26
Financial Assistance Program . . . . .	27
Student Responsibilities . . . . .	29
College Parallel Programs . . . . .	32
Occupational Education . . . . .	52
Technical Division . . . . .	53
Vocational Division . . . . .	78
Adult And Extension Education . . . . .	102
Board Of Trustees . . . . .	112
Administrative Officers And Staff . . . . .	112
Faculty . . . . .	114

# Calendar of Events

## SUMMER SCHOOL, 1972

### 1st Session

June 5	Registration & Orientation
June 6	First Day of Classes
June 8	Last Day to Register & Add
June 13	Last Day to Drop
July 4	Holiday
July 12	Last Day of Classes and Finals

### 2nd Session

July 13	Registration
July 14	First Day of Classes
July 18	Last Day to Register & Add
July 21	Last Day to Drop
August 17	Last Day of Classes & Finals
August 18	Graduation

### Summer Quarter

June 5	Registration & Orientation
June 6	First Day of Classes
June 8	Last Day to Register & Add
June 13	Last Day to Drop
July 4	Holiday
July 13	No Classes
July 11-14	Mid-Terms
August 14	Last Day of Classes
August 15, 16, 17	Final Exams
August 18	Graduation

# Calendar of Events

## FALL QUARTER, 1972

Sept. 5 & 6  
Sept. 7  
Sept. 14  
Sept. 21  
Oct. 16–20  
Nov. 17  
Nov. 20, 21, 22

Registration & Orientation  
First Day of Classes  
Last Day to Register & Add  
Last Day to Drop  
Mid-Terms  
Last Day of Classes  
Finals  
Thanksgiving Holidays

## WINTER QUARTER, 1972–73

Nov. 28  
Nov. 29  
Dec. 6  
Dec. 13  
Dec. 20 – Jan. 1  
Jan. 2  
Jan. 15–19  
Feb. 20  
Feb. 21, 22, 23

Registration  
First Day of Classes  
Last Day to Register & Add  
Last Day to Drop  
Christmas Holidays  
Classes Resume  
Mid-Terms  
Last Day of Classes  
Finals

## SPRING QUARTER, 1973

Feb. 28  
March 1  
March 8  
March 15  
April 9–13  
April 20–29  
May 18  
May 21, 22, 23  
May 25

Registration & Orientation  
First Day of Classes  
Last Day to Register & Add  
Last Day to Drop  
Mid-Terms  
Easter Holidays  
Last Day of Classes  
Exams  
Graduation

# Calendar of Events

## SUMMER SCHOOL, 1973

### 1st Session

June 4	Registration & Orientation
June 5	First Day of Classes
June 7	Last Day to Register & Add
June 12	Last Day to Drop
July 4	Holiday
July 10	Last Day of Classes & Finals

### 2nd Session

July 11	Registration
July 12	First Day of Classes
July 16	Last Day to Register & Add
July 19	Last Day to Drop
August 16	Last Day of Classes & Finals
August 17	Graduation

### Summer Quarter

June 4	Registration & Orientation
June 5	First Day of Classes
June 7	Last Day to Register & Add
June 12	Last Day to Drop
July 4	Holiday
July 11	No Classes
August 10	Last Day of Classes
August 13, 14, 15	Final Exams
August 17	Graduation

# Calendar of Events

## FALL QUARTER, 1973

Sept. 4 & 5	Registration & Orientation
Sept. 6	First Day of Classes
Sept. 13	Last Day to Register & Add
Sept. 20	Last Day to Drop
Oct. 15–19	Mid-Terms
Nov. 16	Last Day of Classes
Nov. 19, 20, 21	Final Exams
	Thanksgiving Holidays

## WINTER QUARTER, 1973–74

Nov. 28	Registration
Nov. 29	First Day of Classes
Dec. 6	Last Day to Register & Add
Dec. 13	Last Day to Drop
Dec. 18–Jan. 1	Christmas Holidays
Jan. 2	Classes Resume
Jan. 21–25	Mid-Terms
Feb. 20	Last Day of Classes
Feb. 21, 22, 25	Final Exams

## SPRING QUARTER, 1974

Feb. 28	Registration & Orientation
Mar. 1	First Day of Classes
March 8	Last Day to Register & Add
March 15	Last Day to Drop
April 8–11	Mid-Terms
April 12–21	Easter Holidays
May 17	Last Day of Classes
May 20, 21, 22	Final Exams
May 24	Graduation



# Calendar of Events

## SUMMER SCHOOL, 1974

### 1st Session

June 5	Registration & Orientation
June 6	First Day of Classes
June 10	Last Day to Register & Add
June 13	Last Day to Drop
July 4	Holiday
July 12	Last Day of Classes & Finals

### 2nd Session

July 15	Registration & Orientation
July 16	First Day of Classes
July 18	Last Day to Register & Add
July 23	Last Day to Drop
August 15	Last Day of Classes & Finals
August 16	Graduation

### Summer Quarter

June 5	Registration & Orientation
June 6	First Day of Classes
June 10	Last Day to Register & Add
June 13	Last Day to Drop
July 4	Holiday
July 15	No Classes
July 16-19	Mid-Terms
August 9	Last Day of Classes
August 12, 13, 14	Final Exams
August 16	Graduation

## President's Message

We believe that every citizen should have the opportunity to study and work in whatever field best suits his individual abilities and desires.

We believe that no interested and capable student should be denied the privilege of attending a college or vocational school of the highest quality.

We believe that knowledge and skill are essential to a happy productive life for our people and for the welfare of our nation.

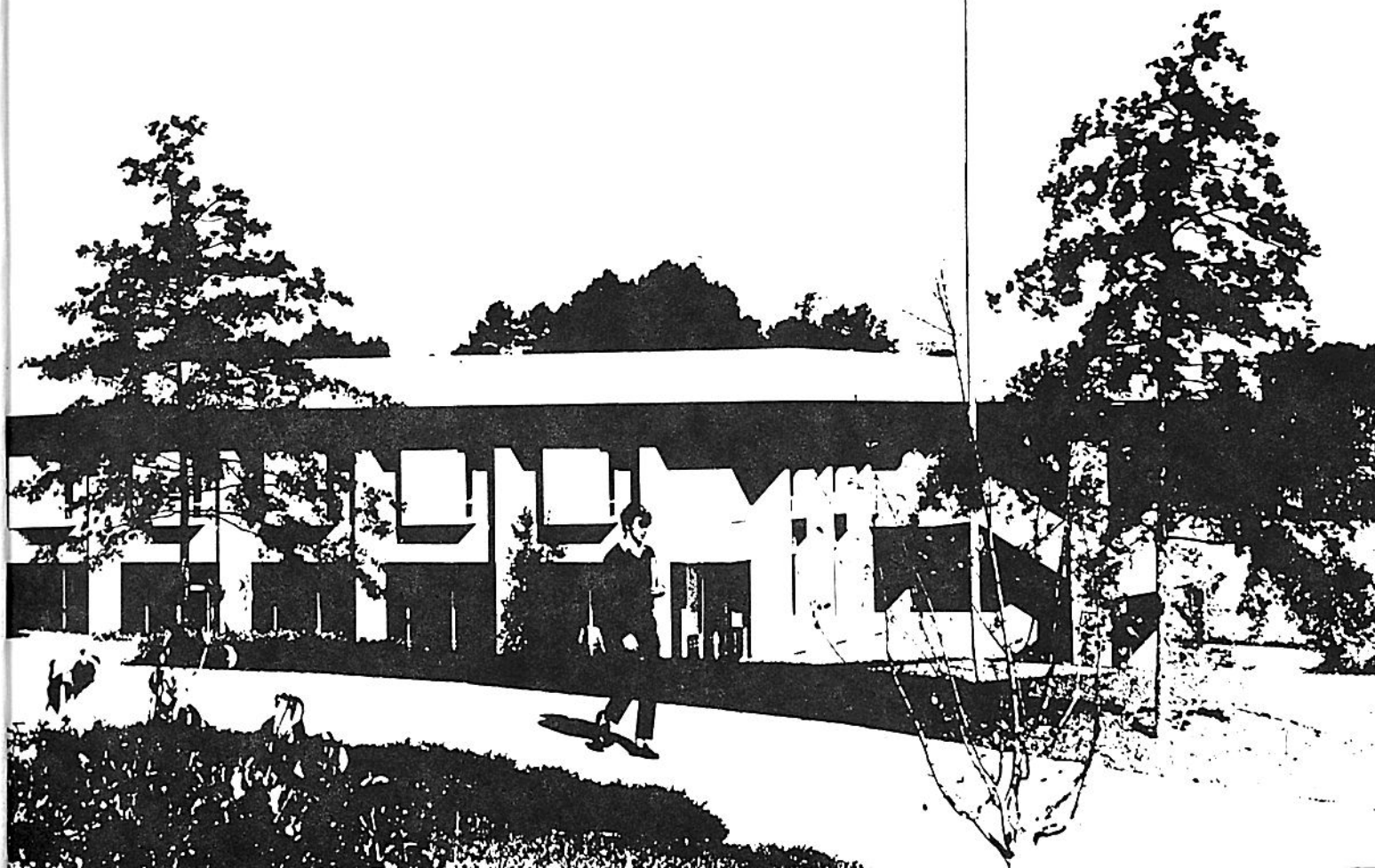
We believe that since no one's education is ever complete, continuing education can be beneficial to any community.

Because of our belief in these principles, and in the philosophy of the Community College, we are extending every effort to bring to the people of this area the best possible education and training at a price they can afford to pay.

FRED J. EASON  
President



General  
Information



Isothermal Community College was authorized by the 1963 General Assembly under 115A, General Statutes of North Carolina. In 1964, citizens of Rutherford County approved a tax levy to support the College, and necessary capital funds were appropriated to purchase a site and construct the buildings. In 1966, Isothermal Community College formally initiated its four basic programs of instruction, occupying temporary facilities in the Avondale, Caroleen and Spindale communities.

The permanent campus of Isothermal Community College is located between the towns of Forest City and Spindale, North Carolina, adjoining US-74 (By Pass). Buildings are constructed on a wooded site that provides an attractive setting for the modern facilities which serve the people of Rutherford and surrounding counties.

The College is a commuter's college with classes scheduled both day and evenings. Four basic curricula include: college transfer, vocational, technical, and adult education courses. College parallel, technical, and vocational courses are compatible with other college programs throughout the state: Adult education courses are initiated on the basis of adult interest and demand. Qualified instructors fill each position on the teaching staff.

Isothermal Community College is a comprehensive two-year institution. The purpose of the comprehensive college is to provide for all citizens beyond the normal high school age appropriate, economical, and convenient learning opportunities. The various programs include two-year college parallel and technical programs, one-year vocational programs, a variety of educational programs for adults and guidance services for in-school and out-of-school citizens. Isothermal Community College offers help for the student in developing the understandings, dispositions, and habits required for living effectively.

The major aims of this institution are:

1. To provide two years of transferable college credit courses for students desiring to transfer to four-year colleges.
2. To provide two years of technical education appropriate to the needs of the individual and the community.

## History of the College

## Purpose and Objectives

## Purpose and Objectives

3. To provide vocational education for persons desiring to prepare for a trade or upgrade themselves in their present jobs.
4. To provide an adult program based on community needs and interests with special emphasis on the following areas:
  - a. Basic education courses for grades 1 – 8.
  - b. High school equivalency certificate.
  - c. Cultural and community service programs.
5. To provide a program of guidance and instruction which will help all students become effective members of a democratic society.

## Accreditation

Isothermal Community College, a member of the American Association of Junior Colleges, is accredited by the Southern Association of Colleges and Schools and by the North Carolina State Board of Education.

## Library

The library provides students and faculty with materials needed to support and enrich the instructional program of the College.

The college library contains over 20,000 volumes at the present time with books continually being added to support the various college programs. The library also subscribes to 197 periodicals and is building a collection of films, filmstrips, film loops, phonograph recordings, slides, and microfilm for back issues of periodicals. Students are encouraged to browse and use the reading rooms as a quiet place to study. The library is open five days a week – Monday through Thursday from 8:00 a.m. to 9:00 p.m. and Friday from 8:00 a.m. to 5:00 p.m.

## Learning Laboratory

The learning laboratory (programmed materials) and the audio-visual production department are located in the library building.

The learning laboratory is one of the most versatile of all the learning concepts utilized by the Community College System. The laboratory uses the programmed

materials approach and offers planned study in all of the areas served by the Community College. It starts at the fourth grade level and goes through the freshman year of college with additional study in specialized areas.

Probably the most significant factor for its tremendous success in North Carolina is that it allows the student to progress at his own rate without the necessity of gearing one's self to the pace of a particular classroom situation.

The learning laboratory serves as a second stage of our illiteracy program, as a source of preparation for the Adult High School Diploma Program, and it is also widely used by adults who merely wish to pursue subjects of interest. Veterans may use their veterans educational benefits to complete high school in the L. L.

There is no fee for the learning laboratory, and it is open to the students and public alike. The hours maintained will coincide with those of the library.

**OFFICE HOURS.** The administrative offices of the College are open Monday through Friday from 8:00 a.m. to 5:00 p.m.

#### **TRAFFIC REGULATIONS.**

##### **I. Registration**

- A. A student is responsible for registering his car or cars at regular registration for his initial quarter of enrollment, and for reporting new license plates.
- B. There is no charge for car registration.
- C. Each student is required to obtain a parking sticker for each of his cars and to display each sticker on each car.

##### **II. Parking Areas**

- A. Students park in student parking areas.
- B. Parking regulations are enforced each day that school is in session.
- C. Students may inquire in the Student Personnel Office for emergency permission to park in areas not designated for students.

##### **III. Speeding**

- A. Speed limits as posted on campus must be adhered to.

## Learning Laboratory

## Administrativ Regulations

## Administrative Regulations

**CHANGES IN REGULATIONS.** Isothermal Community College reserves the right to make changes in the regulations, fees, and other matters of policy and procedure when necessary.

**ACTION BULLETINS.** Action bulletins are initiated by the President of the College to inform students of current information. These bulletins are posted periodically and include information such as changes in regulations, student delinquent lists, and notification of meetings and conferences.

IT IS THE RESPONSIBILITY OF EACH STUDENT AND STAFF MEMBER TO READ AND UNDERSTAND THE CONTENTS OF THESE BULLETINS.

## Evening Division

The College offers an evening program which includes many credit courses given in the daytime, as well as non-credit courses which are offered primarily for adults and special organizations in the community.

The purpose of the evening program is to make available courses to the student who must work while going to college. Any student may enroll for both evening and daytime classes.

Class schedules of all evening classes are published quarterly and are available upon request from the Student Personnel Office. Courses listed in the evening class schedule which do not receive ten or more registrations will be cancelled.

## Admissions

### **GENERAL ADMISSION REQUIREMENTS FOR CREDIT COURSES.**

Isothermal operates under an "Open Door" admission policy. To enter the college parallel or technical divisions, the applicant must be a high school graduate or the equivalent. To enter the vocational division, the applicant must be at least 18 years old or have a high school diploma or the equivalent. The following requirements must also be met:

1. Formal application. An application for admission must be filled in by all curriculum students.
2. Transcript(s). A high school transcript is required of all applicants except transfer students with 45 quarter hours of transferable work and students taking courses on an audit basis.
3. Medical examination form. Students taking 7 hours or more are required to furnish a medical examination form which has been completed by a licensed physician.
4. College placement battery. All college parallel and technical students are required to take placement tests which are administered by the Counseling Department, unless the student has 45 quarter hours of transferable credit from another institution. Students taking courses on an audit basis also are exempt. (See Guided Studies Program.)
5. Interview. All college parallel and technical applicants are required to have an interview with a member of the Student Personnel counseling staff. At this time, test scores will be reviewed and course recommendations made.

## Admissions

Students are cautioned that unless all applicable supporting documents for admission are acknowledged by the Student Personnel Office prior to their initial registration, permission to register for classes may be denied. In the case of extenuating circumstances a conditional admission to the College may be granted.

**TRANSFER ADMISSION REQUIREMENTS.** Isothermal Community College will accept any transfer student who has maintained a satisfactory conduct standing at his previous institution. Each applicant requesting transfer of credits from another institution will be considered on an individual basis. Any student on disciplinary suspension from another institution must appear before the Admission Committee for approval or disapproval for admission.

Transfer students must also fulfill the following requirements:

1. Submit a completed application for admission.



2. Provide a transcript(s) of all previous academic work. (Students transferring 45 quarter hours or more of acceptable credit do not have to provide a high school transcript.)
3. Provide a medical examination form signed by a licensed physician. (Students taking less than 7 hours are exempt from this requirement.)
4. Students transferring less than 45 hours of acceptable credit will be required to take the college placement battery and have a pre-admission interview.
5. Submit a confidential rating form from last College attended.

## Admissions

### ADULT EDUCATION AND EXTENSION ADMISSION REQUIREMENTS.

Requirements for admission and application procedures for the numerous adult education programs are dependent upon the nature of the course desired. Interested persons should contact the Office of the Director of Adult Education and Extension Programs for specific information.

**READMISSION.** Any student having been suspended from the College for any reason must submit an application for readmission to the Registrar.

Isothermal Community College operates under the "Open Door" admissions policy. Selective placement in various curriculums is determined by a review of the student's academic background and his academic proficiency as demonstrated by his score on the placement tests.

Students who score below the required level for the various college parallel and technical areas of instruction will be required to complete successfully a non-credit, guided studies course before registering for a beginning credit course in that particular area.

Some students find it necessary to register for a full non-credit, guided studies program during their first quarter.

## Guided Studies Program

**PLACEMENT TESTS.** The following tests are given to all applicants applying for the college parallel and technical programs. The tests are used only for placement purposes.

1. Cooperative English Test-English Expression Part.
2. Nelson-Denny Reading Test
3. College Qualification Test

Applicants are notified concerning testing dates and are encouraged to take the placement tests at their earliest convenience.

**G.E.D. Isothermal Community College** offers the General Educational Development Program (G.E.D.) to adults who did not complete their high school education. Upon successful completion of a series of tests, a North Carolina Certificate of High School Equivalency will be awarded. Isothermal accepts the certificate from applicants desiring to enter the College in either the college parallel or technical division.

Individuals interested in applying for the G.E.D. Program should contact the Office of Student Personnel Services for application procedures.

**HIGH SCHOOL EQUIVALENCY PROGRAM.** These programs are designed to enable adults to complete their high school education by

- a. preparing for the General Education Development Test (G.E.D.) that leads to the North Carolina certificate. (See section on Learning Laboratory.)
- b. earning credits required for graduation by the Rutherford and Polk County Boards of Education and the Tryon City School Board. (For further information see section on Learning Laboratory.)

## Testing

# Registration

The College operates on the quarter system. All students are expected to register during the time set aside for that purpose. Registration dates are listed in the College Calendar published in the front of this catalog. Registration clearance must be secured from the Student Personnel Office before the student is permitted to register.

## Tuition and Fees

Isothermal Community College receives financial support from local, state, and federal sources, allowing each student an education opportunity at minimum cost. Tuition fees are set by the State Board of Education and are subject to change without notice. Cost of textbooks, laboratory fees and supplies are additional expenses which vary according to the program of study. The payment of all fees is required at the time of registration. If a student cannot pay his fees during registration, he is required to make some arrangement with the Business Manager's Office prior to his registration date.

Each quarter, tuition charges are as follows:

	In-State	Out-of-State
College Parallel		
14 quarter hours or more	\$42.00 per quarter	\$137.00 per quarter
Less than 14 quarter hours	\$ 3.00 per qtr. hr.	\$ 11.45 per qtr. hr.
Activity fee	\$10.00 per quarter	\$ 10.00 per quarter
Technical or Vocational		
14 quarter hours or more	\$32.00 per quarter	\$137.00 per quarter
Less than 14 quarter hours	\$ 2.50 per qtr. hr.	\$ 11.45 per qtr. hr.
Activity fee	\$10.00 per quarter	\$ 10.00 per quarter

\*Student activity fee of \$10.00 applicable only if 7 or more quarter hours are carried.

### REFUND POLICY.

- A. "Tuition refund for students shall not be made unless the student is, in the judgment of the institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds of the student's tuition may be refunded if the student withdraws within ten calendar days after the first day of classes as published in the school calendar. Tuition refunds will not be considered for \$5.00 or less, except if a course or curriculum fails to materialize, then the entire tuition will be refunded."

