




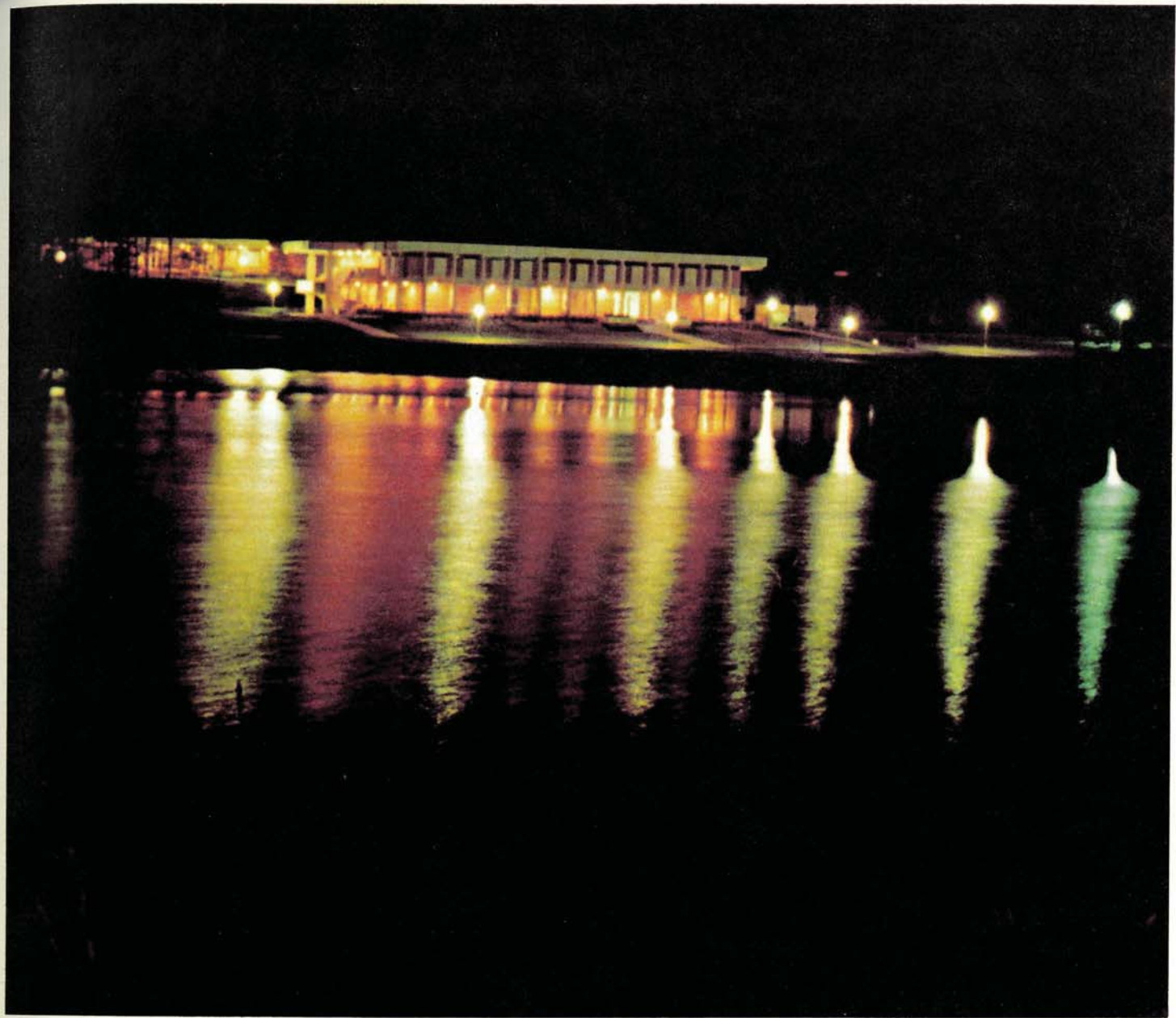
ISOTHERMAL



ISOTHERMAL COMMUNITY COLLEGE CATALOG
VOLUME IV - JULY 1970

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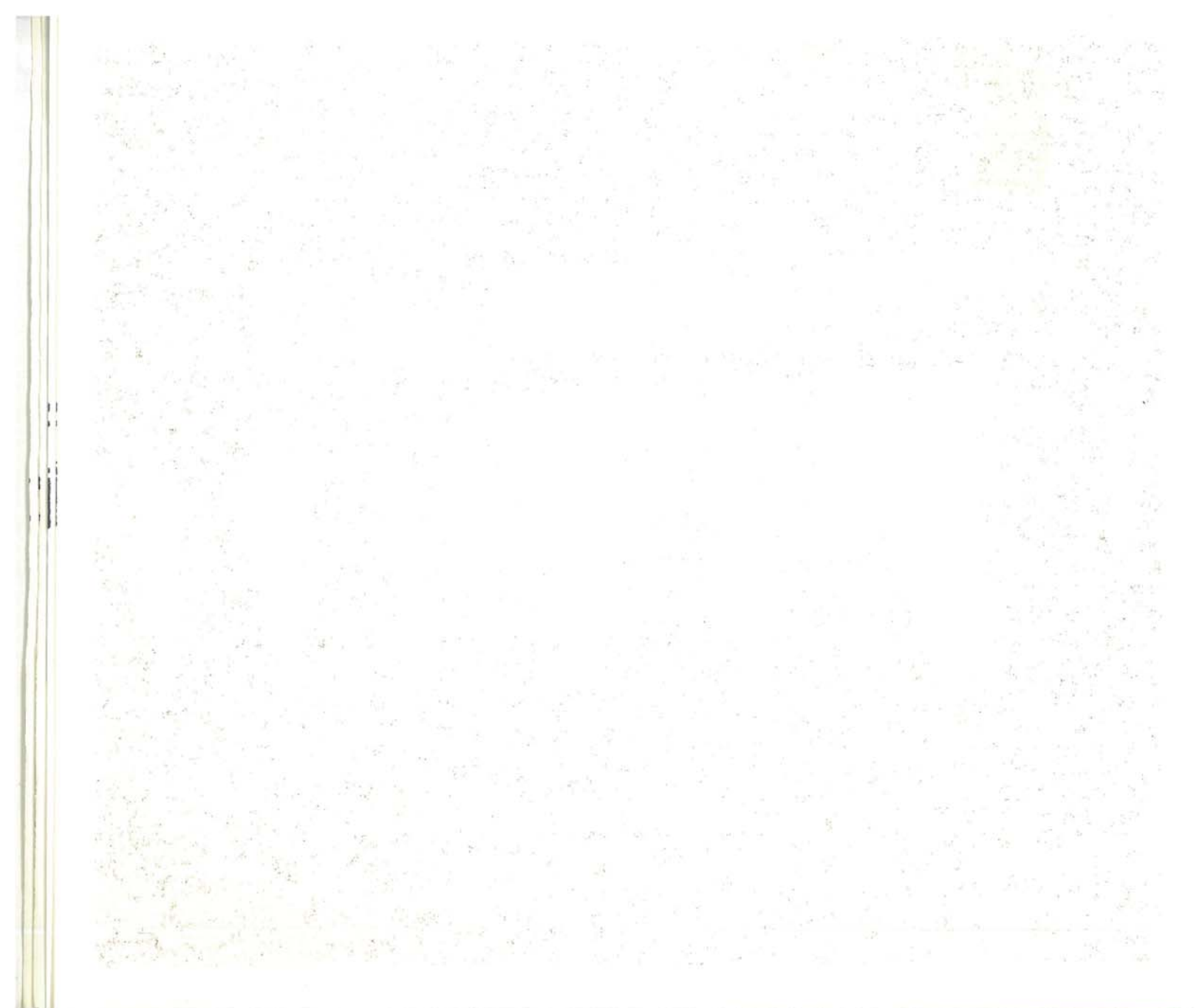