**STUDENT ACTIVITY FEE.** A student activity fee of \$10.00, \$10.00, & \$8.00 is charged each of first three quarters Fall, Winter, and Spring respectively for students registering for seven hours or more. There is no Student Activity fee for summer quarter. The proceeds from this fee are budgeted cooperatively by students and faculty in support of non-curricular activities. Part-time students may purchase a student activity card. Students are advised that without the activity card admission charges may be assessed at certain student activity functions.

**BOOKSTORE.** The College operates a bookstore where the student may purchase needed books and supplies with profits being used for college projects and services. The hours of operation are 9:00 a.m. to 1:00 p.m. Monday through Thursday, closed all day Friday.

Used books will be purchased by the bookstore if they continue to be approved for use as a text. Used prices will be determined by the condition of the book. In no case will the repurchase price be more than 50 percent of the original price.

All students should attend class before buying books. Any book sold will be considered used when repurchased even though the incorrect book was purchased.

**CLASS RING AND GRADUATION FEE.** All orders for class rings, caps and gowns, and graduation invitations will be coordinated by the Business Office. Notices will be posted relevant to dates for measurements. Students who are graduating should see that their orders are placed on the date specified in the bulletin.

**CLASS ATTENDANCE.** Every student is expected to attend all of his classes and is responsible for all class work.

**ACADEMIC CONTINUATION.** When the student has attempted 25 quarter hours of credit and has less than 1.0 cumulative grade point average, he may elect to change programs or be placed on academic probation with the stipulation that he must achieve at least a 1.50 grade point average for the probationary quarter in order to remain in his present program.

## Tuition and Fees

## Academic Matters

## Academic Matters

Any student on academic probation who fails to meet the minimum academic requirement for continuation in a particular program may elect to do one of the following:

1. Change his division, in which event he would be eligible to return to his original program after two quarters. Any student who reverts to his original division will be placed on probation requiring a 1.5 academic grade point average for that quarter.
2. Withdraw from the College for a period of one year, after which time he will be eligible to return to his original division with the stipulation that he is on academic probation and will be required to achieve a 1.5 academic grade point average for that quarter.

After attempting 60 quarter hours, the student with a cumulative grade point average less than 1.50 will be placed on academic probation with the stipulation that he must improve his GPA for the current quarter. Any student failing to show improvement in his GPA at the end of the probationary period will have his future academic status reviewed by the Committee on Academic Continuation.

**GRADING SYSTEM.** Isothermal Community College is on a quarter system. Normally, one unit of credit is equal to one class hour meeting time per week. Where the laboratory is required, one credit hour will equal at least two hours of laboratory time.

The grading system is as follows:

Grade Significance	Quality Points
A 93-100	4 per quarter hour
B 85-92	3 per quarter hour
C 77-84	2 per quarter hour
D 70-76	1 per quarter hour
F Failed	0
DR Dropped	0
DRP Dropped Passing	0
DRF Dropped Failing	0
I Incomplete	0
NC No Credit (Audit)	0

A grade of "I" is assigned when the course work is incomplete. This grade can be removed if the course work is completed satisfactorily within one calendar year. (4 qtrs).

Courses with earned grades of "D" or "F" may be repeated. Courses with earned grades of "C" or better may be repeated only by special permission from the Director of his division.

**ACADEMIC LOADS.** A load of 12–19 credit hours constitutes a normal load for a student enrolled in the college parallel division. A load of 12–21 credit hours constitutes a normal load for a student enrolled in the technical or vocational division. Students who wish to register for more than the normal load must get the approval of the Divisional Chairman. (The Academic Dean for College Parallel and the Director of Occupational Education for Technical and/or Vocational Programs.)

**EXAMINATIONS.** Final examinations in all subject areas are held at the end of each quarter. The examination record combined with the record made in class constitutes the student's final grade.

**GRADE REPORTS.** A written mid-term report will be mailed to the parent if the student is failing a course before the end of the sixth week. Final grade reports are furnished to the student at the end of each quarter.

#### **STUDENT CLASSIFICATION.**

Freshman – A student who has earned fewer than 45 quarter hours of credit.

Sophomore – A student who has 45 hours or more quarter hours of credit.

Part-Time – A student who is enrolled for less than 12 quarter hours.

**NUMERICAL DESIGNATION OF COURSES.** Courses in Isothermal Community College catalogs are numbered in accordance with the North Carolina Department of Community College System.

1. All college preparatory courses are indicated by a prefix, and numbers range from 0-99.
2. (a) All freshmen academic courses are indicated by a three-letter prefix and numbers ranging between 100-199.  
(b) All sophomore academic courses are indicated by a three-letter prefix and numbers ranging between 200-299.

## Academic Matters

## Schedule Changes

3. (a) All freshmen technical courses are indicated by a three-letter prefix, numbered between 100-199 and preceded by the letter "T".  
(b) All sophomore technical courses are indicated by a three-letter prefix, numbered between 200-300, and preceded by the letter "T".
4. All vocational courses are indicated by a three-letter prefix and numbered between 1000-2000.
5. All adult education courses beyond the high school are indicated by a three-letter prefix and numbered 2000-3000.
6. All high school courses are numbered according to the North Carolina Public School course number system.

In order to drop or add a course or to change a course section, the following steps should be adhered to before the changes are official:

1. Secure change of schedule form from Student Personnel Office.
2. Drops and adds must be approved by the faculty advisor and instructor. (No one will be allowed to add a course or change sections after the last day to register.)
3. Change of sections must be approved by the instructor(s) involved.
4. All notifications of schedule changes must be acknowledged and recorded by the Registrar before the change is official.

A student may officially drop a course during the first two weeks of the quarter without academic penalty. If a student drops a course after this deadline, he will receive a grade of "DrP" (dropped passing) or "DrF" (dropped failing). A "DrF" carries the same value as an "F" (failure).

### DIVISIONAL CHANGES.

1. Any student desiring to change divisions should report to the Counselor. The Counselor will initiate a divisional change sheet and refer the appropriate division chairman.
2. If testing is necessary, the counselor will administer the appropriate battery of placement tests to the student. Test scores will be reviewed and recommendations made to the divisional chairman.

3. The divisional chairman will review the student's test scores and his academic work to date. If the divisional change is approved, the student is asked to report to the Registrar's Office to begin registration.

#### PROGRAM CHANGES.

1. Student requests for a change in program that requires a divisional change will be handled in the same manner as outlined under "Divisional Changes."
2. Changing programs within the same division does not require placement testing. However, these changes must be acknowledged by the Counselor and approved by the Divisional Chairman.

To withdraw from the College, the student will use the following procedure:

1. The student will obtain a withdrawal form from the Director of Student Personnel.
2. The official date of a student's withdrawal from the College is the exact date that he makes his request for withdrawal. The Student Personnel Office notifies each instructor of the name of the student and the official date of withdrawal.
3. A student may withdraw during the first two weeks of the quarter without scholastic penalty. This procedure, if followed, will entitle the student to have his permanent record show the notation "withdrawn." This notation indicates good standing and the privilege of readmission.
4. Any student who withdraws after the first two weeks of the quarter will receive a grade of "WP" or "WF". A student who withdraws unofficially from the College without following the proper procedure will receive the grade of "F".

**REQUIREMENTS.** Requirements for the degree or diploma will vary according to curriculum. The student should refer to the required courses in the catalog which applies to his program so that he can ascertain the course requirements for graduation. All

Change In  
Divisions  
or Program

Withdrawal  
From  
College

Graduation



students must have a grade point average (GPA) of 2.0 ("C" average) to be eligible for graduation.

## Graduation

In the case of students transferring into Isothermal Community College, at least half of the credits required for graduation must be earned at Isothermal Community College or a member institution within the North Carolina System of Community Colleges.

**COMMENCEMENT EXERCISES.** Commencement exercises to award degrees and diplomas to students in respective divisions are held at the conclusion of the spring and summer quarters. Students are expected to file graduation applications with the Registrar's Office at least one quarter preceding commencement exercises. The specific dates of graduation are listed in the College Calendar in the front of this catalog. All students who are eligible to receive degrees and diplomas are expected to participate in graduation exercises unless excused by their Divisional Chairman.

**DEAN'S LIST WITH HIGHEST HONORS.** The Dean's List is designed to recognize all students whose academic performance is outstanding. In order to qualify for the Dean's List with Highest Honors, a student must carry at least twelve (12) quarter hours of credit work during the quarter and maintain a 4.0 quality point average for the quarter.

## Honors

**DEAN'S LIST.** In order to qualify for the Dean's List, a student must carry at least twelve (12) quarter hours of credit work during the quarter and maintain a 3.0 quality point average for the quarter.

**GRADUATION WITH HONORS.** Students who complete a degree or diploma program with a quality point ratio of 3.6 or better will be graduated with High Honors. The student who earns a quality point ratio of 3.00 to 3.59 will be graduated with Honors.

**AWARDS DAY.** Awards Day is an annual assembly, held to recognize students whose scholarship, leadership, citizenship and service have been meritorious and noteworthy. Each division as well as department of Isothermal Community College is

entitled to give recognition to those students whose achievements have evinced the highest level. Appropriate certificates, trophies, or plaques and letters of citation are presented to the winners.

## Honors

### WHO'S WHO AMONG STUDENTS IN AMERICAN JUNIOR COLLEGES.

Annually, a directory recognizing outstanding campus leaders from over 500 junior colleges in the 50 states and the District of Columbia is published in Tuscaloosa, Alabama. Only second-year college students are eligible for nomination. Nominees are selected each year by a faculty committee, composed of representatives from each department of the College. The number of nominees is determined by the national office, based on present enrollment. The selection committee is instructed to consider students whose academic standing, service to the community, leadership in extracurricular activities and future potential are decidedly above average. The winners submit biographical information which is included in the Directory, receive a certificate suitable for framing, and are eligible for placement service when they seek employment.

All student services and out-of-class activities are coordinated through the Office of Student Personnel Services. Professional staff members are available to provide assistance to individual students and groups on matters affecting student well being. This section of the catalog outlines the various services available at the College.

## Student Services

**STUDENT COUNSELING.** The Student Counseling Center is located in the Office of Student Personnel Services and is in operation for the benefit of all students.

A professional counseling staff is available to assist the student with personal, social, educational, or vocational problems. Referral is not necessary, and students with problems or questions are encouraged to see members of the counseling staff at any time. Group counseling sessions are encouraged in cases where several students wish to talk over a similar problem.

Included in the counseling program are individual and small group tests which may be given on student request, and/or on the recommendation of the counselor. Specific academic subject areas, problem check lists, and interest inventories are among the tests available.

Occupational and educational information is on file in the Center and students are encouraged to use the pamphlets, books, college catalogs, brochures and leaflets on hand.

## Student Services

Students who cannot find desired information should contact the counselor for assistance.

**ACADEMIC COUNSELING.** Any student whose cumulative quality point average is less than 1.0 at the end of any quarter will be requested to report to the Office of Student Personnel Services for counseling. The counselor will attempt to identify the problems of the student. If mutually agreed, the counselor may direct the student to a program for which he is better qualified.

**PLACEMENT SERVICE.** The College will assist students in securing part-time employment during their enrollment and will give special attention to the placement of students who graduate in the occupational educational curriculums. Information on employment opportunities is posted on the Student Personnel bulletin board. Applications can be secured and turned in to the Director of Student Personnel.

**HEALTH SERVICES.** Each student is required to have a physical examination prior to enrollment. Health problems are identified and recorded for future reference in case of emergency.

A first aid station is available in the Administration Building for treatment of minor injuries. Arrangements for emergency treatment are referred to local physicians. In all cases involving serious illness or accidents, parents will be notified immediately.

Procedures in case of accident or sickness:

1. In the event of accident or emergency, notify the Student Personnel Office immediately.
2. If the accident is believed serious, the student should not be moved, but made more comfortable until help arrives.
3. If the student is able to move, he should be assisted and taken directly to Room 123 in the Student Personnel Office.

**HOUSING.** The College does not provide living accommodations for students. A list of available housing is prepared annually to assist out-of-town students in locating housing facilities. In all cases the student is responsible for making his own housing

arrangements. The College assumes no responsibility for rental negotiations between student and homeowner.

**FOOD SERVICES.** Food and beverages are served through vending machines in the Student Center. Light lunches may be secured throughout each day of operation.

**STUDENT CENTER.** The College operates a Student Center for relaxation and recreation during the day and in the evenings. Available for student use are the following: a pay telephone, a juke box, and ping-pong tables. Students are urged to make recommendations to the elected officers of the Student Government Association relevant to additions or deletions or recreational equipment or food matter.

**ACCIDENT INSURANCE.** Two accident insurance plans have been authorized by the College on a voluntary basis for the welfare of students and staff. The College urges each student to purchase accident insurance during his initial registration. The two plans are:

Plan I This plan provides benefits for a full 24 hours per day for the 12-month period for covered accidents. Provides protection not only at school but also any time school is not in session. The premium is \$16.00 per student. The premium for teachers, administrative and clerical employees is \$24.75 per employee.

Plan II This is a limited policy covering only bodily injuries resulting from covered school-associated accidents. Students who enrolled for Plan I do not need and are not eligible for protection under this plan. The premium is \$3.00 per student. The premium for teachers, administrative and clerical employees is \$3.75 per employee.

#### **ORIENTATION FOR FRESHMEN AND TRANSFER STUDENTS.**

The purpose of Orientation Day is to introduce the student to his new environment and to acquaint him with the policies and ideals of the College. All new freshmen and transfer students are required to register for Educational Orientation 101 their first quarter of enrollment.

**SELECTIVE SERVICE.** Selective Service requires evidence of enrollment for all students registered with them within 30 days after school opens each year. It is the student's responsibility to submit the request for deferment form through the Student

## Student Services

## Student Services

Personnel Office so that his enrollment can be verified. These forms are made available at registration and may be obtained at any time in the Student Personnel Office.

**VETERAN AFFAIRS.** Veterans entitled to educational subsistence should make application to their local Veterans Service Officer. (The Rutherford County Veterans Office is located in the Rutherford County Courthouse.) The Veterans Administration Regional Office serving the state where a student registers will acknowledge eligibility and educational entitlement by directing a Certificate of Eligibility to the student. This important document must be submitted to the Student Personnel Office for certification of enrollment.

The V.A. uses the following schedule of hours to determine veterans benefits. According to the Veterans Administration, the following number of credits or hours constitute what is considered full-time, three-quarter time, and one-half time in each division: (This information applies to N. C. Community College students only)

College Parallel Division and Technical Division

Full time	.....12 or more quarter hours of credit
3/4 time	..... 9-11 quarter hours of credit
1/2 time	..... 6-8 quarter hours of credit

### Vocational Division

Full time	.....30 clock hours
3/4 time	.....22-29 clock hours
1/2 time	.....15-21 clock hours

Students in vocational programs will not be classified as full time students under the Veterans Administration Educational Assistance Program unless enrolled for thirty contact hours per week. In any quarter when the total weekly contact hours are fewer than thirty hours in a vocational program, a student may request enrollment in additional courses. Approval will be given to enroll for additional instruction up to thirty hours per week in courses deemed appropriate and consistent with his programs and abilities.

Isothermal Community College provides a variety of extra-curricular activities for students. All student activities are coordinated through faculty supervision. Listed below are the opportunities available at the College for students to express and develop special interests.

# Student Activities

**STUDENT GOVERNMENT ASSOCIATION.** All students of the College are members of the Student Government Association and are entitled to all membership privileges of the organization. The Student Government Association is active in promoting the interests of the students, improving facilities, planning social functions, and assisting student organizations.

The President of the Student Government Association is the chief executive which includes divisional representatives and members at large. Student interest and assistance are welcomed. The S.G.A. President is a voting member of all college committees, including the President's Administrative Council.

**INTRAMURAL ATHLETICS.** Seasonal sports are organized each quarter. This program gives the student an opportunity to engage in various forms of physical activity such as: basketball, softball, tennis, golf, badminton, and volleyball. All interested students are invited to participate in these activities.

**INTERCOLLEGIATE ATHLETICS.** The College offers athletics on the intercollegiate level in basketball, golf, and tennis. Isothermal Community College is a member of the NJCAA and maintains an independent status while scheduling athletic contests with other NJCAA 2-year colleges in its geographic regions. Male students are eligible for varsity participation providing that they meet the eligibility requirements prescribed by the NJCAA.

**ALUMNI ACTIVITIES.** Isothermal Community College maintains a list of alumni and keeps them informed of college activities by means of a newsletter several times a year.

**LECTURES AND CONCERTS.** The Fine Arts Committee exists to bring programs in painting, drama, music, dance, art cinema, and literature to the College for the enjoyment of both students and community. It attempts to present the arts not only as aesthetic enjoyment but also as reflections and interpretations of an era. To these ends, the Committee has in the past sponsored art exhibits, foreign films, music recitals, and lecturers. The Committee invites both local participants and visiting scholars, and also artists from other colleges and universities to present programs.

**COLLEGE SINGERS.** The College Singers provide musical concerts for the enjoyment of the students and general public throughout the year. Its membership is open to all students with vocal or other musical talent and interest.

## Student Activities

**PUBLICATIONS.** The yearbook, "Sentinel," recalls the events of the school year. It is compiled and edited by an elected staff of students with assistance provided by faculty advisers.

The college newspaper, "Patriot," published bi-monthly, provides communication to the student body. Through this media, students are brought up to date on college current events such as: Student Government meetings, student activities, editorials, intramural and intercollegiate sports.

**BUSINESS CLUB.** The club was organized to assist students in the development of business leadership. Literature is reviewed in all fields of business.

**INTERCLUB COUNCIL.** Membership in the Interclub Council is open only to presidents of campus clubs or organizations. This group acts as a line of communication to all campus clubs or organizations and provides information to the student body pertinent to meetings and events. The Council establishes guidelines for the selection of "Outstanding Students" and "Miss I.C.C." each year.

**SIGMA CHI.** This organization is a chapter of Phi Theta Kappa honoring fraternity. This institutional chapter was organized to recognize students of top academic standing at Isothermal Community College.

**RADIO CLUB.** The Radio Club is open to any student who wishes to learn or develop skills in the art of electronics. The purpose of the Club is to exchange information, promote radio knowledge, and improve operational techniques. One of the principle objectives of the Club is to conduct programs and activities on the air in an effort to stimulate general interest and promote amateur radio in the community.

**VOCATIONAL ASSOCIATION.** Membership is restricted to students enrolled in the vocational division. This organization is concerned with promoting a better public image of occupational education in our schools and community, encouraging vocational students to participate in college affairs, and to assist in the development of existing and new courses.

## Financial Assistance Program

**FINANCIAL AID.** Isothermal Community College is a participant in federal and state financial aid programs. Awards are based on financial need and academic merit. The need is judged by the total financial picture of the student and his family. Academic

merit is determined by the same factors considered in connection with admission – high school achievement and placement test results.

Students may secure information and financial aid applications by contacting the Director of Student Personnel in the Student Personnel Office. Listed below are the programs of financial assistance that are available at the College.

**EDUCATIONAL OPPORTUNITY GRANTS.** This program is available to students with exceptional need. Educational Opportunity Grants vary in amounts due to individual needs and availability of funds. Grants can range from \$200 to \$1000 a year and can be no more than one-half of the total assistance awarded to the student.

**COLLEGE WORK-STUDY PROGRAM.** Students, particularly those from low-income families, who need a job to help pay for college expenses are potentially eligible for employment by their colleges under federally supported work-study programs.

The amount of hours a student can work a week will depend on the division he is enrolled in. During the summer or other vacation periods when they do not have classes, students can work full-time (40 hours per week).

**NATIONAL DEFENSE STUDENT LOANS.** National Defense Student Loans are awarded in conjunction with other forms of financial assistance. The repayment period and the interest does not begin until nine months after the student ends his studies. The loan bears interest at the rate of 3 percent each year and repayment of principal may be extended over a ten-year period, except that Isothermal Community College requires a minimum repayment of \$15.00 a month.

If a borrower becomes a full-time teacher in an elementary or secondary school or in an institution of higher learning, as much as half of the loan may be forgiven at the rate of 10 percent for each year of teaching service. This must be applied for by the borrower before the end of the academic year.

Other forms of financial assistance are available.