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Calendar of Events

FALL QUARTER, 1970

Sept. 8	Registration & Orientation
Sept. 9	Registration
Sept. 10	1st Day of Classes
Sept. 17	Last Day to Register and Add
Sept. 24	Last Day to Drop
Oct. 12-16	Mid-Term Exams
Nov. 18	Last Day of Classes
Nov. 19, 20, 23	Final Exams

WINTER QUARTER, 1970-71

Nov. 30	Registration & Orientation
Dec. 1	1st Day of Classes
Dec. 8	Last Day to Register or Add
Dec. 15	Last Day to Drop
Dec. 19-Jan. 3	Christmas Holidays
Jan. 4	Classes Resume
Jan. 18-22	Mid-Term Exams
Feb. 22	Last Day of Classes
Feb. 23, 24, 25	Finals

SPRING QUARTER, 1971

March 3	Registration & Orientation
March 4	1st Day of Classes
March 11	Last Day to Register and Add
March 18	Last Day to Drop
April 5-6	Mid-Terms
April 9-16	Easter Holidays
May 21	Last Day of Classes
May 24, 25, 26	Finals
May 28	Graduation

Calendar of Events

SUMMER SCHOOL, 1971

1st Session

June 7	Registration & Orientation
June 8	1st Day of Classes
June 10	Last Day to Register and Add
June 15	Last Day to Drop
July 5	Holiday
July 9	Last Day of Classes and Finals

2nd Session

July 12	Registration
July 13	1st Day of Classes
July 15	Last Day to Register and Add
July 20	Last Day to Drop
August 12	Last Day of Classes and Finals
August 13	Graduation

Summer Quarter

June 7	Registration and Orientation
June 8	1st Day of Classes
June 10	Last Day to Register and Add
June 15	Last Day to Drop
July 5	Holiday
July 13	No Classes
August 3	Last Day of Classes
August 4, 5, 6	Finals
August 13	Graduation

Calendar of Events

FALL QUARTER, 1971

Sept. 7-8	Registration & Orientation
Sept. 9	1st Day of Classes
Sept. 16	Last Day to Register and Add
Sept. 23	Last Day to Drop
Oct. 11-15	Mid-Terms
Nov. 17	Last Day of Classes
Nov. 18, 19, 22	Finals

WINTER QUARTER, 1971-72

Nov. 29	Registration
Nov. 30	1st Day of Classes
Dec. 7	Last Day to Register
Dec. 14	Last Day to Drop
Dec. 18-Jan. 2	Christmas Holidays
Jan. 3	Classes Resume
Jan. 10-14	Mid-Terms
Feb. 21	Last Day of Classes
Feb. 22, 23, 24	Finals

SPRING QUARTER, 1972

March 1	Registration & Orientation
March 2	1st Day of Classes
March 9	Last Day to Register and Add
March 16	Last Day to Drop
March 31-April 7	Easter Holidays
April 17-21	Mid-Terms
May 19	Last Day of Classes
May 22, 23, 24	Exams
May 26	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.

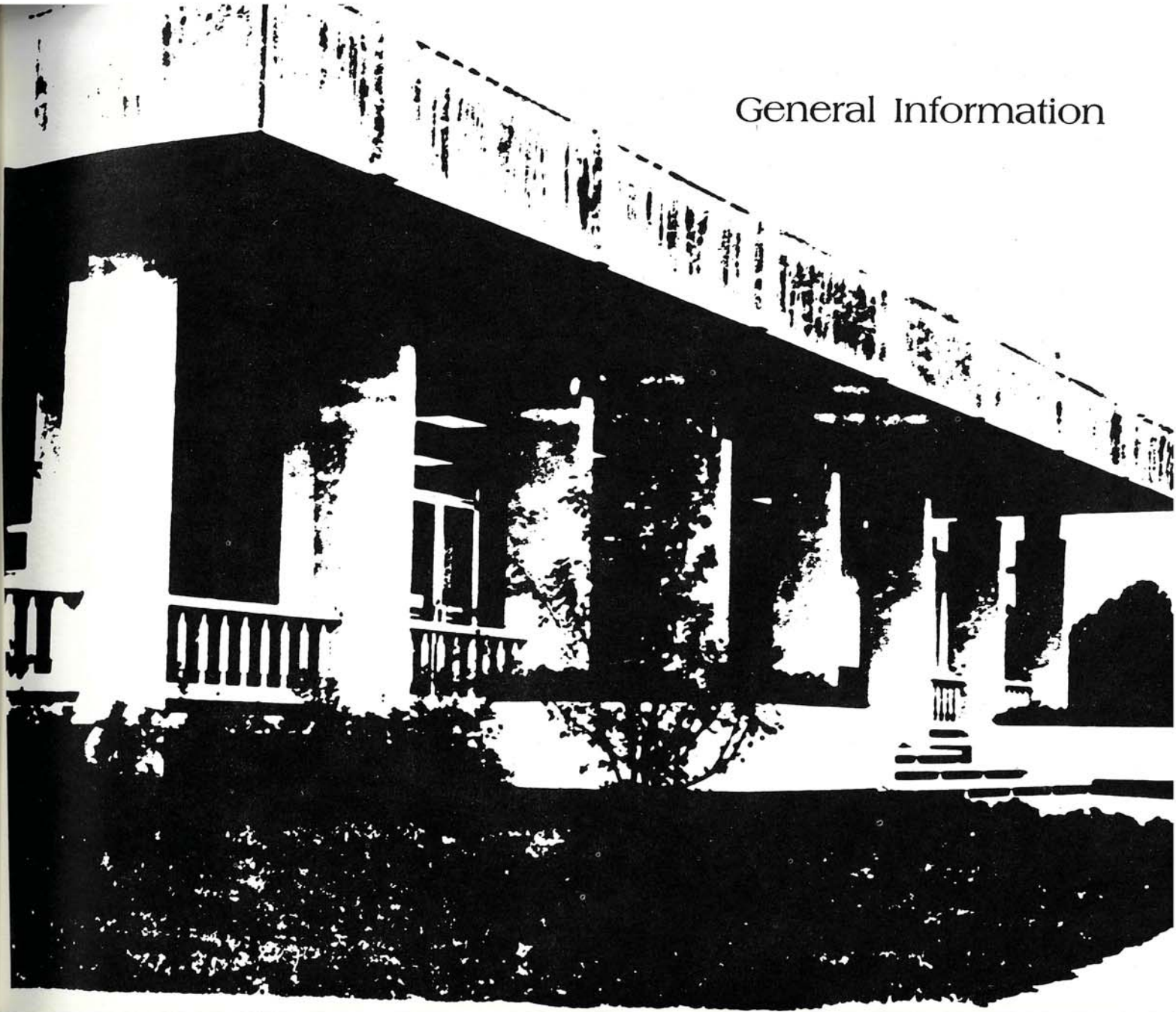
We believe that knowledge and skill are essential to a happy productive life for our people and for the welfare of our nation.

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, just off Highway 74. Buildings have been constructed on a wooded site that provides an attractive setting for the modern facilities which serve the people of Rutherford and surrounding counties. New Highway 74 (a modern four lane highway) is under construction and will pass near the front entrance to the main campus.

The College is planned as a commuter's college with classes taught both day and night. Four basic curricula include: college transfer, vocational, technical and adult education courses. College parrallel, technical and vocational courses are planned along the lines of other college programs throughout the state. Adult education courses are initiated on the basis of adult interest and demand. Qualified instructors are selected to fill each position on the teaching staff in each curriculum.