**SCHOLARSHIP LOAN FUND FOR PROSPECTIVE TEACHERS OF NORTH CAROLINA.** This loan program is administered through the State Department of Education. Maximum loan consideration is \$600 per year and is renewable

## Financial Assistance Program



## Financial Assistance Program

for four years. A percentage of the loan will be cancelled for each year of teaching service in North Carolina. Applications can be obtained from the Financial Aid Director in the Student Personnel Office. Students are advised to submit their applications early in the year.

**GUARANTEED LOAN PROGRAM.** Loans are available to both incoming freshmen and currently enrolled students through the Guaranteed Loan Program. Under this program, one may borrow from a bank or other private financial institutions. Additional information and applications can be obtained through the Director of Financial Aid.

**VOCATIONAL WORK-STUDY PROGRAM.** Designed to provide part-time employment for technical and vocational students who need the earnings from such employment to continue their education on a full-time basis.

**VOCATIONAL REHABILITATION.** Vocational Rehabilitation offers services necessary to enable a student who is disabled to become self-supporting. Eligible handicapped persons may receive financial assistance while enrolled at Isothermal Community College.

Prospective students having a disability who desire to apply for training under the provisions of this program should contact the Division of Vocational Rehabilitation Office in their respective county.

**CONDUCT.** The conduct of a student, both in and out of school, will be measured on an adult standard. He assumes full responsibility for the consequences of his actions and behavior. It is the personal responsibility of each student to uphold the rules and regulations of Isothermal Community College. The College reserves the right to dismiss any student who in its judgment conducts himself in a manner that is not in compliance with the purposes of this institution.

**DRESS.** One of the purposes of college experience is to afford a student the opportunity to practice effective personal grooming. Appropriate dress is encouraged and required. While the College aims to honor the individuality of each student, it reserves the prerogative to announce and implement regulations concerning dress.

**ADDITIONAL INFORMATION ON RULES AND REGULATIONS IS CONTAINED IN THE STUDENT HANDBOOK. IT IS THE INDIVIDUAL RESPONSIBILITY OF EACH STUDENT TO READ AND UNDERSTAND THIS HANDBOOK.**

## Student Responsibilities



# College Parallel



The college parallel division has several missions. First, it makes available in preplanned programs of study the first two years of college for students who intend to transfer to a senior college or university to complete a baccalaureate degree. These are called transfer programs. Second, it provides individual college courses for our out-of-school citizens who desire, for a variety of reasons, to continue their education. Finally, it provides the opportunity to study in the arts and sciences for those whose desire for such an education is satisfied by two years or less of work. The degree Associate in Arts is awarded to those who complete all requirements for that degree.

## College Para Programs

The student who plans to transfer to a senior college or university from Isothermal Community College is advised to give careful attention to several important considerations.

1. The transferability of courses taken at Isothermal is determined solely by the institution to which the student transfers. Courses numbered 100 through 299 are generally accepted by senior institutions. Courses numbered below 100 are developmental studies and carry no college transfer credit.
2. The transferring student is responsible for meeting the entrance requirements of the senior institution at the time of transfer. A student may earn more than 90 quarter hours of academic credit, but the total number of hours accepted for transfer is determined by the senior institution to which the student transfers.
3. The institution to which an official transcript of credits is sent may recompute the quality point ratio and/or the credits of the student in accordance with its own grading system and calendar. Most senior institutions require an overall grade point average of 2.000 or better for transfer.

## College Trai Program

# Degree Offered

## Curriculum Description

Isothermal Community College offers the Associate of Arts Degree to the college parallel student.

**REQUIREMENTS FOR DEGREE.** Associate in Arts candidates must complete the following courses or equivalents in addition to approved electives for a minimum of 96 hours with an overall grade point average of 2.0 ("C") or better:

### Subject Area

Communications . . . . .	9
(English 101, 102, 103 are required of all college parallel students.)	
Humanities . . . . .	12
(This requirement may be met by a selection from literature, art, or music and in all cases English 201, 202, 203 will be required.)	
Mathematics . . . . .	10
Laboratory Science . . . . .	12
(At least 3 courses in sequence will be selected from one of the laboratory sciences.)	
Social Studies . . . . .	12
Physical Education . . . . .	6
Educational Orientation . . . . .	1
Electives . . . . .	34

### Physical Education Exemption Requirements

1. Physician's Exemption
2. Twenty-five years of age or older

Note: R.O.T.C. and National Guard training do not count for physical education exemption.

## College Parallel Programs

**BUSINESS ADMINISTRATION.** This program is designed for the student to transfer to a college offering a major in business administration with no loss of credit. Business majors should follow this program with some modifications depending upon their particular needs.

### FRESHMAN YEAR

Fall Quarter	Credit Hours
Course Title	
English 101 . . . . .	3
History 101 . . . . .	3
Math 101 . . . . .	5
Biology (or) Chemistry 101 . . . .	4
Phy. Ed. . . . .	1
Educational Orientation . . . . .	1
	17

### Winter Quarter

English 102 . . . . .	3
History 102 . . . . .	3
Math 102 (or) Math 161 . . . . .	5
Biology (or) Chemistry 102 . . . .	4
Phy. Ed. . . . .	1
	16

### Spring Quarter

English 103 . . . . .	3
History 103 . . . . .	3
Biology (or) Chemistry 103 . . . .	4
Phy. Ed. . . . .	1
Electives . . . . .	6
	17

### SOPHOMORE YEAR

Fall Quarter	Credit Hours
Course Title	
English 201 . . . . .	3
Economics 201 . . . . .	3
History 251 . . . . .	3
Business 201 . . . . .	3
Phy. Ed. . . . .	1
Soc. 201 . . . . .	3
	16

### Winter Quarter

English 202 . . . . .	3
Economics 202 . . . . .	3
History 252 . . . . .	3
Business 202 . . . . .	3
Phy. Ed. . . . .	1
Soc. 202 . . . . .	3
	16

### Spring Quarter

English 203 . . . . .	3
Economics 203 . . . . .	3
History 253 . . . . .	3
Business 203 . . . . .	3
Phy. Ed. . . . .	1
Soc. 203 . . . . .	3
	16

**SUGGESTED ELECTIVES:** Mathematics, Speech, Psychology, Health, Political Science, Anthropology, Religion.

EDUCATION. This program is designed to meet the general educational requirements of the college as well as provide sufficient electives to explore various fields of interest.

FRESHMAN YEAR

Fall Quarter Course Title	Credit Hours
English 101 .....	3
History 101 .....	3
Math 101 .....	5
Biology 101 (or) Chemistry 101 ..	4
Phy. Ed. ....	1
Educational Orientation .....	1
	17

Winter Quarter

English 102 .....	3
History 102 .....	3
Math 102 (or) Math 161 .....	5
Biology 102 (or) Chemistry 102. ..	4
Phy. Ed. ....	1
	16

Spring Quarter

English 103 .....	3
History 103 .....	3
Biology 103 (or) Chemistry 103. ..	4
Phy. Ed. ....	1
Elective .....	6
	17

SOPHOMORE YEAR

Fall Quarter Course Title	Credit Hours
English 201 .....	3
Sociology 201 .....	3
Am. Hist. 251 .....	3
Phy. Ed. ....	1
Phy. Sci. 101 .....	4
Pol. Sci. 201 .....	3
	17

Winter Quarter

English 202 .....	3
Sociology 202 .....	3
Am. Hist. 252 .....	3
Phy. Ed. ....	1
Phy. Sci. 102 .....	4
Pol. Sci. 202 .....	3
	17

Spring Quarter

English 203 .....	3
Sociology 203 .....	3
Am. Hist. 253 .....	3
Phy. Ed. ....	1
Phy. Sci. 103 .....	4
Pol. Sci. ....	3
	17

SUGGESTED ELECTIVES: Economics, Geography, Speech, Mathematics, Health, Anthropology, Religion.

**LIBERAL ARTS.** The liberal arts program is designed to serve a variety of needs. The person who intends to pursue a baccalaureate major in such areas as chemistry, physics, mathematics, sociology, history, music, philosophy, or psychology may complete his first two years of work at Isothermal Community College.

**FRESHMAN YEAR**

Fall Quarter	Credit Hours
Course Title	
English 101 . . . . .	3
History 101 . . . . .	3
Biology 101 (or) Chemistry 101. .4	
Math 101 . . . . .	5
Phy. Ed. . . . .	1
Educational Orientation . . . . .	1
	17

**Winter Quarter**

English 102 . . . . .	3
History 102 . . . . .	3
Biology 102 (or) Chemistry 102. .4	
Math 102 (or) Math 161 . . . . .	3
Phy. Ed. . . . .	1
	16

**Spring Quarter**

English 103 . . . . .	3
History 103 . . . . .	3
Biology 103 (or) Chemistry 103. .4	
Math 103 . . . . .	3
Elective . . . . .	6
	17

**SOPHOMORE YEAR**

Fall Quarter	Credit Hours
Course Title	
English 201 . . . . .	3
Foreign Language . . . . .	3
Phy. Ed. . . . .	1
Phy. Sci. 101 . . . . .	4
Elective . . . . .	6
	17

**Winter Quarter**

English 202 . . . . .	3
Am. Hist. 252 . . . . .	3
Phy. Ed. . . . .	1
Phy. Sci. 102 . . . . .	4
Elective . . . . .	3
	17

**Spring Quarter**

English 203 . . . . .	3
Am. Hist. 253 . . . . .	3
Phy. Ed. . . . .	1
Phy. Sci. 103 . . . . .	4
Elective . . . . .	6
	17

**SUGGESTED ELECTIVES:** Speech, Psychology, Music, Art, Mathematics, Health, Anthropology, Religion.



ENGINEERING, MATHEMATICS OR SCIENCE. The following, subject to modification, is generally what most engineering and science majors need for the first two years.

FRESHMAN YEAR

Fall Quarter

Course Title	Credit Hours
Mathematics 111 . . . . .	5
History 101 . . . . .	3
English 101 . . . . .	3
Chemistry 101 or Biology 101 . . .	4
Phy. Ed. . . . .	1
Educational Orientation . . . . .	1
	17

Winter Quarter

Mathematics 112 . . . . .	5
History 102 . . . . .	3
English 102 . . . . .	3
Chemistry 102 or Biology 102 . . .	4
Phy. Ed. . . . .	1
	16

Spring Quarter

Mathematics 113 . . . . .	5
History 103 . . . . .	3
English 103 . . . . .	3
Chemistry 103 or Biology 103 . . .	4
Phy. Ed. . . . .	1
	16

SOPHOMORE YEAR

Fall Quarter

Course Title	Credit Hours
Mathematics 211 . . . . .	5
English 201 . . . . .	3
Physics 201 . . . . .	4
Phy. Ed. . . . .	1
Elective . . . . .	3
	16

Winter Quarter

Mathematics 212 . . . . .	5
English 202 . . . . .	3
Physics 202 . . . . .	4
Phy. Ed. . . . .	1
Elective . . . . .	3
	16

Spring Quarter

Mathematics 213 . . . . .	5
English 203 . . . . .	3
Physics 203 . . . . .	4
Phy. Ed. . . . .	1
Elective . . . . .	3
	16

SUGGESTED ELECTIVES: Political Science, Speech, Math, Sociology, American History, Health, Physical Science, Biology, Anthropology and Religion.

# Courses of Instruction

**COURSE DESCRIPTIONS.** The courses listed below represent the offerings within the college transfer division. Courses should be taken in numerical sequence with prerequisite courses taken as indicated.

Following the name of the course, appear two numbers (3-3) which should be interpreted as follows: The first number represents the number of hours in lecture or laboratory study; the second number equals the number of credits assigned to the course.

Courses in the guided studies program are described in areas where development work is offered. When test results indicate weaknesses in a subject area, students will be assigned to noncredit study courses. When weaknesses are overcome, curriculum students will be scheduled for college credit courses.

\*Asterisk denotes courses approved for the curriculum which may not be offered each year.

## BUSINESS.

BUS 101--Introduction to Business . . . . . 3-3

This course is designed to give a business freshman an introduction to the areas of accounting, business finance, economics, transportation, management, marketing, business law and business education.

BUS 102--Beginning Typewriting . . . . . 5-3

Students who have less than one year of typewriting experience should begin their college typewriting with this course. Emphasis is placed on the typewriting keyboard and theory.

BUS 103--Intermediate Typewriting . . . . . 5-3

Students who have had one year of high school typewriting and type at a speed of 30 words a minute on a five minute time test must begin their college typewriting with this course. The emphasis is again placed on the typewriting keyboard and theory.

BUS 104--Advanced Typewriting . . . . . 5-3

Students who have had two years of typewriting will begin with this course. Study and tabulations, telegrams, memos, business letters, and legal forms. Fundamental skills are developed on duplicating machines and transcription machines.

- BUS 106--Shorthand . . . . .5-3  
Principles of Gregg shorthand. Presentation of theory with extensive practice in reading and writing. (Students with one year of high school shorthand will receive no credit for this course.) Five meetings a week.
- BUS 107--Intermediate Shorthand . . . . .5-3  
A review of fundamental principles, followed by assignments which stress speed, accuracy, fluency, and vocabulary. Introduction to transcription. Prerequisite: BUS 106 or one year of high school shorthand. Five meetings a week.
- BUS 108--Intermediate Shorthand . . . . .5-3  
Further study of shorthand theory, acquisition of ability to take rapid dictation and transcribe accurately. Prerequisite: BUS 104. Five meetings a week.
- BUS 201--Principles of Accounting I . . . . .3-3  
Principles, techniques, and tools of accounting for understanding the mechanics of accounting – collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises; include practical application of principles learned.
- BUS 202--Principles of Accounting II . . . . .3-3  
Partnership and corporation accounting including a study of payrolls and federal and state taxes with emphasis on the recording, summarizing and interpreting of data for management control rather than on bookkeeping details. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 201.
- BUS 203--Principles of Accounting III. . . . .5-4  
Partnership and corporation accounting including a study of payrolls and federal and state taxes with emphasis on the recording, summarizing and interpreting of data for management control rather than on bookkeeping details. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 201 and BUS 202.
- BUS 205--Advanced Typewriting . . . . .3-3  
Emphasis is placed on the development of individual production rates. From the knowledge the student has previously acquired in typewriting, he learns to set up problems using his own judgment. He learns the techniques needed in planning and typing special reports for executives, applying for a job, duplicating process, manuscripts, and legal papers.

## ECONOMICS.

- ECO 201--Economic Principles I . . . . .3-3  
An introduction to economic principles, problems, and policies. The nature of economic concepts, the principles and problems involved in national incomes, employment and prices, aggregate demand, business cycles, monetary and fiscal policies.
- ECO 202--Economic Principles II . . . . .3-3  
A continuation of Economics 201 with emphasis on the market and price system and the allocation of resources.
- ECO 203--Economic Principles III . . . . .3-3  
The distribution of income, government expenditures and revenues, public debt, and the distribution of the tax burden. A study of the international economy and perspectives on economic change.
- ECO 208--Consumer Economics . . . . .3-3  
A study of personal financial problems in such areas as housing, budgeting, loans, banking, taxes, credit and insurance.

## EDUCATIONAL ORIENTATION.

- EDU 101--Educational Orientation . . . . .1-1  
Required of all full-time freshman and transfer students during their first quarter at Isothermal Community College. Class meets once a week during regular class periods. The course covers the art of effective study, educational and vocational planning, use of the library, art of writing papers, and personal relations in college.

## ENGLISH AND HUMANITIES.

- ART 201--Survey of Art . . . . .3-3  
Introduction to principles of art, including media, style, technique; emphasis on Egyptian, Greek, Roman, Byzantine, Medieval, Renaissance, Baroque, Neo-Classical, Romantic, Impressionistic and Modern Art.
- DRA 201--Literature for the Theatre . . . . .3-3  
Survey of significant plays, both classic and contemporary, with special emphasis on the unique qualities of the drama as an art form.

- English 90--Fundamentals of Grammar . . . . .3--GS3  
 A guided studies course designed to review the fundamentals of grammar and sentence structure, including spelling, punctuation, common errors of usage, and paragraph development.
- English 95--Reading Proficiency . . . . .3--GS3  
 A guided studies course designed to improve reading ability in the areas of comprehension, vocabulary development, reading speed, and study skills.
- English 101--Freshman Composition I . . . . .3--3  
 A study of grammar and sentence structure with the main emphasis on understanding and composing a variety of correct English sentences which serve as building blocks toward larger units of composition. A study of selected works of literature and vocabulary development supplement.
- English 102--Freshman Composition II . . . . .3--3  
 A reading and writing course designed (1) to develop competence in composition in the major areas of discourse – exposition, definition, narration, description, and argumentation – with the main emphasis on paragraph development and composition of original themes and (2) to stimulate student interest in some of the major problems and issues of our times by reading, discussing, and writing about selected shorter works of literature. Vocabulary development supplement. Prerequisite: English 101.
- English 103--Freshman Composition III . . . . .3--3  
 A study of the use of the library and library materials for research; a study of the techniques and mechanics of writing a research paper; compiling a documented research or library paper. A study of selected literary works illustrating various types of literature. Prerequisite: English 102.
- English 201--English Literature I . . . . .3--3  
 A survey of English Literature from the fifth through the eighteenth century. Representative works are related to historical background and language development. Term paper (optional). Prerequisite: Successful completion of Freshman English courses.
- English 202--English Literature II . . . . .3--3  
 A survey of English literature of the nineteenth and twentieth centuries with special attention to development of literary types. Term paper (optional). Prerequisite: Successful completion of freshman English courses.

- English 203--Major American Writers . . . . . 3-3  
 Survey of American literature presenting representative works and types selected by the instructor. Term paper (optional). Prerequisite: Successful completion of freshmen English courses.
- Journalism 221, a, b, c, . . . . . (each) 1-1  
 A Laboratory course with the primary objective of publishing the college newspaper. Any student who is eligible to enter English 101 may take three quarters of Journalism for credit (one hour credit each quarter).
- Music 101, 102, 103, Applied Music . . . . .  
 Individual lessons in voice, piano, organ. Open to all students with the consent of the instructor. All Music students must sing in the College Chorus (music 210). One ½ hour lesson per week, one hour credit per quarter. Extra fee is \$30.00 per quarter paid to instructor. Two ½ hour lessons per week, two hours credit per quarter. Extra fee of \$60.00 per quarter paid to instructor.
- Music 110a, 110b, 110c, Music Fundamentals . . . . . (each) 1-1  
 A course of instruction in the basic fundamentals of music reading and parts singing designed to help those who like to sing but lack the necessary musical training to follow the music score and to do part singing. A suggested elective for all students who plan to major in elementary education.
- Music 111, 112, 113, Elementary Music Theory . . . . . 3-3  
 The writing of melodies, intervals, four-part harmony. Beginning keyboard harmony. All students who plan to work toward a music degree should take this course their first year, as they are prerequisites for third year course in a senior college. The student should have enough knowledge of piano to be able to play the harmony examples he will write during the year. Open to all qualified students as a Fine Arts elective.
- Music 201, 202, 203, Applied Music . . . . .  
 Prerequisite Music 101, 102, 103.  
 Individual lesson in voice, piano, or organ for advanced study with the consent of the instructor. All music students must sing in the College Chorus (Music 210). One ½ hour lesson per week, one hour credit per quarter. Extra fee of \$30.00 per quarter paid to instructor. Two ½ hour lessons per week, two hours credit per quarter. Extra fee of \$60.00 per quarter paid to instructor.

Music 211, 212, 213, Advanced Music Theory . . . . .	3-3
Continuation of first year theory. Study of altered chords, modulation, non-harmonic tones. Musical analysis. Further study of keyboard harmony and melodic and rhythmic dictation. Sight singing. Prerequisite: Music 111, 112, 113.	
Music 210, Chorus . . . . .	2-1
Study-activity course designed to give the student a deeper understanding, appreciation, and enjoyment of choral music and its practice. Open to all students by permission of the instructor. Student may take this course for six quarters for credit.	
Music 251, Music Appreciation . . . . .	3-3
A historical survey of music from its primitive beginning to the present, designed to develop a deeper understanding, appreciation, and enjoyment of music. Recorded music examples. Listening assignments. Open to all students. Two sections each quarter.	
Speech 211--Public Speaking . . . . .	3-3
Instruction and practice in effective public speaking; listening to and evaluating speeches; preparation and presentation of speeches for various occasions such as impromptu, extempore, after dinner, introduction of speaker, presiding at meetings, etc.	

#### HEALTH AND PHYSICAL EDUCATION.

HEA 101--Personal Health . . . . .	3-3
The Philosophy, knowledge and practices of personal health, hygiene and total fitness: physical, mental, and emotional.	
HEA 102--Community Health . . . . .	3-3
A study of the health problems of communities and their causes; the work of various agencies concerned with community health, and the individual's responsibilities for community health.	
HEA 103--First Aid . . . . .	3-3
A study of accidents and emergency situations; their cause, prevention, and treatment. Intensive instruction and laboratory work dealing with the treatment of the above.	
P E 101--Conditioning . . . . .	2-1
P E 102--Golf . . . . .	2-1
P E 103--Archery . . . . .	2-1

P E 104--Tumbling	2-1
P E 105--Badminton	2-1
P E 107--Volleyball	2-1
P E 205--Basketball	2-1
P E 207--Softball	2-1
P E 208--Tennis	2-1
P E 209--Touch Football	2-1
P E 210--Folk Dancing	2-1
P E 211--Square Dancing	2-1
P E 212--Social Dancing	2-1
P E 213--Field Hockey	2-1
P E 214--Bowling	2-1
P E 215--Wrestling	2-1
P E 216--Soccer	2-1
P E 217--Roller Skating	2-1
P E 218--Swimming	2-1

#### INDUSTRIAL ARTS.

I. A. 102--Automotive Mechanicis	5-3
A study of the construction and operation of automotive engines, the electrical system and tune-up adjustments.	
I. A. 103--Automotive Body	5-3
A study of the automobile body and the use of tools, equipment and materials for its repair. It will cover the general body-shop applications.	

#### MATHEMATICS.

MAT 101, 102--Foundation of Mathematics	(each) 5-5
A series of courses designed to give some insight into the nature and structure of mathematics. Topics include sets, systems of numeration, logic, finite mathematical systems, functions, a unified treatment of the concepts of algebra and trigonometry, probability and statistics, analytic geometry, limits, and an introduction to calculus. These courses must be taken in sequence.	
MAT 111, 112--Integrated College Algebra and Trigonometry	(each) 5-5
A unified treatment of algebra and trigonometry to provide a thorough preparation for a course in analytic geometry and the calculus. Prerequisite: MAT 102.	



- MAT 113, 211, 212, 213--Analytic Geometry and the Calculus . . . . . (each) 5–5  
 An integrated course in the fundamentals of analytic geometry and the calculus including application of derivatives, differentials, indefinite integrals, definite integrals, equations of curves and conic sections, differentiations of transcendental functions, polar coordinates, parametric equations, theory and applications of integrations, infinite series, solid analytic geometry, partial derivatives, multiple integrals and an introduction to differential equations. Prerequisite: MAT 112
- MAT 161--Elementary Statistics . . . . . 5–5  
 A study of fundamental statistical methods, basic statistical distributions, measures of control tendency and dispersion, statistical inference, and sampling techniques. Prerequisite: MAT 111 or 102.
- MAT 214--Linear Algebra . . . . . 5–5  
 A semi-rigorous approach to the fundamentals of linear algebra including linear equations and matrices, vector spaces, linear mappings, determinants, quadratic forms, and vector cross products. Prerequisite: MAT 113.

SCIENCE.

- BIO 101--Principles of Biology . . . . . 6–4  
 Principles, problems and basic similarities of all living organisms with emphasis on the chemistry of living organisms, metabolism, cytology, and genetics. Three lecture and three laboratory hours per week.
- BIO 102--Principles of Biology . . . . . 6–4  
 Principles of reproduction, development, organic maintenance, organization and integration, and behavior in plants and animals. A study of the principles of evolution and the concept of species. Three lecture and three laboratory hours per week. Prerequisite: BIO 101.
- BIO 103--Principles of Biology. . . . . 6–4  
 A systematic study of living organisms with emphasis on the vertebrates and Angiosperms. The principles of ecology and taxonomy will be included as they relate to the study of living organisms. Three lecture and three laboratory hours per week. Prerequisite: BIO 101, 102.
- BIO 111--Human Ecology . . . . . 3–3  
 A study of man in his environment with special emphasis on pollution and the population explosion in terms of man's future. The causes and cures of major aspects of human ecology will be covered with special attention given to ecological principles.

- BIO 201--General Zoology (Invertebrates) . . . . . 6-4  
 A study of the classification, morphology, physiology, and ecology of invertebrates. Three lecture and three laboratory hours a week. Prerequisite: BIO 101, 102, 103.
- BIO 202--General Zoology (Vertebrates) . . . . . 6-4  
 A study of the classification, morphology, physiology, ecology, and development of vertebrates. Three lecture and three laboratory hours a week. Prerequisite: BIO 101, 102, 103.
- BIO 203--Plant Identification . . . . . 6-4  
 The identification and related ecology of vascular plants with special emphasis on the local flowering plants. Three lecture and three laboratory hours a week. Prerequisite: BIO 101, 102, 103.
- CHM 101--General Chemistry . . . . . 6-4  
 An intensive treatment of basic principles with emphasis upon atomic and molecular theory. Special attention is given to quantitative topics. Laboratory work devoted to experiments which reinforce the theoretical concepts.
- CHM 102--General Chemistry . . . . . 6-4  
 An intensive treatment of basic principles with emphasis upon solutions, chemical equilibrium, and oxidation and reduction reactions. Laboratory work devoted to experiments which reinforce the theoretical concepts. Prerequisite: CHM 101.
- CHM 103--General Chemistry . . . . . 6-4  
 A continuation of general chemistry with major emphasis upon stoichiometric chemistry. Laboratory practice in separation and identification of the more common cations and anions. Prerequisite: CHM 101, 102.
- CHM 111--General Chemistry For the Health Sciences . . . . . 6-4  
 This is a brief presentation of the basic principles of inorganic chemistry. Emphasis will be on application of these principles to nursing and related fields. Topics covered will include the following: systems of measurement, structure of matter, chemical bonding, stoichiometry, reactions, solutions, and chemical equilibrium. All laboratory experiments are designed to reinforce topics covered in the lecture.

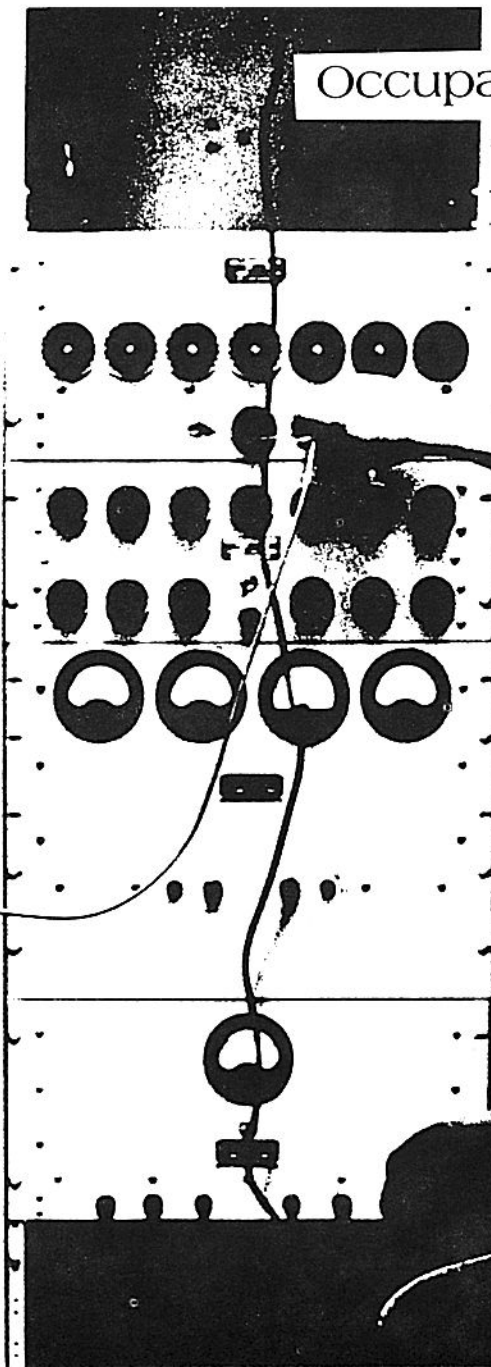
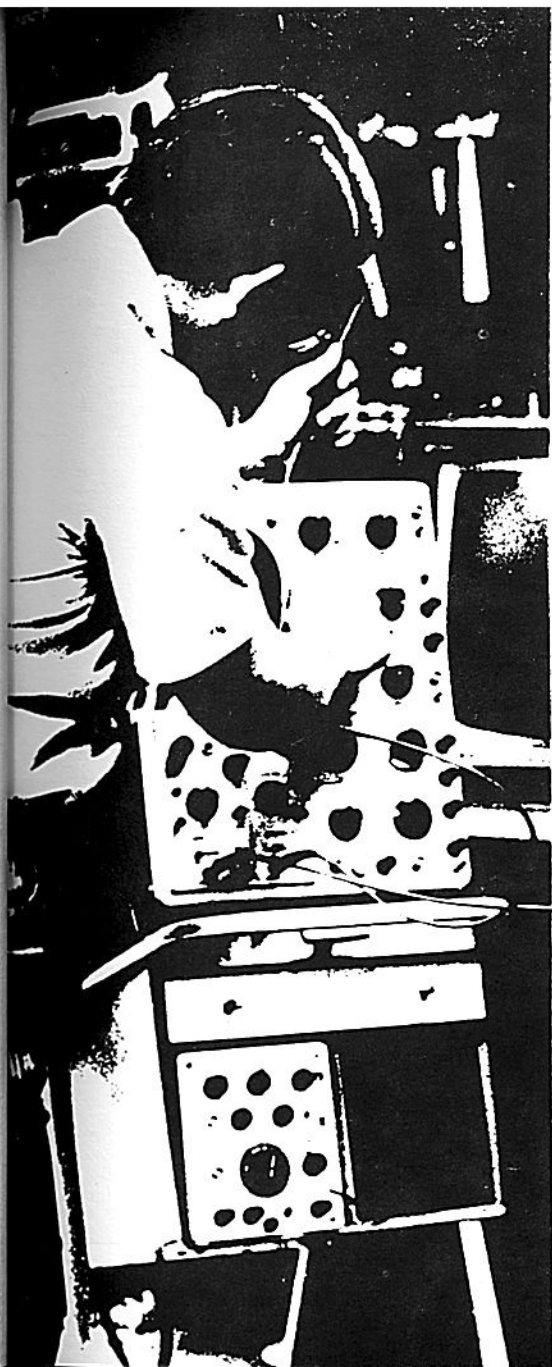
- CHM 112--General Chemistry For the Health Sciences . . . . . 6-4  
 Basic organic and physiological chemistry as applied to nursing and related fields will be presented. Topics to be covered are the following: Nomenclature, types of organic compounds, types of reactions, organic preparations and purifications, metabolism, body fluids, and the chemistry of body functions. All laboratory experiments are designed to reinforce topics covered in the lecture. Prerequisite: CHM 111.
- \* GEOL 101--Physical Geology . . . . . 6-4  
 The nature and occurrence of rocks and minerals, together with crustal features on the earth's surface. Laboratory work devoted to a study of rocks and minerals and their structure and occurrence.
- \* GEOL 102--Physical Geology . . . . . 6-4  
 A continuation of Geology 101 with major emphasis upon glaciation and glacial deposits, deserts, oceans, mountains and mountain building, and the earth's interior. Laboratory work will consist of topographic map interpretation. Prerequisite: GEOL 101.
- \* GEOL 103--Historical Geology . . . . . 6-4  
 Emphasis in this course is on the stratigraphic and fossil history of the earth as found in the earth's crust together with the necessary information on both plant and animal kingdoms to trace the evolution of life down through the ages. Laboratory work devoted to the experience with fossils, geologic maps, and aerial photographs.
- PHY SCI 101, 102, 103--Man and His Physical Environment . . . . . (each) 6-4  
 An integrated perspective of the physical sciences, study of selected topics such as systems of measurement, the expanding universe, structure of the earth, kinetic molecular theory of matter, energy (types, transformation, utilization), properties of elements and compounds, structure and utilization of atoms. The role of science in the development of civilization is emphasized. These courses must be taken in sequence.
- PHY 201--General Physics . . . . . 6-4  
 An introduction to systems of measurements, properties of matter (solids, liquids, gases), and mechanics. Laboratory experiments in mass, pressure, volume, and mechanics.
- PHY 202--General Physics . . . . . 6-4  
 Electron theory. Magnetism, electricity, and heat. Direct and alternating currents, series and parallel circuits. Heat temperature and change of state. Laboratory experiments in resistance, voltage and current measurements, and magnetic and electromagnetic effects. Prerequisite: PHY 201.

- PHY 203--General Physics . . . . .6-4  
 A study of light and sound wave motion, measurements of intensity, volocities, frequencies, and qualitative analysis. Prerequisite: PHY 202.
- SCI 90--Developmental Science . . . . .3-GS3  
 A guided study in developing the student's weakness in this area with emphasis on biology, chemistry, and physics.
- SOCIAL STUDIES.**
- ANT 201--Introduction to General Anthropology . . . . .3-3  
 A survey of the major fields and basic principles in the comparative study of mankind. Human development, fossil evidence, cultural origins are emphasized.
- ANT 202--Introduction to Cultural Anthropology . . . . .3-3  
 The evolution of culture is emphasized in the areas of cultural innovations, language, mores, customs, and anthroarchaeological techniques.
- ANT 203--Comparative Cultures and World Development . . . . .3-3  
 Comparison of selected primitive, pre-literate or non-industrial cultures from different regions of the world.
- GEOG 101--Physical Geography . . . . . 5-4  
 The earth's astronomical relations, factors of weather and climate, and physiographic features. Lecture three hours and laboratory two hours.
- GOEG 102--World Regions . . . . . 6-4  
 Relation of human activities to the larger geographic regions of the world.
- GEOG 103--Economic Geography . . . . . 3-3  
 Geographic factors involved in production, distribution, consumption, and conservation of the major crops, minerals and industries of the world.
- HIS 101, 102, 103--World Civilization . . . . . (each) 3-3  
 A survey of world history: ancient and medieval; early modern; mid-nineteenth century to date.
- HIS 251, 252, 253--History of the United States . . . . . (each) 3-3  
 A survey of the history of the United States: 1492-1848; 1848-1910; 1910 to date.

- PSY 201--General or Introductory Psychology . . . . .3-3  
 This course is designed to acquaint the student with the various aspects of psychology at the introductory level.
- PSY 202--Introduction to Child and Developmental Psychology . . . . .3-3  
 The course is designed to acquaint students with the complex developmental processes of humans from childhood to older maturity.
- PSY 203--Introduction to Applied Psychology . . . . .3-3  
 This course explores the field of psychology with reference to its application in human affairs.
- POL SCI 201--American National Government . . . . .3-3  
 A study of the formation and development of the national government; the Constitution; and the national government's organization, functions, and powers.
- POL SCI 202--Problems and Policies of American Government . . . . .3-3  
 A study of the politics, functions, and progress of the national government. Specific policies in the area of labor, agriculture, welfare, business, civil rights, citizenship, and national security; using a background of history, politics, and governmental institutions.
- POL SCI 203--American State and Local Government . . . . .3-3  
 A study of the organization, function, and powers of state and local government throughout the United States.
- REL 101--Introduction to the Old Testament . . . . .3-3  
 A survey or introduction to the life, literature, geography, and religion connected with the Old Testament.
- REL 102--Introduction to the New Testament . . . . .3-3  
 This course is designed to acquaint the student with the history, literature and personalities of the New Testament.
- REL 103--World Religions and Modern Man . . . . .3-3  
 A survey and comparison of the origins, developments, beliefs, or practices of the major faiths.
- SOC 201--Introduction to Sociology . . . . .3-3  
 An analysis of the society and culture dealing with social organization, control, institution, stratification, and social change.

- SOC 202--Social Problems . . . . .3-3  
A study of the major social problems of modern society, including family disorganization, minority groups, and problems associated with industrial and urban development.
- SOC 203--Sociology of the Family . . . . .3-3  
Study of the American family with attention given to courtship, marriage, family relationships and interdependencies, and social cultural stresses emerging from contemporary family life.
- SOC STD 90--Developmental Social Studies . . . . .3-GS3  
A guided study in developing the student's weakness in the social sciences with emphasis on historical, cultural, and political characteristics of a given period.

Occupational Education



# Occupational Education

Occupational Education has become an important part of our program, serving both business and industry. Skilled employees are able to secure higher salaries and more desirable working conditions.

Occupational Education at Isothermal Community College has been carefully planned to train individuals to qualify for the more skilled jobs in both technical and vocational work. Our planning of these programs has been centered around the needs of our community and its people. Our chief objective is to prepare any person who wishes to develop business and industrial competencies for skilled employment.

The courses in occupational education are not designed for transfer to other institutions. These courses are structured for the placement of competent, efficient, productive and well-adjusted individuals on better paying jobs that are not only remunerative, but also self-satisfying and worthwhile.



## Technical Division

Courses offered in the technical division are designed to meet the increasing demand in industry for high level industrial skills. The technician is a person whose chief interests and activities lie in the direction of testing, developing, and applying the operation of engineering and scientific processes. The student will be exposed to such activities as drafting and design, installation and operation of equipment, estimating, and sales. The technical curriculum requires two years for completion. The curriculum is similar to professional engineering but briefer and more technical in content.

Students choosing to enter a technical program must meet educational and aptitude requirements applicable to the individual course of their choosing. Students must have a well-rounded educational background in mathematics and science and possess maturity with a general aptitude for this advanced type of training.

Isothermal Community College endeavors to meet the needs of the people in the area by offering a two-year technical curriculum geared to train a person in specific technical areas.

The student is eligible for an Associate in Applied Science Degree pending completion of one of the following two-year programs:

Business Administration  
Electronics Technology  
Executive Secretary  
General Office Technology  
Recreation Technology

## Degree Offered

**REQUIREMENTS FOR DEGREE.** All students, regardless of program, must complete the following requirements for graduation with the Associate of Applied Science Degree.

1. A minimum of 108 quarter hours credit.
2. A minimum of 18 quarter hours in the areas of English, social science, and humanities, and not less than three (3) quarter hours in each field.
3. A student may be exempt from one area upon the approval of the Director of Occupational Education. (In such a case, the total number of hours would not be reduced but concentrated in the remaining two areas.)

## Technical Programs

**BUSINESS ADMINISTRATION.** In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this state, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The business administration curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the business administration curriculum are to develop: (1) Understanding of the principles of organization and management in business operations; (2) Understanding our economy through study and analysis of the role of production and marketing; (3) Knowledge in specific elements of accounting, finance, and business law; (4) Understanding and skill in effective communication for business operations in a rapidly expanding economy.

The graduate of the business administration curriculum may enter a variety of career opportunities from beginning sales person or office clerk to management trainee. The duties and responsibilities of this graduate vary in different firms. These duties might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculation, adjusting complaints, operating various office machines, and assisting managers in supervision. Positions are available in businesses such as advertising; banking; credit, finance, retailing, wholesaling; hotel, tourist, and travel industry; insurance; transportation; manufacturing; and communications.