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 College also seeks to prepare students for successful entry into senior colleges and universities as juniors or for immediate entry into an occupation.

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.

History of the College

Purpose and Objectives

Purpose and Objectives

2. To provide two years of technical education appropriate to the needs of the individual and the community.
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 North Carolina State Board of Education. Arrangements have been formulized with four-year colleges and universities whereby graduates of the college parallel division will be accepted on the same basis as transfer students from other colleges and universities during the interim before Isothermal Community College is eligible for regional accreditation.

Isothermal Community College has received a letter of satisfactory progress from the Southern Association of Colleges and Schools and full accreditation is expected by 1970.

The library is planned to provide students and faculty, both day and evening divisions, with materials needed to support and enrich the instructional program of the College.

Library

The college library contains over 18,000 volumes at the present time with books continually being added to support the various college programs. The library also subscribes to 185 periodicals and is building a good collection of films, filmstrips, film loops, tapes, 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 9:30 p.m. and Friday from 8:00 a.m. to 5:00 p.m.

The library also houses the learning laboratory (programmed materials) and the audio-visual production department. The attached auditorium is used for classes and for cultural programs open to the public.

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 or her 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.

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.
- B. A student is responsible for registering each additional vehicle that he will use on campus during his enrollment.
- C. New license plates must be registered each year at spring quarter registration or sooner.

Learning Laboratory

Administrative Regulations

Administrative Regulations

- D. There is no charge for car registration.
 - E. 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 are to park in student parking areas.
 - B. Faculty and staff members are to park in faculty-staff parking areas.
 - C. Parking regulations will be enforced until 6:00 p.m. each day.
 - D. Students may inquire in the Student Personnel Office for emergency permission to park in areas not designated for students.
 - E. Any guest receiving a parking violation should submit this to the Student Personnel Office.
- III. **Speeding**
Speed limits as posted on campus must be adhered to.
- IV. All parking violations are payable to the Spindale Police Department.

CHANGES IN REGULATIONS. Isothermal Community College reserves the right to make changes in the regulations, fees, and other matter of policy and procedure as and when deemed 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.

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 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 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.

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.

Admissions

Admissions

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.

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.

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. Otis Quick Scoring Mental Ability Test
2. Nelson-Denny Reading Test – Part II
3. College Qualification Tests

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

VOCATIONAL APPLICANTS. All applicants applying for the vocational division should take the General Aptitude Test Battery administered by the North Carolina Employment Security Commission. The applicant should contact the Employment Security Commission regarding test dates and he should request that his scores be sent to the College.

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

Guided Studies Program

Testing

Testing

- 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.)

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. Students are expected to register on these dates. 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 before his registration is complete.

Tuition charges are as follows:

College Parallel

14 quarter hours or more	\$.42.00 per quarter
Less than 14 quarter hours	\$3.00 per qtr. hr.
Activity fee	\$.10.00 per quarter

Technical or Vocational

14 quarter hours or more	\$.32.00 per quarter
Less than 14 quarter hours	\$2.50 per qtr. hr.
Activity fee	\$.10.00 per quarter

Out-of-state students pay the same tuition as in-state students.

*Student activity fee of \$6.50 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."
- B. "In order to comply with federal regulations in institutions not regionally accredited, the State Board authorized modification of the tuition refund policy so that veterans or war orphans receiving benefits under U. S. Code Title 38, Chapters 33 and 35, can be refunded the pro rata portion of the tuition fee not used up at the time of withdrawal of such students."

Tuition and Fees

STUDENT ACTIVITY FEE. A student activity fee of \$6.50 is charged each quarter for students registering for seven hours or more. 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 will be determined each quarter and posted.

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 60 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 made through the Business Office. Notices will be posted relevant to dates for measurements. Students are urged to be prompt when making these orders.