### BUSINESS ADMINISTRATION.

Course Title	Hours Per Week		Quarter
	Class	Lab.	Hours Credit
<b>FALL QUARTER</b>			
T-ENG 101 Grammar	3	0	3
T-MAT 110 Business Mathematics	3	2	4
T-BUS 101 Introduction to Business	3	0	3
T-ECO 102 Economics	3	0	3
T-BUS 102 Typewriting or Elective	2	3	3
EDU 101 Educational Orientation	<u>1</u>	<u>0</u>	<u>1</u>
	15	5	17
<b>WINTER QUARTER</b>			
T-ENG 102 Composition	3	0	3
T-BUS 120 Accounting	5	2	6

T-BUS 115 Business Law	3	0	3
T-ECO 104 Economics	3	0	3
T-BUS 123 Business Finance	<u>3</u>	<u>0</u>	<u>3</u>
	17	2	18
SPRING QUARTER			
T-ENG 103 Report Writing	3	0	3
T-BUS 121 Accounting	5	2	6
T-BUS 116 Business Law	3	0	3
T-BUS 124 Business Finance	3	0	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	17	2	18
FALL QUARTER			
T-ENG 204 Oral Communication	3	0	3
T-BUS 232 Sales Development	3	0	3
T-BUS 239 Marketing	5	0	5
T-BUS 229 Taxes	3	2	4
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	17	2	18
WINTER QUARTER			
T-ENG 206 Business Communication	3	0	3
T-BUS 243 Advertising	3	2	4
T-BUS 235 Business Management	3	0	3
T-PSY 206 Applied Psychology	3	0	3
Elective	<u>5</u>	<u>0</u>	<u>5</u>
	17	2	18
SPRING QUARTER			
T-EDP 104 Intro. to Data Processing	3	2	4
T-BUS 271 Office Management	3	0	3
T-BUS 272 Principles of Supervision	3	0	3
T-BUS 110 Office Machines	2	2	3
Elective	<u>6</u>	<u>0</u>	<u>6</u>
	17	4	19

**ELECTRONICS TECHNOLOGY.** The field of electronics has developed at a tremendously rapid pace, especially since 1940. For many years the major concern of electronics was in the area of communications. Developments during and following World War II have revolutionized production techniques. Completely new industries have been established to supplement the need and demand for electronics equipment. This rapid growth of the electronics industry has been accompanied by an equally phenomenal growth in the demand for qualified technicians – both men and women.

This program provides a basic background in electronics theory and practical applications for business and industry. The electronics technology curriculum is designed to give the student a thorough introduction to the basic theory and application of electronic fundamentals, along with a solid foundation of mathematics and physics. The graduate of this curriculum is qualified to enter any of the many branches of our modern and ever-expanding world of electronics. Skilled electronic technicians are in great demand in our giant aerospace, communications, and computer industries. There is also a growing demand for skilled personnel in the medical and service fields. A career in electronics technology easily leads into supervisory and management positions in industry. There is no foreseeable decrease in the demand or growing opportunity for the skilled technician in electronics.

Upon completion of this program, students will find employment opportunities in such fields as radio and television production, radar, sonar, telemetering, and other forms of communication such as telephone; industrial and medical measuring, recording, indicating, and controlling devices; navigational equipment; missile and spacecraft guidance; electronic computers; and other types of equipment using vacuum tubes, transistors, and semiconductor circuits.

## ELECTRONICS.

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
FALL QUARTER			
T-ENG 101 Grammar	3	0	3
T-DFT 101 Drafting	0	6	2
T-ELEC 100 Intro. to Electricity	3	3	4
EDU 101 Educational Orientation	1	0	1
Elective or Developmental Studies	3	0	3
	<u>10</u>	<u>9</u>	<u>13</u>
WINTER QUARTER			
T-ENG 102 Composition	3	0	3
T-MAT 101 Math	5	0	5
T-ELN 101 Electronic Instruments and Measurements	2	3	3

T-ELC 101 DC Circuit Analysis	5	3	6
T-MAT 100 Slide Rule	0	2	1
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	18	8	21
SPRING QUARTER			
T-ENG 103 Report Writing	3	0	3
T-MAT 102 Math	5	0	5
T-ELC 102 AC Circuit Analysis	5	3	6
T-ELN 105 Control Devices	<u>5</u>	<u>3</u>	<u>6</u>
	18	6	20
FALL QUARTER			
T-ENG 204 Oral Communication	3	0	3
T-MAT 103 Technical Mathematics	5	0	5
PHY 201 Physics	3	3	4
T-DFT 112 Electronic Drafting	2	3	3
T-ELN 205 Electronic Circuits	<u>5</u>	<u>3</u>	<u>6</u>
	18	9	21
WINTER QUARTER			
T-MAT 201 Technical Mathematics	5	0	5
PHY 202 Physics	3	3	4
T-ELN 210 Transistor Circuit Analysis	5	3	6
T-ELN 214 Wave Shaping & Pulse Circuits	2	3	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	18	9	21
SPRING QUARTER			
PHY 203 Physics	3	3	4
T-ELN 220 Electronic Systems	5	4	7
T-ELN 215 Wave Shaping & Pulse Circuits	2	3	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	13	10	17

**RECREATION TECHNOLOGY.** This curriculum is designed for both men and women who are interested in working with other people in various recreational projects. The graduate will organize and administer various crafts and games usually under the direction of a recreational director. He may, however, direct small recreational centers.

**Objectives:**

1. Develop an attitude for quality work.

2. Acquaint individuals with an understanding of various arts, crafts, music, drama, indoor and outdoor sports, including the rules of play.
3. Develop an understanding of people.
4. Develop socially acceptable graduates who work well with others.

## RECREATION TECHNOLOGY

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>FALL QUARTER</b>			
T-ENG 101 Grammar	3	0	3
EDU 101 Education Orientation	1	0	1
T-REC 110 Natural Science	3	2	4
T-BIO 104 Physiology	3	3	4
T-REC 112 Arts and Crafts	0	5	2
T-REC 127 Team Sports	2	2	2
T-ART 106 Cultural Arts	<u>2</u>	<u>2</u>	<u>2</u>
	14	14	18
<b>WINTER QUARTER</b>			
T-ENG 102 Composition	3	0	3
T-REC 111 Introduction to Recreation	5	0	5
HEA 103 First Aid	3	0	3
T-PSY 206 Applied Psychology	3	0	3
T-REC 120 II Arts and Crafts, Music, Art & Drama	<u>2</u>	<u>3</u>	<u>3</u>
	16	3	17
<b>SPRING QUARTER</b>			
ENG 211 Speech or T-ENG 204 Oral Communication	3	0	3
T-REC 231 Social Recreation	3	2	4
T-BUS 266 Budget and Record Keeping	3	2	4
T-REC 121 Program Planning and Organization	2	3	3
T-REC 145 Techniques of Coaching & Officiating Major Sports	<u>1</u>	<u>4</u>	<u>2</u>
	12	11	16
<b>SUMMER QUARTER</b>			
T-REC 129 Cooperative Recreation (Supervised Field Training in Recreation)	2	24	5
T-REC 128 Water Sports	0	4	2
T-REC 106 Swimming Pool Operation & Maintenance	<u>2</u>	<u>0</u>	<u>2</u>
	4	28	9

FALL QUARTER			
Elective	3	0	3
T-PSY 201 Group Leadership	3	2	4
SOC 201 Introduction to Sociology	3	0	3
T-REC 220 Outdoor Recreation	2	3	3
T-REC 228 Practicum	0	10	3
	<u>11</u>	<u>15</u>	<u>16</u>
WINTER QUARTER			
T-REC 221 Individual Lifetime Recreation Activities	2	3	3
T-REC 207 Folk Dancing, Modern, Square Dancing	1	3	2
T-REC 229 Practicum	0	10	3
Elective Social Science or Humanities	6		6
	<u>9</u>	<u>16</u>	<u>14</u>
SPRING QUARTER			
T-REC 232 Organization of Activities	3	2	4
T-REC 225 Outdoor Sports	2	2	3
T-REC 241 Facility Operation & Maintenance	2	8	3
Elective	6	0	6
	<u>13</u>	<u>12</u>	<u>16</u>

**SECRETARIAL SCIENCE--EXECUTIVE.** Almost 11 million people were employed in clerical or some closely related type of work in 1965. More than two million of these were employed in occupations requiring stenographic skills. In fact, more individuals are employed in the clerical fields than in any other category.

A rapid increase in employment in this decade is anticipated. Openings may total more than 200,000 annually. Local employment opportunities parallel national trends.

In today's increasingly complex society, everyone needs an understanding of the business world. The successful business enterprise can no longer operate with only a few typists and bookkeepers. The private secretary must supplement her typing and shorthand with many new skills and abilities to meet demands of her position today.

The executive secretary curriculum is designed to develop the necessary secretarial skills in typing dictation, transcription, operation of office machines, and terminology for employment in the business world. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development.

The graduate of the executive secretary curriculum may be employed as a stenographer or a secretary as well as in a variety of other clerical occupations. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, handling numerous routine duties, private and confidential records, and a variety of business details on her own initiative. Positions are available in a variety of businesses such as insurance companies, banks, marketing institutions, financial firms, as well as all types of manufacturing firms.

## SECRETARIAL SCIENCE--EXECUTIVE.

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>FIRST QUARTER</b>			
T-ENG 101 Grammar	3	0	3
T-MAT 110 Business Mathematics	3	2	4
T-BUS 101 Introduction to Business	3	0	3
T-BUS 102 Typewriting or Elective	2	3	3
T-BUS 106 Shorthand or Elective	3	2	4
EDU 101 Educational Orientation	<u>1</u>	<u>0</u>	<u>1</u>
	15	7	18
<b>SECOND QUARTER</b>			
T-ENG 102 Composition	3	0	3
T-BUS 103 Typewriting or Elective	2	3	3
T-BUS 107 Shorthand	3	2	4
T-BUS 115 Business Law	3	0	3
T-BUS 183 Terminology and Vocabulary	<u>3</u>	<u>0</u>	<u>3</u>
	14	5	16
<b>THIRD QUARTER</b>			
T-ENG 103 Report Writing	3	0	3
T-BUS 104 Typewriting	2	3	3
T-BUS 108 Shorthand	3	2	4
T-BUS 112 Filing	3	0	3
T-BUS 110 Office Machines	2	2	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	16	7	19
<b>FOURTH QUARTER</b>			
T-BUS 199 Accounting	3	1	3
T-ENG 204 Oral Communications	3	0	3
T-BUS 205 Advanced Typewriting	2	3	3



T-BUS 206 Dictation & Transcription	3	2	4
T-BUS 211 Office Machines	2	2	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	16	8	19
FIFTH QUARTER			
T-ENG 206 Business Communication	3	0	3
T-BUS 207 Dictation & Transcription	3	2	4
T-BUS 214 Secretarial Procedures	3	2	4
T-PSY 206 Applied Psychology	3	0	3
Elective	<u>6</u>	<u>0</u>	<u>6</u>
	18	4	20
SIXTH QUARTER			
T-BUS 208 Dictation & Transcription	3	2	4
T-BUS 271 Office Management	3	0	3
T-PSY 112 Personality Development	3	0	3
Elective	<u>6</u>	<u>0</u>	<u>6</u>
	15	2	16

**GENERAL OFFICE TECHNOLOGY.** More people are now employed in clerical occupations than in any other single job category. Automation and increased production will mean that these people will need more technical skills and a greater adaptability for diversified types of jobs.

The general office curriculum is designed to develop the necessary variety of skills for employment in the business world. Specialized training in skill areas is supplemented by related courses in mathematics, accounting, business law, and applied psychology.

The graduate of the general office curriculum may be employed as an administrative assistant, accounting clerk, assistant office manager, bookkeeper, file clerk, machine transcriptionist, or a variety of other clerical related jobs. Positions are available in almost every type of business, large or small.

#### GENERAL OFFICE TECHNOLOGY.

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting or Elective	2	3	3
T-MAT 110 Business Mathematics	3	2	4
T-BUS 101 Introduction to Business	3	0	3

Elective	3	0	3
EDU 101 Educational Orientation	<u>1</u>	<u>0</u>	<u>1</u>
	15	5	17
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
T-BUS 103 Typewriting	2	3	3
T-BUS 115 Business Law	3	0	3
T-BUS 183 Terminology & Vocabulary	3	0	3
Elective	<u>6</u>	<u>0</u>	<u>6</u>
	17	3	18
SPRING QUARTER			
T-ENG 103 Report Writing	3	0	3
T-BUS 104 Typewriting	2	3	3
T-BUS 112 Filing	3	0	3
T-BUS 110 Office Machines	2	2	3
Elective	<u>6</u>	<u>0</u>	<u>6</u>
	16	5	18
FALL QUARTER			
T-ENG 204 Oral Communication	3	0	3
T-BUS 205 Advanced Typewriting	2	3	3
T-BUS 211 Office Machines	2	2	3
T-BUS 199 Accounting	3	1	3
T-BUS 232 Sales Development	3	0	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	16	6	18
WINTER QUARTER			
T-ENG 206 Business Communication	3	0	3
T-BUS 212 Machine Transcription-Business	1	2	2
T-BUS 214 Secretarial Procedures	3	2	4
T-PSY 206 Applied Psychology	3	0	3
Electives	<u>6</u>	<u>0</u>	<u>6</u>
	16	4	18
SPRING QUARTER			
T-BUS 271 Office Management	3	0	3
T-EDP 104 Introduction to Data Processing	3	2	4
T-PSY 112 Personality Development	3	0	3
T-BUS 220 Stenoscrypt	3	2	4
Electives	<u>5</u>	<u>0</u>	<u>5</u>
	17	4	19

## Courses of Instruction

**COURSE DESCRIPTIONS.** The courses listed in this section represent the offerings within the technical division. Courses should be taken in numerical sequence with prerequisite courses taken as prescribed.

Courses in the guided studies program are described in areas where developmental work is offered. When tested results indicate weaknesses in a subject area, students will be assigned to a noncredit course. When weaknesses are overcome, curriculum students will be scheduled for college credit courses.

### ART.

T-ART 106--Cultural Arts . . . . . 2-2-2  
This course is designed to familiarize the student with the various cultural aspects of mankind. Also the relationship of recreation and cultural arts will be included.

### BUSINESS.

T-BUS 101--Introduction to Business . . . . . 3-0-3  
A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management.

T-BUS 102--Typewriting . . . . . 2-3-3  
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation and manuscripts.

T-BUS 103--Typewriting . . . . . 2-3-3  
Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 102 or the equivalent. Speed requirements 30 words per minute for five minutes.

T-BUS 104--Typewriting . . . . . 2-3-3  
Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.

T-BUS 106--Shorthand . . . . .	3-2-4
A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.	
T-BUS 107--Shorthand . . . . .	3-2-4
Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: T-BUS 106 or the equivalent.	
T-BUS 108--Shorthand . . . . .	3-2-4
Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Prerequisite: T-BUS 107	
T-BUS 110--Office Machines . . . . .	2-2-3
A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.	
T-BUS 112--Filing . . . . .	3-0-3
Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal Filing.	
T-BUS 115--Business Law . . . . .	3-0-3
A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.	
T-BUS 116--Business Law . . . . .	3-0-3
Includes the study of laws pertaining to bailments, sales, riskbearing, partnership-corporation, mortgages, and property rights.	
T-BUS 117--Business Law . . . . .	3-0-3
A study of the powers, policies, methods, and procedures used by the various Federal, state and local administrative agencies in promoting and regulating business enterprises. It includes a consideration of the constitutional and statutory limitations on these bodies and judicial review of administrative action. Prerequisite: T-BUS 116.	
T-BUS 120--Accounting . . . . .	5-2-6
Principles, techniques and tools of accounting, for understanding of the mechanics of	

accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: T-MAT 110.

- T-BUS 121--Accounting . . . . . 5-2-6  
Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on record keeping, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: T-BUS 120.
- T-BUS 123--Business Finance . . . . . 3-0-3  
Financing of business units as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing.
- T-BUS 124--Business Finance . . . . . 3-0-3  
Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: T-BUS 123.
- T-BUS 183--Terminology and Vocabulary . . . . . 3-0-3  
To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. Prerequisite: T-BUS 107.
- T-BUS 199--Accounting . . . . . 3-1-3  
Principles, techniques and tools of accounting for understanding of the mechanics of accounting. Emphasis is placed on record keeping, including a study of payroll, cash receipts and disbursements, also including summarizing and analyzing through the accounting cycle.
- T-BUS 205--Advanced Typewriting . . . . . 2-3-3  
Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. Prerequisite: T-BUS 104. Speed requirement, 50 words per minute for five minutes.
- T-BUS 206--Dictation and Transcription . . . . . 3-2-4  
Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute

required for five minutes on new material. Prerequisite: T-BUS 108.

- T-BUS 207--Dictation and Transcription . . . . . 3-2-4  
Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirement of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material. Prerequisite: T-BUS 207.
- T-BUS 208--Dictation and Transcription . . . . . 3-2-4  
Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material. Prerequisite: T-BUS 207.
- T-BUS 211--Office Machines . . . . . 2-2-3  
Instruction in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines. Prerequisite: T-BUS 110.
- T-BUS 212--Machines Transcription . . . . . 1-2-2  
A study and practice course in the use of transcribing machines in business dictation. Proficiency in word usage, correct grammar, and letter styles will be emphasized. Prerequisite: T-BUS 103.
- T-BUS 214--Secretarial Procedures . . . . . 3-2-4  
Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.
- T-BUS 215--Office Application . . . . . 2  
During the sixth quarter only, students are assigned to work in a business, technical, or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisites: T-BUS 214, T-BUS 204, T-BUS 211, T-BUS 208.
- T-BUS 219--Credit Procedures and Problems . . . . . 3-0-3  
Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included. Prerequisite: T-BUS 120.

- T-BUS 220--Stenoscript (ABC Shorthand) . . . . . 3-2-4  
 A course offering the theory and practice for ABC shorthand. Emphasis on speed in taking dictation as well as accuracy in transcription. A minimum speed of 80 words a minute required during the quarter.
- T-BUS 229--Taxes . . . . . 3-2-4  
 Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: T-BUS 121.
- T-BUS 232--Sales Development . . . . . 3-0-3  
 A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.
- T-BUS 233--Personnel Management . . . . . 3-0-3  
 Principles of organization and management of personnel, procurement, placement, training, performance and checking, supervision, remuneration, labor relations, fringe benefits and security.
- T-BUS 235--Business Management . . . . . 3-0-3  
 Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business--qualifications and requirements.
- T-BUS 237--Wholesaling . . . . . 3-0-3  
 The development of wholesaling; present day trends in the United States. As study of the function of wholesaling.
- T-BUS 239--Marketing . . . . . 5-0-5  
 A general survey of the field of marketing, with a detailed study of the function, policies, and institutions involved in the marketing process.
- T-BUS 243--Advertising . . . . . 3-2-4  
 The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

- T-BUS 245--Retailing . . . . .3-0-3  
 A study of the role of retailing in the economy including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends.
- T-BUS 247--Business Insurance . . . . . 3-0-3  
 A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included.
- T-BUS 255--Interpreting Accounting Records . . . . .3-0-3  
 Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements. Prerequisite: T-BUS 121.
- T-BUS 266--Budget and Record Keeping . . . . . 3-0-3  
 The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: T-BUS 121.
- T-BUS 271--Office Management . . . . .3-0-3  
 Presents the fundamental principles of office management. Emphasis on the role of office management, including its functions, office automation, planning controlling, organizing, and actuating office problems.
- T-BUS 272--Principles of Supervision . . . . .3-0-3  
 Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.

#### DATA PROCESSING.

- T-EDP 104--Introduction to Data Processing Systems . . . . .3-2-4  
 Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers. Prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.



T-EDP 106--Business Programming . . . . . 2-4-4  
The effective use of data processing equipment in meeting the information needs of business; utilizing the symbolic programming system as a tool in the solution of problems. The Scope of the problems developed will vary from a modest payroll procedure to the total information retrieval for a large and complex business. Prerequisite: T-EDP 101.

**DRAFTING.**

T-DFT 101--Technical Drafting . . . . . 0-6-2  
The study of technical drafting is drawing principles and practices for print reading and describing objects in graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced.

T-DFT 112--Electronic Drafting . . . . . 2-3-3  
The course will provide experience in various types of electronic layouts, electronic circuitry diagrams, and graphic processes that are used by industry in electronic drafting. This course is intended primarily for a second quarter of drafting for students enrolled in the electronics curriculum. Prerequisite: T-DFT 101.

**ECONOMICS.**

T-ECO 102--Economics . . . . . 3-0-3  
The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large.

T-ECO 104--Economics . . . . . 3-0-3  
Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: T-ECO 102.

T-ECO 108--Consumer Economics . . . . . 3-0-3  
Designed to help the student use his resources of time, energy, and money, to get the most out of life. It gives the student an opportunity to build useful skills in buying, managing his finances, increasing his resources, and to understand better the economy in which he lives.

## ELECTRICITY.

### T-ELC 100--Introduction to Electricity . . . . .3-3-4

A survey course intended to give the student an overview of the uses of electricity in a variety of fields of endeavor, and to give him a basic understanding of electricity. the course will cover basic electric units of measurements, Ohm's Law, power concepts, magnetic concepts, inductance, capacitance, and component part structure and processes. Space vehicles communications, power generation and distribution are typical of the uses of electricity which are to be discussed. Laboratory experiences will familiarize the student with elementary hardware assembly techniques and with basic electrical measurement.

### T-ELC 101--D. C. Circuit Analysis . . . . .5-3-6

Direct current principles of electricity in series, parallel, and compound circuit using Ohm's Law and network analysis theorems. Introducing sine wave development and analysis, and non-resonant resistive, inductive, and capacitive circuits. Prerequisite: T-ELEC 100.

### T-ELC 102 --A. C. Circuit Analysis . . . . .5-3-6

Alternating current principles of electricity in linear and complex circuits using Ohm's Law and network analysis theorems. Series and parallel resonant circuit analysis, resonant and non-resonant transformer analysis, and introduction to electro=mechanical devices. Prerequisite: T-ELC 101.

## ELECTRONICS.

### T-ELN 101--Electronic Instrument and Measurements . . . . .2-3-3

A study of the applications of basic electronic instruments including measurements, tolerances and calibration. The laboratory will provide experience with each instrument studied. Corequisite: T-ELC 101.

### T-ELN 105--Control Devices . . . . .5-3-6

A study in depth of the electrical characteristics of electron tubes and semiconductors. Basic parameters and applications of each type device to the configurations of two and three terminal two part systems will be included. Corequisite: T-ELC 102.

### T-ELN 205--Applications of Control Devices . . . . .5-3-6

Applications of electron tubes and semiconductors to amplifiers, detectors, rectifiers, waveform generators and modulators. Prerequisite: T-ELN 105.

### T-ELN 210--Semiconductor Circuit Analysis . . . . .5-3-6

A study of the practical analysis of semiconductor circuits. The use of readily available data is

emphasized. Device peculiarities and limitations pertinent to reliable operations are considered. Equipment circuits and H, Y, and Z parameters are employed. Concepts of signal flow diagrams are introduced. Prerequisite: T-ELN 205.

- T-ELN 214--Wave Shaping and Pulse Circuits I . . . . . 2-3-3  
A study of wave-shaping and wave generation circuits. Pulse amplifiers, multi-vibrators, differentiating and integrating circuits, clippers and clamps are studied. Waveform duty cycle, rise-time, duration and spacing considerations are emphasized. Prerequisite: T-ELN 205.
- T-ELN 215--Wave Shaping and Pulse Circuits II . . . . . 2-3-3  
Applications of the circuits and techniques of T-ELN 214. Study of pulse techniques, diode switches and matrices, gates, counters, D-A and A-D conversion. Digital computer circuit arrays are considered. Prerequisite: T-ELN 214.
- T-ELN 220--Electronic Systems . . . . . 5-4-7  
A course utilizing the functional schematic diagrams as the medium for studying and analyzing electronic systems. The functions of circuits studies in prior courses are represented by blocks arranged in a flow chart to form a complete system or equipment diagram. The same circuits arranged in different configurations and different numbers are made to represent systems of varying complexity. Systems will be reduced to functions, and then to functional schematic diagrams. Wire and wireless communication, industrial measurement and control, computers, navigation, radar and sonar will be considered.
- T-ELN 225--Transmission and Propagation . . . . . 2-3-3  
An introduction to the electromagnetic radiation, principles of antenna, radiation patterns and field strength. The characteristics and use of transmission lines in radio frequency application. Factors involved in propagation, ground waves, reflections, sky waves, atmospheric effects, ionosphere, fading, noise, static, wire radiators, directive gain, effect of ground, impedance, antenna systems and arrays, Prerequisite: T-ELN 105. Corequisite: T-ELN 205.
- T-ELN 227--UHF and Microwave Systems . . . . . 5-4-7  
A study of UHF and components, circuits, and measurement techniques. The use of distributed constant elements, waveguides and coaxial cables, microwave links, high frequency oscillators, magnetrons, klystrons, traveling wave tubes. An introduction to the use of the Smith Chart. Prerequisite: T-ELN 225.
- T-ELN 230--Television Systems . . . . . 4-6-7  
A study of the principles of television including the television system, camera tubes, scanning and synchronization, composite video signal, receiver circuits, transmitting equipment, color television, and closedloop systems. Corequisite: T-ELN 214.

T-ELN 235--Industrial Instrumentation . . . . . 5-4-7  
Broad introduction to use of industrial electro-mechanical and electronic circuits and equipment. Provides an understanding of the methods, techniques, and skills required for installation, service and operation of a variety of industrial control systems. Analysis of sensing devices for detecting changes in pressure, temperature, humidity, sound, light electricity, the associated circuitry. Prerequisites: T-ELN 205, T-PHY 104.

T-ELN 240--Digital Computers . . . . . 2-3-3  
An exploration into the methodology of counting and computing. Various computer techniques will be investigated including: non-sinusoidal waveforms, binary and decade counters, industrial counters, readout devices, logic circuits, arithmetic circuits, storage devices, input-output devices, computer control, analog and digital converters. Prerequisite: T-ELN 214.

T-ELN 245--Electronic Design Project . . . . . 0-4-2  
Students are required to design and construct a project approved by the instructor. Includes selection of project, design, construction, and testing of completed project. Projects may include the following: AM or FM transmitters or receivers, amplifiers, test equipment, control devices, simple counters, lasers, masers, etc. Prerequisite: T-ELN 205.

ENGLISH.

T-ENG 101--Grammar . . . . . 3-0-3  
Designed to aid the student in the improvement of self-expression in grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

T-ENG 102--Compisition . . . . . 3-0-3  
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.

T-ENG 103--Report Writing . . . . . 3-0-3  
The fundamentals of English are utilized as a background for the organizations and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: T-ENG 102.

T-ENG 204--Oral Communication . . . . . 3-0-3  
A study of basic concepts and principles of oral communications to enable the students to communicate. Emphasis is placed on the speaker's attitude, improving diction, voice, and the

application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention is given to conducting meetings, conferences, and interviews.

T-ENG 206--Business Communication . . . . . 3-0-3  
Develops skills in techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collection, adjustments, complaints, orders, acknowledgements, remittances, and inquiry. Prerequisite: T-ENG 102.

#### MATHEMATICS.

T-MAT 100--Slide Rule . . . . . 0-2-1  
A study of the mechanics involved in the use of the slide rule. Multiplication, division, trigonometric functions, powers, and roots are covered. Prerequisite: Satisfactory score on math placement test.

T-MAT 101--Technical Mathematics . . . . . 5-0-5  
The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinated system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed. Prerequisite: Satisfactory score on math placement test.

T-MAT 102--Technical Mathematics . . . . . 5-0-5  
A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth. Prerequisite: T-MAT 101.

T-MAT 103--Technical Mathematics . . . . . 5-0-5  
The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Application of these concepts to practical situations are stressed. Prerequisite: T-MAT 102.

T-MAT 110--Business Mathematics . . . . . 3-2-4  
This course stressed the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discounts, commissions, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: Satisfactory score on math placement test.

T-MAT 121--Numbering System & Boolean Algebra . . . . .4-0-4

A cursory treatment of the base-ten numbering systems; functional introduction to numbering systems with bases other than 10, transformation from one system to another; fundamental operation in systems other than the decimal; a detailed study of the binary system in relation to machine calculations; principles of Boolean Algebra and its contribution to digital devices and data processing. Prerequisite: None.

T-MAT 201--Technical Mathematics . . . . .5-0-5

A continuation of T-MAT 103. More advanced concepts of differentiation and integration are considered. Included are graphs and derivatives of the trigonometric functions, exponential and logarithmic differentiation and integration, metric equations, and Fourier series. Prerequisite: T-MAT 103.

T-MAT 208--Calculus and Laplace Transforms for Electronics . . . . .5-0-5

An investigation of the methods of calculus which are of the most direct use in the study of electronic circuits. Introduction to selected topics from differential equations and Laplace transforms and applications of these methods to the solution of electronic circuit problems. Prerequisite: T-MAT 201. Corequisite: T-ELN 214.

#### MECHANICS.

T-MEC 110--Fundamental Mechanisms . . . . .3-2-4

A study of the purpose and actions of cams, cables, gear trains, differentials, screws, belts, pulleys, shafts, levers, and other mechanical devices used to transmit or control signals. Prerequisite: T-PHY 102.

#### POLITICAL SCIENCE.

T-POL 201--United States Government . . . . .3-0-3

A study of government with emphasis on basic concepts, structure, powers, procedures and problems.

#### PSYCHOLOGY.

T-PSY 112--Personality Development . . . . .3-0-3

Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement.

- T-PSY 201--Group Leadership . . . . .3-2-4  
 In this course the student should obtain a practical knowledge of group situations and the principles necessary for effective leadership. A number of leadership techniques are presented and adequate class time is provided for the students to apply these techniques.
- T-PSY 206--Applied Psychology . . . . .3  
 A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems. Other topics investigated are the following: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community.

#### RECREATION.

- T-REC 106--Swimming Pool Operation & Maintenance . . . . .2-0-2  
 This course is designed to instruct the student in operation objectives, operation, personnel, regulations for health safety, maintenance and sanitation.
- T-REC 110--Natural Science . . . . .3-2-4  
 Presents a basic understanding of man as a biological organism in nature. Emphasis is on the zoological and botanical aspects as opposed to the physical.
- T-REC 111--Introduction to Recreation . . . . .5-0-5  
 This course is designed to introduce the student to the historical and philosophical foundation of liesure and recreation, with emphasis placed on the interrelatedness of special agencies and institutions which serve the recreation needs of society. During the course the student will be allowed to develop concepts concerning recreation.
- T-REC 112--Arts and Crafts . . . . .0-5-2  
 A study activity course of creative crafts in each of the following areas: ceramics, metalwork, weaving and minor crafts. Emphasis will be upon teaching others the skill.
- T-REC 120--II Arts and Crafts, Music, Art, & Drama . . . . .2-3-3  
 A study of musical and dramatic activities. This includes lighting, scenery, equipment, costumes, singing, playing, listening, and community drama and music services. During the course the student will be allowed to further develop the techniques of arts and crafts.

- T-REC 121--Program Planning and Organization . . . . . 2-3-3  
 The underlying principles for effective recreation programming are presented. An overview of the variety of program areas associated with recreation is discussed and attention is given to the recreation interests and needs of the participants.
- T-REC 127--Team Sports . . . . . 2-2-2  
 This course is designed to provide for group instruction and practical experience in the team sports of softball, soccer, touch football, volleyball. Emphasis will be on the planning and organization of team sports designed to serve the interests of all people.
- T-REC 128--Water Sports . . . . . 0-4-2  
 This course is designed to acquaint the student with aquatic activities and their relationship to the recreation program. It is a practical course where participation is required to adequately obtain the skills and techniques of such activities as canoeing, angling, swimming, and diving.
- T-REC 129--Cooperative Recreation (Supervised Field Training in Recreation) . . . . . 2-24-5  
 A summer work assignment in some field of recreation preferably public. The work experience should include some administrative work but should emphasize organizing and leading different recreational activities.
- T-REC 145--Techniques of Coaching & Officiating Major Sports . . . . . 1-4-2  
 This course deals with the training, play patterns, game strategy, seasonal planning and the principles and techniques of officiating major sports.
- T-REC 207--Folk Dancing, Modern, Square Dancing . . . . . 1-3-2  
 Using practical experience, the student will be instructed in the fundamental skills of folk, square, and social dancing. Emphasis will be placed on promoting, planning, programming, and conducting these types of dances in a recreation setting.
- T-REC 220--Outdoor Recreation . . . . . 2-3-3  
 This course presents an overview of the scope and extent of outdoor recreation. The history and development of outdoor recreation, conservation, and organized camping are presented. Students will have an opportunity to lead others in a camping experience.
- T-REC 221--Individual Lifetime Recreation Activities . . . . . 2-3-3  
 This course is designed to provide for group instruction and practical experience in archery, badminton, bowling, golf, tennis. Emphasis should be on the planning and organization of these



lifetime sports in a recreation setting. The student should actively participate in these activities to acquire skills, knowledge of the rules, and fundamental teaching techniques of individual sports.

T-REC 225--Outdoor Sports . . . . . 2-2-3

This course is designed to acquaint the student with various outdoor activities and their relationship to the recreation program. Emphasis is on playing the game by the rules.

T-REC 228--Practicum . . . . . 0-10-3

An eight hour per week assignment to work in a different recreational program each of the three quarters.

T-REC 229--Practicum . . . . . 0-10-3

An eight hour per week assignment to work in a different recreational program each of the three quarters.

T-REC 231--Social Recreation . . . . . 3-2-4

The course is designed to present material and information necessary to adequately conduct social recreation in clubs, churches, camps, playgrounds, and recreation centers. The focus should be on acquainting students with planning, programming, and conducting social recreation.

T-REC 232--Organization of Activities . . . . . 3-2-4

This course deals with the organization, planning, evaluating and the use of facilities of various activities.

T-REC 241--Facility Operation & Maintenance . . . . . 2-8-3

This course deals with methods of operation of various park and recreation facilities for public use; protection and law enforcement; job planning and scheduling; preventive maintenance; and modern maintenance techniques and maintenance materials.

#### SCIENCE.

T-BIO 104--Physiology . . . . . 3-3-4

A study of the basic function of the human organism.

SOCIAL SCIENCE.

T-SSC 201--Social Science . . . . . 3-0-3  
An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology.

T-SSC 202--Social Science . . . . . 3-0-3  
A further study of social sciences with emphasis on economics, political science, and social problems as they relate to the individual. Prerequisite: T-SSC 201.

T-SSC 205--American Institutions . . . . . 3-0-3  
A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems viewed in the light of our political and economic heritage.

In an ever changing world of engineering and technologies, one must not lose sight of the growing need for skilled craftsmen. Isothermal Community College offers a series of training courses in the trade division with emphasis on manipulative and mental skills applicable to a particular course for which a student is enrolled. Trade courses require from one quarter to one full year on a full-time basis.

# Vocational Division

A diploma is awarded at the completion of one of the following programs:

Automotive Body Repair  
Automotive Power Mechanics

Electrical Installation  
Welding

# Diploma and Certificate Offered

A certificate is awarded at the completion of the following program:

Clothing Construction  
Masonry

Nurse's Assistant  
Paraprofessional in Child Education

Isothermal Community College Library

# Vocational Programs

## AUTOMOTIVE BODY REPAIR.

### *Purpose of Curriculum*

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, estimate, repair and paint automobile bodies. Manual skills are developed in practical shop work. The study of automobile bodies, the stresses of metal and the composition of paint constitute the curriculum.

Complexity in automobile vehicles increases each year because of scientific discovery and new engineering. The changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of motor vehicles. This curriculum provides a basis for the student to compare and adapt to new techniques and new tools for repairing motor vehicle bodies as changes are made from year to year.

The Automotive Body Repair curriculum is a one-year program.

	Course Title	Class	Hours Per Week		Credit
			Lab.		
FALL QUARTER:					
AUT 1111	Auto Body Repair . . . . .	5	16		9
MAT 1101	Fundamentals of Mathematics . . . . .	5	0		5
EDU 101	Educational Orientation . . . . .	1	0		1
WLD 1101	Basic Gas Welding. . . . .	0	3		1
		<u>11</u>	<u>19</u>		<u>16</u>
WINTER QUARTER					
AUT 1112	Auto Body Repair . . . . .	5	17		10
WELD 1105	Auto Body Welding . . . . .	0	3		1
ENG 1101	Reading Improvement . . . . .	2	0		2
ENG 1102	Communications Skills . . . . .	3	0		3
		<u>10</u>	<u>20</u>		<u>16</u>
SPRING QUARTER					
AUT 1113	Metal Finishing and Painting . . . . .	3	10		6
PSY 1101	Human Relations . . . . .	3	0		3
AUT 1115	Trim, Glass & Radiator Repair . . . . .	2	7		5
PHY 1101	Applied Physics . . . . .	3	2		4
		<u>11</u>	<u>19</u>		<u>18</u>

## SPRING QUARTER

AUT 1114	Body Shop Applications . . . . .	3	24	10
BUS 1103	Small Business Operations . . . . .	$\frac{3}{6}$	$\frac{0}{24}$	$\frac{3}{13}$

## AUTOMOTIVE POWER MECHANICS.

### *Purpose of Curriculum*

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of gasoline-powered equipment. The one-year curriculum (four consecutive quarters) provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### *Job Description*

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicles or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

College Library

	Course Title	Hours per Class	Week Lab.	Quarter Hours Credit
<b>FIRST QUARTER</b>				
PME 1101	Internal Combusion Engines . . . . .	5	19	9
MAT 1101	Fundamentals of Mathematics . . . . .	5	0	5
EDU 101	Educational Orientation . . . . .	1	0	1
		<u>11</u>	<u>19</u>	<u>15</u>
<b>SECOND QUARTER</b>				
PME 1102	Engine Electrical and Fuel Systems . . . . .	10	15	14
ENG 1102	Communication Skills . . . . .	3	0	3
ENG 1101	Reading Improvement . . . . .	2	0	2
		<u>15</u>	<u>15</u>	<u>19</u>
<b>THIRD QUARTER</b>				
AUT 1123	Automotive Chassis and Suspensions Systems	3	5	4
AUT 1121	Braking Systems . . . . .	3	3	4
PSY 1101	Human Relations . . . . .	3	0	3
AHR 1101	Automotive Air Conditioning . . . . .	2	3	3
WLD 1101	Basic Gas Welding . . . . .	0	3	1
PHY 1101	Applied Science	3	2	4
		<u>14</u>	<u>16</u>	<u>19</u>
<b>FOURTH QUARTER</b>				
AUT 1124	Automotive Power Train Systems . . . . .	3	9	6
AUT 1125	Automotive Servicing . . . . .	3	12	6
BUS 1103	Small Business Operations . . . . .	3	0	3
		<u>9</u>	<u>21</u>	<u>15</u>

## CLOTHING CONSTRUCTION

### *Purpose of the Curriculum.*

This curriculum provides a training program for developing the basic knowledge and skills needed for proficiency in all phases of clothing construction. Study will include cutting, fitting, pressing and finishing, as well as sewing.

The curriculum is designed to prepare students for dressmaker at home or dress shops, alterations in department stores, or sales in piece goods ready to wear.

	Course Title	Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIRST QUARTER				
HEC 1101	Clothing Construction I . . . . .	5	15	9
HEC 1107	Textiles (Consumer) . . . . .	3	0	3
HEC 1105	Modeling and Grooming . . . . .	1	2	2
HEC 1104	Art – Design . . . . .	3	0	3
EDU 1101	Educational Orientation . . . . .	1	0	1
		<u>13</u>	<u>17</u>	<u>18</u>
SECOND QUARTER				
HEC 1102	Clothing Construction II . . . . .	5	17	10
HEC 1109	Alterations and Fitting . . . . .	1	4	3
PSY 1101	Human Relations . . . . .	3	0	3
		<u>9</u>	<u>21</u>	<u>16</u>
THIRD QUARTER				
HEC 1103	Tailoring . . . . .	5	17	10
HEC 1114	Draperly Making . . . . .	1	4	3
BUS 1103	Small Business Operations . . . . .	3	0	3
		<u>9</u>	<u>21</u>	<u>16</u>

## ELECTRICAL INSTALLATION AND MAINTENANCE.

### *Purpose of Curriculum.*

The rapid expansion of the national economy and the increasing development of new electrical products are providing a growing need for qualified people to install and maintain electrical equipment. Today more than 350,000 are employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradesmen are required each year to replace those leaving the industry. The total requirements for electrical tradesmen are 500,000 and will be 700,000 by 1975. The majority of the electrical tradesmen today are trained through apprenticeship or on-the-job training programs.

The one-year curriculum (4 consecutive quarters) will provide a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and experience.

### *Job Description and Requirements*

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He will have a basic knowledge of motor and motor control systems; industrial electronic control systems; business procedures, organizations, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training.

		Hours per Class	Week Lab.	Quarter Hours Credit
FIRST QUARTER				
ELC 1112	Direct and Alternating Current . . . . .	7	11	10
MAT 1115	Electrical Math . . . . .	5	0	5
DFT 1110	Blueprint Reading: Building Trades. . . . .	0	3	1
PSY 1101	Human Relations . . . . .	3	0	3
EDU 101	Educational Orientation . . . . .	1	0	1
		16	14	20
SECOND QUARTER				
MAT 1116	Electrical Math . . . . .	5	0	5
ELC 1124	Residential Wiring . . . . .	5	8	7
ELN 1118	Industrial Electronics . . . . .	3	4	4
ENG 1101	Reading Improvement . . . . .	2	0	2
ENG 1102	Communication Skills. . . . .	3	0	3
		18	12	21

### THIRD QUARTER

DFT 1113	Blueprint Reading: Electrical . . . . .	0	3	1
ELC 1113	Alternating Current & Direct Current . . . . .			
	Machines and Controls . . . . .	10	12	14
PHY 1101	Applied Science . . . . .	3	2	4
		<u>13</u>	<u>17</u>	<u>19</u>

### FOURTH QUARTER

ELC 1125	Commercial and Industrial Wiring . . . . .	5	12	9
ELC 1119	Industrial Electronics . . . . .	5	5	7
BUS 1103	Small Business Operations . . . . .	3	0	3
		<u>13</u>	<u>17</u>	<u>19</u>

### MASONRY.

#### *Purpose of Curriculum*

Masons are the craftsmen in the building trades that work with artificial stone, brick, concrete masonry units, stone and the like. As building construction continues to increase the demand for bricklayers, cement masons, and stonemasons will also increase.

The nine months curriculum (3 quarters) is designed to train the individual to enter the trade with the knowledge and basic skills that will enable him to perform effectively. He must know the methods used in laying out a masonry job with specific reference to rigid insulation, refractories, and masonry units specified for residential, commercial and industrial construction.

Most employment opportunities for masons are found with contractors in new building construction. However, a substantial proportion of masons are self-employed and work with contractors doing repair, alteration, or modernization work.

#### *Job Description.*

Most masons lay brick, and blocks made of tile, concrete, glass, gypsum or terra cotta. Also, he constructs or repairs walls, partitions, arches, sewers, furnaces and other masonry structures.

After gaining experience in the various types of the masonry trade along with leadership training, it is possible for the tradesman to become a foreman, inspector and eventually a contractor.



Course Title	Hours per Class	Week Lab.	Quarter Hours Credit	
FIRST QUARTER				
MAS 1101	Bricklaying . . . . .	5	17	10
MAT 1101	Fundamentals Of Mathematics . . . . .	5	0	5
DFT 1110	Blueprint Reading: Building Trades . . . . .	0	3	1
		<u>10</u>	<u>20</u>	<u>16</u>
SECOND QUARTER				
MAS 1102	Bricklaying . . . . .	5	19	10
MAT 1112	Building Trades Mathematics . . . . .	3	0	3
DFT 1111	Blueprint Reading & Sketching . . . . .	0	3	1
		<u>8</u>	<u>22</u>	<u>14</u>
THIRD QUARTER				
MAS 1103	General Masonry . . . . .	5	16	10
MAS 1113	Masonry Estimating . . . . .	3	3	4
DFT 1112	Blueprint Reading & Sketching . . . . .	0	3	1
		<u>8</u>	<u>22</u>	<u>15</u>

### PARAPROFESSIONAL IN CHILD EDUCATION.

#### *Purpose of Curriculum*

This curriculum is designed for those women who are interested in working with young children. The source is designed to prepare students to help teach young children and to assist a certified teacher.

The curriculum is so designed that students may get valuable training and experience right from the beginning in case they cannot complete the course.

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
FALL QUARTER			
EDU 1102	Introduction to Early Childhood Education .3	0	3
PSY 1114	Growth and Development of Children I . . . .3	5	5
HEA 1101	Health, Hygiene and Safety of Young Children3	0	3
EDU 1111	Learning Experience I . . . . .3	5	5
PSY 1123	Exceptional Children . . . . .3	0	3
EDU 101	Educational Orientation . . . . .1	0	1
		<u>16</u>	<u>20</u>

## WINTER QUARTER

T-BUS 102	Typing (or Elective) . . . . .	2	3	3
PSY 1115	Growth and Development of Children II . . . . .	3	0	3
SOC 1120	Family and Community . . . . .	3	0	3
EDU 1112	Learning Experiences II . . . . .	3	5	5
EDU 1106	Role of the Paraprofessional . . . . .	3	5	5
		<u>14</u>	<u>13</u>	<u>19</u>

## SPRING QUARTER

EDU 1116	Communicating with Young Children . . . . .	3	0	3
EDU 1104	Working with Children with Special Problems . . . . .	3	0	3
EDU 1124	Audio-Visual Materials and Equipment . . . . .	1	2	2
EDU 1113	Learning Experiences III . . . . .	3	5	5
EDU 1130	Practicum (Nursery – Third Grade) . . . . .	2	8	5
		<u>12</u>	<u>15</u>	<u>18</u>

## WELDING.

### *Purpose of Curriculum*

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Survey shows clearly that many welders will be needed annually to fill present and projected vacancies in the state.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding and metals industry.

Welding offers a person security and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop and many others. The Welding curriculum is a one-year program (4 quarters).

### *Job Description*

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and-resistance welding are the three most important.

College Libr...

The principal duty of the welder using manual techniques is to control the melting by directing the heat from either an electric arc or gas welding torch, and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

	Course Title	Hours per Class	Week Lab.	Quarter Hours Credit
FALL QUARTER				
WLD 1120	Oxyacetylene Welding and Welding . . . . .	5	13	9
MAT 1101	Fundamentals of Mathematics . . . . .	5	0	5
DFT 1104	Blueprint Reading: Mechanical . . . . .	0	3	1
PSY 1101	Human Relations . . . . .	3	0	3
EDU 101	Education . . . . .	1	0	1
		<u>14</u>	<u>16</u>	<u>19</u>
WINTER QUARTER				
WLD 1121	Arc Welding . . . . .	5	14	8
MAT 1103	Geometry . . . . .	3	0	3
DFT 1117	Blueprint Reading: Welding . . . . .	0	3	1
ENG 1101	Reading Improvement . . . . .	2	0	2
ENG 1102	Communication Skills . . . . .	3	0	3
		<u>13</u>	<u>17</u>	<u>17</u>
SPRING QUARTER				
WLD 1124	Pipe Welding . . . . .	3	11	7
WLD 1123	Inert Gas Welding . . . . .	1	3	2
WLD 1112	Mechanical Testing and Inspection . . . . .	1	3	2
DFT 1118	Pattern Development and Sketching. . . . .	0	3	1
PHY 1101	Applied Science . . . . .	3	2	4
		<u>8</u>	<u>22</u>	<u>16</u>
FOURTH QUARTER				
WLD 1122	Commercial and Industrial Practices . . . . .	3	9	6
WLD 1125	Certification Practices . . . . .	3	6	5
MEC 1112	Machine Shop Processes . . . . .	0	6	2
BUS 1105	Industrial Organizations . . . . .	3	0	3
		<u>9</u>	<u>21</u>	<u>16</u>

## NURSES' ASSISTANT.

A three-months program (1 quarter) designed to prepare qualified men and women to give effective nursing care to selected patients, to make and report observations, and to carry out routine aspects of ward management. Classroom teaching is centered around modern concepts of health, functional relationships within a hospital, fundamentals of effective interpersonal relations, and nursing procedures related to daily needs of patients and to common therapeutic measures. Throughout the course emphasis is given to the role of nurses' assistant. Clinical experiences provide opportunities for applying classroom learnings to practice in the hospital setting.

		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
Unit I	Introduction to Nurse Assistant . . . . .	2	0	1
Unit II	Understanding Effects of Illness . . . . .	1	0	1
Unit III	Making Observations of Patients . . . . .	2	2	3
Unit IV	Safety Measures in Care of the Sick . . . . .	2	1	2
Unit V	Measures to Promote the Patient's Comfort . . . . .	2	2	3
Unit VI	Measures Related to Patient's Happiness . . . . .	3	5	5
Unit VII	Becoming a Hospital Employee . . . . .	3	5	5
		<u>15</u>	<u>15</u>	<u>20</u>

## Courses of Instruction

### AUTOMOTIVE.

	Class		Credit
	Hours	Lab	Hours
AHR 1101--Automotive Air Conditioning . . . . .	2	3	3
<p style="margin-left: 20px;">General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.</p>			
AUT 1111--Auto Body Repair . . . . .	5	16	9
<p style="margin-left: 20px;">Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning, and painting of damaged areas.</p>			
AUT 1112--Auto Body Repair . . . . .	5	17	10
<p style="margin-left: 20px;">A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting.</p>			
AUT 1113--Metal Finishing and Painting . . . . .	3	10	6
<p style="margin-left: 20px;">Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools.</p>			
AUT 1114--Body Shop Applications . . . . .	3	24	10
<p style="margin-left: 20px;">General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of the frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and developing the final settlement with adjuster. Prerequisites: AUT 1115, PHY 1101, DFT 1101</p>			

AUT 1115--Trim, Glass and Radiator Repair . . . . .	2	7	5
Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers, and door trim panels, cutting, fitting, and installation. The student gains a thorough knowledge of the engine cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation. Prerequisites: AUT 112, WLD 1105			
AUT 1121--Braking Systems . . . . .	3	3	4
A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment, and repair.			
AUT 1123--Automotive Chassis and Suspension Systems . . . . .	3	5	4
Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end alignment. Prerequisite: PME 1102			
AUT 1124--Automotive Power Train Systems . . . . .	3	9	6
Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair. Prerequisites:			
AUT 1125--Automotive Servicing . . . . .	3	12	6
Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of experiences in testing, adjusting, repairing and replacing. Prerequisites: AUT 1123, AUT 1121, AHR 1101			

**BUSINESS.**

BUS 1103--Small Business Operations . . . . .	3	0	3
An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations. Prerequisite: None			

BUS 1105--Industrial Organizations . . . . .	3	0	3
Methods, techniques, and practices of modern management in planning, organization and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost. Prerequisite: None			

### CLOTHING CONSTRUCTION.

HEC 1101--Clothing Construction I . . . . .	5	15	9
A study and practice of the parts of machine – use and care, body measurement, pattern selection to suit figure, pattern making, reading and understanding guide, and construction of simple garments.			
HEC 1102--Clothing Construction II . . . . .	5	17	10
An advanced study of the construction of garments including inner facings, underlinings and buttonholes. Prerequisite: Clothing Construction I.			
HEC 1103--Tailoring . . . . .	5	17	10
Advanced clothing construction of suits and coats and tailoring techniques used in other garments.			
HEC 1104--Art – Design . . . . .	3	0	3
A study of color, line and design theories and their relation to fabrics and the figure.			
HEC 1105--Modeling and Grooming . . . . .	1	2	2
A course in figure control, stance, carriage, and posture including makeup and hair styles.			
HEC 1107--Textiles (Consumer) . . . . .	3	0	3
The study of the identification, manufacturing, properties of fabrics in relation to construction, care and use.			
HEC 1109--Alterations and Fitting . . . . .	1	4	3
Cutting to fit figure problems and altering of ready-made garments. Prerequisite: Clothing Construction I.			
HEC 1114--Drapery Making . . . . .	1	14	3
Making curtains and draperies and other techniques in window treatment with fabrics.			

## DRAFTING.

DFT 1114--Blueprint Reading: Mechanical . . . . .0	3	1
Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes. Prerequisite: None		
DFT 1110--Blueprint Reading: Building Trades . . . . .0	3	1
Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.		
DFT 1111--Blueprint Reading & Sketching . . . . .0	3	1
Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches and cavity wall construction. Development of proficiency in making three view and pictorial sketches. Prerequisite: DFT 1110		
DFT 1112--Blueprint Reading and Sketching . . . . .0	3	1
Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls and various detailed drawings of masonry work. Prerequisite: DFT 1111		
DFT 1113--Blueprint Reading: Electrical . . . . .0	3	1
Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes are a part of this course. Prerequisite: DFT 1110		
DFT 1117--Blueprint Reading: Welding . . . . .0	3	1
A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications. Prerequisite: DFT 1104		
DFT 1118--Pattern Development and Sketching . . . . .0	3	1
Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.		



## ELECTRICITY.

- ELC 1112--Direct and Alternating Current ..... 7      11    10  
A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits.
- ELC 1113--Alternating Current and Direct Current Machines and Controls .....10      12    14  
Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as thermostats, times, or sequencing switches. Prerequisites: ELC 1112, MAT 1115
- ELC 1124--Residential Wiring .....5      8      7  
Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups.
- ELC 1125--Commercial and Industrial Wiring .....5      12    9  
Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols; the related National Electrical Codes, and the applications of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisites:  
ELC 1124

## ELECTRONICS.

- ELN 1118--Industrial Electronics .....5      4      4  
Basic theory, operating characteristics, and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes and other basic applications. Prerequisite: ELC 1113

ELN 1119--Industrial Electronics .....5      5      7  
 Basic industrial electronic systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, and other basic types of systems commonly found in most industries.  
 Prerequisite: ELN 1118

**ENGLISH.**

ENG 1101--Reading Improvement .....2      0      2  
 Designed to improve the student's ability to read proficiently. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.

ENG 1102--Communication Skills .....3      0      3  
 Designed to promote effective communication through correct language usage in speaking and writing.

**MASONRY.**

MAS 1101--Bricklaying ..... 5      17      10  
 The history of the bricklaying industry. Clay and shale brick, mortar, laying foundations, laying bricks to a line, bonding, and tools and their uses. Laboratory work provides training in the basic manipulative skills.

MAS 1102--Bricklaying ..... 5      19      10  
 Designed to give the student practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches and cavity walls. The proper use of bonds, expansion strips, wall ties and caulking methods are stressed. Prerequisite: MAS 1101

MAS 1103--General Masonry .....5      16      10  
 Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques. Prerequisite: MAS 1102

MAS 1113--Masonry Estimating . . . . .	3	4
This is a practical course in quantity "takeoff" from prints of the more common type jobs for bricklayers and masons. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisite: MAS 1103		

MATHEMATICS.

MAT 1101--Fundamentals of Mathematics . . . . .	5	0 5
Review and analysis of basic operations--addition, subtraction, multiplication, and division. Properties of common fractions, decimal fractions and decimals, percentages. Practice in depth.		

MAT 1103--Geometry . . . . .	3	0 3
Fundamental properties and definitions, plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations. Prerequisite: MAT 1101		

MAT 1104--Trigonometry . . . . .	3	0 3
Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems. Prerequisites: MAT 1102, MAT 1103		

MAT 1112--Building Trades Mathematics . . . . .	3	0 3
Practical problems dealing with volumes, weights, ratios; mensuration, and basic estimating practices for building materials. Prerequisite: MAT 1101		

MAT 1115--Electrical Math . . . . .	5	0 5
A review of everyday mathematics to supplement the mathematical knowledge of students in the operations which are needed in the applications of electrical principles; to introduce practical applications of powers and roots, ratio and proportion; and to give the student a working knowledge of practical applications of fundamental algebraic concepts and operations.		

MAT 1116--Electrical Math . . . . .	5	0 5
A study of fundamental concepts of algebra; use of letters and signs, groupings, factoring,		

exponents, ratios, and proportions, solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current.  
Prerequisite: MAT 1115

### MECHANICS.

MEC 1112--Machine Shop Processes . . . . .	0	6	2
--	---	---	---

To acquaint the student with the procedures of layout work and the correct use of hand and machine tools. Experiences in the basic fundamentals of drill press and lathe operation; hand grinding of drill bits and lathe tools. Prerequisite: None.

### PARAPROFESSIONAL IN CHILD EDUCATION.

EDU 1102--Introduction to Early Childhood Education . . . . .	3	0	3
---	---	---	---

The study of the development of early childhood education including the comparison of various instructional approaches in early childhood programs.

EDU 1104--Working with Children with Special Problems . . . . .	3	0	3
---	---	---	---

An in-depth follow-up to EDU 1123 with specific instructions as to the most effective ways of working with children with special problems.

EDU 1106--Role of the Paraprofessional . . . . .	3	5	5
--	---	---	---

This course would consist of three class meetings per week, and five hours lab work in kindergarten and day care centers. This class would focus on the responsibilities both legal and implied of the paraprofessional, duties in the classroom, and relationships to teacher and students.

EDU 1111, 1112, 1113--Learning Experiences I, II, III . . . . .	3	5	5
---	---	---	---

This is a full year course designed to acquaint students with appropriate learning experiences for young children in all curriculum areas. A combination of subject matter and teaching methods will be introduced with a special emphasis on the development and use of teaching materials and equipment with children. Learning Experiences I will provide special emphasis in the language arts.

EDU 1116--Communicating with Young Children . . . . .	3	0	3
---	---	---	---

Methods and techniques of two-way communications with young children.

EDU 1124--Audio-Visual Materials and Equipment . . . . .	1	2	2
A survey course in the care, operation and use of 16 mm motion picture, slide, filmstrip and overhead projectors, tape recorders, and other audiovisual equipment. Preparation of simply visual materials.			
EDU 1130--Practicum (Nursery – Third Grade) . . . . .	2	8	5
Practical experiences in a classroom situation with opportunities to analyze problems and discuss individual observations.			
HEA 1101--Health, Hygiene and Safety of Young Children . . . . .	3	0	3
A study of the signs and symptoms of communicable diseases, exercise and sleep, proper clothing, diet (planning meals and nourishment, good eating habits). The feeding of infants and toddlers according to age group and the practical knowledge of the development and activities of children from infants up to age eight years. Bodily contact with the child for normal growth and happiness. Also, how to give baths, skin care, oral hygiene – toilet training according to age group. Prevention of these accidents since so many of them are the cause of death in small children. First aid is very important and learning never to leave the child alone.			
PSY 1114--Growth and Development of Children I . . . . .	3	5	5
A study of the principles of growth operative during the infant and early childhood periods; the first five years of life. The laboratory is offered in conjunction with the nursery school and gives opportunity for the student to develop understanding through systematic observation and individual case studies.			
PSY 1115--Growth and Development of Children II . . . . .	3	0	3
A study of childhood behavior from the ages of five through ten. Physiological, emotional, social and intellectual aspects are examined. Prerequisites: Growth and Development I.			
PSY 1123--Exceptional Children . . . . .	3	0	3
An introduction into variations from the norm in young children ranging from the exceptionally bright child to those with physical handicaps that may be compounded with some mental retardation and/or brain damage.			
SOC 1120--Family and Community . . . . .	3	0	3
Study of social and cultural influences upon the development of a child. Study of life in relationship to environment. Social and economic problems related to welfare of the young child.			

## PHYSICS.

PHY 1101--Applied Science . . . . .	3	2	4
An introduction to industrial application of principles of physics. Topics include measurements, simple mechanics, forces or work and motion, magnetism, waves, heat.			

## POWER MECHANICS.

PME 1101--Internal Combustion Engine . . . . .	5	19	9
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.			
PME 1102--Engine Electrical and Fuel Systems . . . . .	10	15	14
A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Prerequisite: PME 1101			

## PSYCHOLOGY.

PSY 1101--Human Relations . . . . .	3	0	3
A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.			

## WELDING.

WLD 1101--Basic Gas Welding . . . . .	0	3	1
Welding demonstrations by the instructor and practice by the students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice is given for surface welding ; bronze welding, silver-soldering, and flamecutting methods applicable to mechanical repair work.			

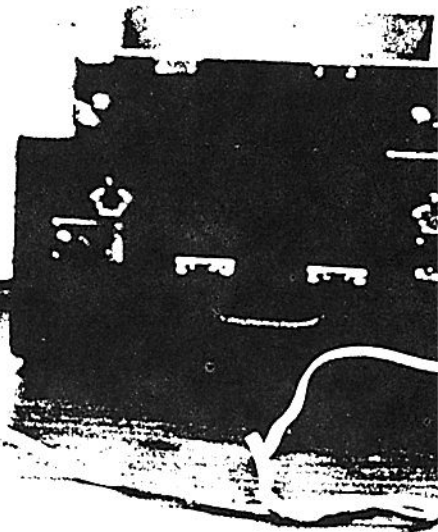
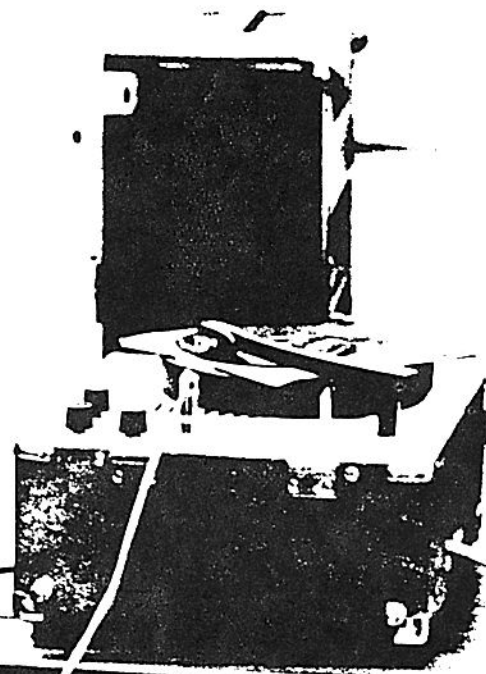
WLD 1105--Auto Body Welding . . . . .	0	3	1
Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods, and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course. Prerequisite: WLD 1101			
WLD 1112--Mechanical Testing and Inspection . . . . .	1	3	2
The standard methods for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact, etc. Prerequisites: WLD 1120, WLD 1121			
WLD 1120--Oxacetylene Welding and Cutting . . . . .	5	13	9
Introduction to the history of oxacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of the units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering, safety procedures are emphasized throughout the course in the use of tools and equipment.			
WLD 1121--Arc Welding . . . . .	5	14	8
The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized through the course in the use of tools and equipment.			
WLD 1122--Commercial and Industrial Practices . . . . .	3	9	6
Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding. Prerequisites: WLD 1120, WLD 1121			

WLD 1123--Inert Gas Welding . . . . .	1	3	2
Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding. Prerequisites: WLD 1120, WLD 1121			
WLD 1124--Pipe Welding . . . . .	3	11	7
Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.			
WLD 1125--Certification Practices . . . . .	3	6	5
This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1120, WLD 1121, WLD 1123, WLD 1124			

College Lib. Srinivasa Nr. 2017/18



Adult and  
Extension  
Education



The purpose of the Adult Education Program at Isothermal Community College is to provide the opportunity for adults to enrich their lives by offering the facilities for continuing education. Therefore, the paramount objectives are: (1) to help the individual become more conscious of his role in the obligation to the community, (2) to better prepare him for his jobs in life, (3) to stimulate creativity, (4) to help the individual appreciate the creative efforts of others, and (5) to provide avenues for the enrichment of leisure time.

The Adult Program consists of the following types of courses with a partial listing of available courses under each area:

1. ADULT BASIC EDUCATION -- a program designed to help individuals learn to read and write and to help early dropouts attain an eighth grade education.
2. HIGH SCHOOL EQUIVALENCY PROGRAMS -- programs designed to enable adults to complete their high school education by:
  - a. preparing for the General Educational Development Test (GED) that leads to the North Carolina certificate. (See section on Learning Laboratory)
  - b. earning credits required for graduation by the Rutherford and Polk County Boards of Education, and the Tryon City School Board. (For further information see section on Learning Laboratory.)
3. ARTS AND CRAFTS -- programs that give adults the opportunity to develop their creative talents.

IND 2100 Interior Decorating I, II  
HAT 2101 Hat Designing I, II  
RUG 2101 Rug Making \*  
CAK 2105 Cake Decorating  
CER 2106 Ceramics  
OIL 2108 Oil Painting \*  
SEW 2120 Home Sewing I, II, III\*  
KNT 2123 Knitting I, II, III\*

MTH 2131 Modern Math for Parents  
SFT 2134 Safety  
ICT 2135 Income Tax  
ENL 2136 Enameling\*  
CRT 2137 2137 Christmas Art  
CRE 2138 Crewel Embroidery \*  
BST 2139 Brush Stroke Design \*  
DPG 2140 Decoupage

## General Adult Education

# General Adult Education

FLO 2125 Floral Arts  
SKT 2126 Sketching

SIL 2141 Silversmithing \*  
PHF 2142 Physical Fitness

\*Available in Tryon

4. COMMUNITY SERVICE PROGRAMS -- consists of lectures, exhibits, shows and other cultural functions for community enrichment.

One of the most versatile of all the learning concepts utilized by the Community College System, the Learning Lab, is a study center designed for adults and the utilization of programmed materials. There are no lectures, no scheduled classes. Each student is assigned to his subject area on the basis of his interest and ability.

Programmed instruction gives each person the opportunity to study independently of others. It is self-instruction material that enables the learner to teach himself. Programmed instruction guides the individual step by step, through each operation and as a result the student learns by doing and receives immediate knowledge of his results.

Anyone with a reading level of 6th grade or above and with a desire to learn can attend. A student applies by coming to the Lab, filling out a brief application, and discussing his educational aims with the coordinator. Together the student and coordinator determine the goal of the student's studies: to proceed through elementary to high school level, to earn a high school diploma, to prepare for the GED Test, to develop salable skills, to overcome subject deficiencies revealed by college entrance exams, to improve one's store of information for self-development. The student is then assigned materials appropriate to his goals. He proceeds at his own speed, on a study schedule adapted to his family and job responsibilities.

The Student attends the Lab without cost. He may enroll and begin his studies at any time during the year. The Lab at the college (telephone 631-3636) is open from 8:00 A. M. to 9:00 P. M. Monday through Thursday and from 8:00 A. M. to 5:00 P. M. on Friday. The Learning Center in Tryon (859-6744) is open from 12:00 noon to 9:00 P. M. Monday through Thursday. A student may arrange his schedule to his own convenience within this time frame at either location.

## I. Adult Basic Education Program

The Learning Lab provides study opportunities for individuals reading at the 6th

# Learning Laboratory

grade level or above. A variety of Adult oriented subjects in Reading, Writing, Arithmetic, Science and Social Studies are available. The student may take advantage of film strips, tapes as well as written material as he studies. The material is programmed which provides the learner the maximum opportunity for self instruction and personnel in the Learning Lab is available to further assist the student as he advances in his study program. Students completing the eighth grade level are encouraged to participate in the Adult High School Program. Students below the sixth grade level, including non-readers, may attend scheduled ABE classes outside the Learning Lab.

## Learning Laboratory

### II. Adult High School Program

Isothermal Community College, in cooperation with the Polk and Rutherford County School Boards, has developed an Adult High School program to meet the needs of individuals who previously did not complete their secondary studies. To meet the requirements for graduation, a person must complete the nine units of study listed below:

- (1) English . . . . . 4 units
- (2) Mathematics . . . . . 1 unit
- (3) Social Studies . . . . . 2 units
- (4) Science . . . . . 2 units

A transcript of the students previous high school studies must be on file at the Learning Lab. Credit for any of the above units is given to the individual for corresponding work satisfactorily completed in prior years. The student has the opportunity to receive further credit for subjects as a result of knowledge gained through his or her work experience by scoring 50% percentile or more on the Stanford Achievement Tests.

To enter the program a person must be over 21 years or, if younger, have special permission. There is no charge for registration or materials. The student may choose to study at the Learning Lab on the Isothermal Campus or at the Learning Center in Tryon. Each student studies independently of others and this offers each one the opportunity to arrange his own study schedule and to proceed at his own pace.

### III. North Carolina High School Equivalency

Individuals may enroll in the Learning Lab to study or review material if they wish

## Learning Laboratory

to take the General Education Development (GED) Examination rather than participate in the Adult High School Program described above.

The GED diploma is awarded by the North Carolina State Department of Education to those individuals who pass the GED test. This program differs from the Adult High School Program in that no transcript or completion of specific study units is required. The examination is composed of a series of tests on the subjects of English, Literature, Math, Social Studies and Science and usually requires a day and a half to complete. The examination requires a three dollar fee. The Guidance Office of the College administers the test by appointment only and additional information may be obtained from the Guidance Director.

#### IV. General Interest Adult Program

There are many courses available in the area of general interest for the adult who wishes to study and satisfy a specific need or to spend his leisure time learning for self-enrichment. Programmed review and refresher materials are available for the high school graduate planning to enter college and to those anticipating taking qualifying exams for a specific job or license. A wide variety of courses in music, speed reading, religion, foreign languages, bridge, chess, and other subjects are available to those who wish to broaden their base of knowledge.

#### V. Remedial Guidance Studies Program

The Remedial Guidance Studies Program is under the direction of the various departments in the College Parallel and Technical Divisions of the college. The Learning Lab, in cooperation with the departments, offer remedial noncredit programs in English, Social Science, Math and Science for students who score below the required level on placement and college entrance tests.

The extent of programmed course offerings available to adults of Polk and Rutherford Counties may be obtained from the partial listing of materials presented below:

BUSINESS--Business math, business letter writing, stenograph, shorthand, accounting, public relations, data processing.

ENGLISH--Grammar, building vocabulary, spelling, techniques of writing, and useful English.

FOREIGN LANGUAGE--German, French, Spanish.  
MATHEMATICS--Elementary, General, Algebra, Geometry, Trigonometry, Calculus.  
READING--Reading instruction (grades 6–14), Speed Reading, Comprehension, and Vocabulary Improvement.  
SCIENCE--General Science, Astronomy, Electricity, Biology, Chemistry, and Physics.  
SOCIAL STUDIES--U. S. History, World History, The Constitution, How a Bill Becomes a Law, Geography of the U. S.  
GENERAL INTEREST--The Bible, Music, Interior Decorating, Contract Bridge, Slide Rule, Health, Nutrition.

## Learning Laboratory

The purpose of the Extension Program is to provide additional training in job improvement for the people in the area. Training of any type, which will improve individual job proficiency, may be offered when sufficient interest is shown.

The following is a list of some of the different courses offered in the Extension Program:

AHR 3454 Air Conditioning  
AHR 3455 Refrigeration  
AUT 3456 Automotive Tune-Up  
AUT 3457 Automotive Transmission  
AUT 3458 Alternators  
AUT 3459 Generators and Starters  
AUT 3460 Automotive Brakes  
AUT 3462 Powder Puff Mechanics  
CAB 3468 Cabinet Making  
CAR 3469 Carpentry  
CHM 3470 Breathalyzer  
GIV 3473 Estimating Construction Costs  
CIV 3474 Plane Surveying  
DFT 3479 Blueprint Reading  
DFT 3480 Drafting

## Extension

## Extension

ELC 3484 Basic Electricity  
ELC 3485 National Electrical Code  
ELN 3488 Basic Electronics  
POL 3565 Police Training  
HOS 3529 Hospitality  
MAS 3531 Masonry  
NUR 3536 Personal Care & Family Aide  
NUR 3537 Infant & Child Care  
PME 3545 Power Mechanics  
TEX 3553 Loom Fixing  
TEX 3554 Industrial Power Sewing  
TEX 3555 Textile Designing  
UPH 3561 Upholstering  
WLD 3563 Welding - Creative  
WLD 3564 Welding (Electric, Gas)  
STN 3571 Stenoscrypt  
TYP 3570 Typing I, II  
TRS 3572 Transcription (Dictaphone)  
BUS 3573 Business Communication Skills  
BUS 3574 Business Machines

### Supervisory Development Training:

SDT 3401 Principles of Supervision  
SDT 3402 Human Relations I  
SDT 3403 Human Relations II  
SDT 3404 Art of Motivating People  
SDT 3405 Economics in Business and Industry  
SDT 3406 Effective Communications & Listening  
SDT 3407 Effective Writing  
SDT 3408 Effective Speaking  
SDT 3409 Reading Improvement  
SDT 3410 Work Measurement  
SDT 3411 Job Methods  
SDT 3412 Conference Leadership  
SDT 3413 Instructor Training  
SDT 3414 Creative Thinking

SDT 3415 Industrial Safety & Accident Prevention  
SDT 3416 Industrial First Aide  
SDT 3417 The Supervisor in North Carolina  
SDT 3418 The Supervisor & Employee Benefits  
SDT 3419 Job Analysis Training  
SDT 3420 Cost Accounting  
SDT 3421 Supervision in Hospitals  
SDT 3422 Management

**Firemanship Training:**

FIP 3501 Introduction of Firefighting  
FIP 3502 Forcible Entry  
FIP 3503 Rope Practices  
FIP 3504 Portable Fire Extinguishers  
FIP 3505 Ladder Practices  
FIP 3506 Hose Practices  
FIP 3507 Salvage and Overhaul Practices  
FIP 3508 Fire Stream Practices  
FIP 3509 Fire Apparatus Practices  
FIP 3510 Ventilation  
FIP 3511 Rescue Practices  
FIP 3512 Protective Breathing Equipment  
FIP 3513 Firefighting Proccdures

\*Contact the Extension Department for a brochure containing complete course listing and description of courses.



## The Handicapped

This is an individualized program whereby the instructor goes to the home of "shut-ins" and gives instruction. This is a non-credit course that provides creative emphasis and job opportunities. The instructor meets with the students on a once-a-week basis for an indefinite period, depending on the progress shown by the student. At the present time floral design is the only program structured specifically for the handicapped.

## The Disadvantaged

The Department of Adult Education maintains a continuous non-credit course in woodworking for the Disadvantaged. This class meets Monday through Friday from 9:00 A. M. to 1 P. M.

The emphasis is on cabinet making, but the student learns to use all types of tools that are necessary in doing fine pieces from quality woods. The stress in this program is to learn by doing. The program offers the student the opportunity to learn to do creative as well as profitable work.

## Manpower Training Program

Isothermal Community College is one of six institutions in the state appointed to participate in the Manpower Training Program. This program is designed to place unemployed, or under-employed, people in jobs which offer them an opportunity for success.

There are no job skills offered, but rather, the emphasis is on literacy training and human resource development. The program is run in eight week cycles. It reflects a cooperative effort between the college, the Department of Labor, the Employment Security Commission, and local industry.



Faculty and Staff



## Board of Trustees

H. Paul Bridges  
Cliffside, North Carolina

Ivy Cowan  
Spindale, North Carolina

W. M. Elliott (M.D.)  
Forest City, North Carolina

Spencer D. Gamble  
Bostic, North Carolina

J. T. Mize (D.D.S.)  
Tryon, North Carolina

Hollis M. Owens, Jr.  
Rutherfordton, North Carolina

Max Padgett (Secretary)  
Forest City, North Carolina

Robert R. Spratt  
Caroleen, North Carolina

James T. Tanner (Vice-Chairman)  
Rutherfordton, North Carolina

J. J. Tarlton (Chairman)  
Rutherfordton, North Carolina

A. Clyde Tomblin  
Spindale, North Carolina

Frank H. West  
Caroleen, North Carolina

## Administrative Officers and Staff

Eason, Fred J. . . . . President  
B.A., M.A., Wake Forest University

Brinkley, Richard T. . . . . Director of Adult Education  
B.A., Wake Forest University; M.A., Columbia University

Coffield, Ann S. . . . . Administrative Assistant, Adult Education  
A.A.S., Winthrop College

Denning, Garland E. . . . . Director of Occupational Education  
B.S., North Carolina State University; M.A., Appalachian State University

Devine, Bill B. . . . . Counselor  
B.S., M.A., Appalachian State University

Donovan, Edward L. . . . .	Academic Dean
A.B., M.A., Ph.D., Aquinas Institute of Philosophy	
Dunagan, Stover P. . . . .	Administrative Assistant to the President
A.B., University of North Carolina	
Ellis, Royce M. . . . .	Director of Library Services
B.S., University of Denver; M.L.S., George Peabody College for Teachers	
Harbison, Martha Y . . . . .	Assistant Bookkeeper
B.S., Women College, University of North Carolina	
Paul, John F. . . . .	Dean of Students
B.A., Cornell College; M.S., George Washington University; Graduate Study, The Catholic University of America	
Porter, Ralph E. . . . .	Business Manager
B.A.E., M.Ed., University of Florida	
Sechriest, Iris B. . . . .	Bookkeeper
Watson, Ben — B.A. Barber-Scotia . . . . .	Outreach Recruiter
Wright, Wilbur M. . . . .	Registrar
B.S., M.A., Appalachian State University	

## Staff Personnel

Burrell, Shirley M. . . . .	Secretary to Adult Education
Dixon, Linda F. . . . .	Secretary to Director of Occupational Education
Dowdle, Rachel R. . . . .	Audio-Visual Assistant
Godfrey, Treva . . . . .	Secretary to the Faculty
Jacobs, Doris . . . . .	Secretary to President
Medford, Nancy H. . . . .	Secretary to Dean of Students
Morgan, O'Lema . . . . .	Assistant to the Librarian

Murray, Genevieve N. . . . .Secretary to Academic Dean  
 Taylor, Jean D. . . . . Secretary to Registrar  
 Wease, Linda D. . . . . Assistant to the Librarian

## Faculty

Atchley, Arnold A. . . . .Automotive Body Repair  
 General Motors Training School

Barrier, Edward L. . . . . Mathematics  
 A.B., University of North Carolina; M.M., University of Tennessee; Graduate Studies, Western  
 Carolina University

Biggerstaff, Raleigh R. . . . . English and Art  
 A.A., Lees-McRae College; A.B., M.Ed., University of North Carolina; Graduate Studies, The  
 University of North Carolina, Wake Forest, Appalachian State University

Callison, Thomas M. . . . . English  
 A.B., Wofford College; M.A., Appalachian State University

Carpenter, Betty Jo . . . . . Music  
 B. Mus., Graduate Studies, Converse College

Chrisman, Steve L. . . . . Business  
 B.S., Carson Newman College; M.A., Appalachian State University

Cone, Virginia M. . . . . English and French  
 B.A., West Hampton College; M.A., University of North Carolina; M.A., Syracuse University

Esdale, Gertrude . . . . . Assistant Learning Lab Coordinator  
 B.S., Northwestern University; M.A., American Conservatory of Music

Fowler, Clara J. . . . . Business  
 B.S., Barber-Scotia

Isothermal Co.  
 Chromatography  
 Equipment  
 1-800-368-3688

- Hall, James L. . . . . Mathematics  
 B.S., M.A., Appalachian State University; Graduate Studies, Appalachian State University, The University of North Carolina – Chapel Hill
- Henderson, Wesley A. . . . . Social Science  
 B.A., University of Mississippi; M.A., State University of New York; Graduate Training, Syracuse University
- Horn, Elaine P. . . . . Assistant Learning Lab Coordinator  
 B.S., University of North Carolina – Greensboro; Graduate Studies, Western Carolina University
- Hutchins, Norman Wayne . . . . . Biology  
 A.B., Duke University; M.A.T., University of North Carolina; Graduate Studies, Appalachian State University
- Hyder, Dorothy E. . . . . Nursing  
 R.N., Rutherford Hospital
- Karriker, John M. . . . . Chemistry  
 A.B., Catawba; Ph.D., University of South Carolina
- Kincaid, James C. . . . . Business  
 A.B., Steed College; M.A., Appalachian State University; Graduate Study, The University of Georgia
- Lima, Edward J. T. . . . . Electronics  
 B.S., R.E., Indiana Institute of Technology; Advanced Study, Indiana Institute of Technology, Purdue University, St. Louis University, Southern Illinois University
- Melton, Tom . . . . . Mathematics  
 B.S., North Carolina State University; M.A., Appalachian State University
- Miller, Joseph Henry . . . . . Automotive Mechanics  
 Nashville Automobile College; Vanderbilt University; Carter Carburetor
- Morrow, Dillard L. . . . . English  
 B.S., M.A., Western Carolina University; Advanced Study, Western Carolina University

- Poole, Jerry S. . . . . Mathematics  
A.B., M.A.T., Emory University
- Shipley, Gary L. . . . . Biology  
B.S., M.S., East Tennessee State University
- Smith, Janet F. . . . . Physical Education  
B.S., M.A., Austin Peay State University
- Toney, David C. . . . . Welding  
B.S., Appalachian State University; Studies at the University of Guam; Journeyman Tool Maker;  
Graduate Studies, Appalachian State University
- Venhuizen, Ronald C. . . . . Social Science  
A.B., Hope College; M.A., Arizona State University
- Whisenant, David H. . . . . Business  
B.S., M.A., Appalachian State University
- Williams, Carl W. . . . . Learning Lab Coordinator  
B.S., M.S., M.A., Louisiana State University; Graduate Studies, Appalachian State University
- Rogers, William R. . . . . Social Sciences  
B.S., M.A. University of Tennessee
- Underwood, Clarence Neilan . . . . . Electronics and Electrical-Industrial  
Electrical Technology U.S. Dept. of Education; U.S. Air Corps Technical  
Institute; Refrigeration and Air Conditioning Training Corporation