Academic Matters

CLASS ATTENDANCE. Every student is expected to attend all of his classes and is responsible for all class work. In the event that a class must be missed, a student may miss one class hour per quarter hour credit with an allowed maximum as stated below. When a student exceeds the maximum allowed absences, he will be withdrawn from the course by the instructor unless the student provides the instructor with a written statement from the division director justifying the excessive absence.

The student must understand that this system of absences is designed to allow only for unavoidable absences.

Quarter Hours Credit	Class Meetings Per Week	Number of Class Meetings A Student May Miss
3	3	3
3	2	2
3	1	1
5	5	4
1	1	1
4	3	3
1	2	2
3	5	3
3	4	3

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.

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 before the end of the following quarter.

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 Dean of Instruction.

Academic Matters

Academic Matters

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 vocation division. Students who wish to register for more than the normal load must get the approval of the Dean of the College.

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.
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 Director of Student Personnel Services. The Director will initiate a divisional change sheet and refer the student to the Student Personnel counselor.
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 Director of Student Personnel Services and approved by the divisional chairman.

Schedule Changes

Change In Divisions or Programs

Withdrawal From College

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 Services.
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 "WF".

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 students must have a grade point average 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 the Dean of the College.

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.

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.

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.

Honors

Student Services

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 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.

Also 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. Students who cannot find desired information should contact the counselor who will assist the student in obtaining such.

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.

Student Services

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 arrangements to secure housing. The College assumes no responsibility for rental negotiations between students and homeowner.

FOOD SERVICES. Food and drink is 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. The Center is also opened in the evenings. Available for student use are the following: a pay telephone for personal service, a juke box, and ping-pong tables. Students are urged to make recommendations to the Student Government Association relevant to additions or deletions of recreational equipment or food matter.

ACCIDENT INSURANCE. At a nominal cost to students, the College has authorized a voluntary group accident insurance program for the welfare of its students. Coverage extends for the entire year at a cost of \$3.00 per student. The College urges each student to purchase accident insurance during his initial registration.

ORIENTATION FOR FRESHMAN 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 freshman and transfer

Student Services

students are required to register for Educational Orientation 101 to assist them in making an easy and normal transition to college life.

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 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:

College Parallel Division

Full time	14 quarter hours of credit
3/4 time	10-14 quarter hours of credit
1/2 time	7-10 quarter hours of credit

Technical Division

Full time	25 clock hours
3/4 time	18-25 clock hours
1/2 time	12-18 clock hours

(Theory and class instruction predominates)

Vocational Division

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

Students in technical and vocational programs will not be classified as full-time students for benefits under the G.I. Bill unless technical students are enrolled for twenty-five clock hours per week and vocational students for thirty hours per week. When in any quarter the total weekly contact hours listed are fewer than twenty-five in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request for additional instructional hours deemed by the institution to be consistent with the program and appropriate to the student to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.

Student Services

The contact hours shown in the catalog are minimal. It is a policy of this institution to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden this training.

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 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.

Student Activities

The president of the Student Government Association is the chief executive which includes divisional representatives and members at large. Student interest and help are welcomed at all times.

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

Student Activities

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.

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 candidates for the titles of Mr. 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.

ST. LUKE'S GUILD. The purpose of St. Luke's Guild is to give artistically inclined students the opportunity to exercise their individual talents by producing and presenting their work 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.

Isothermal Community College is actively engaged 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 financial need. Educational Opportunity Grants vary in amounts due to individual needs and availability of funds. Grants can range from \$200 to \$800 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.

Student Activities

Financial Assistance Program

Financial Assistance Program

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 the Institution requires a minimum repayment of \$15.00 per 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.

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 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.

INSTITUTIONAL SCHOLARSHIPS. The College provides a variety of scholarships each year in support of the Financial Aid Program. The Awards range from \$24.00 to \$500.00. Top priority is extended to students with extreme financial need.

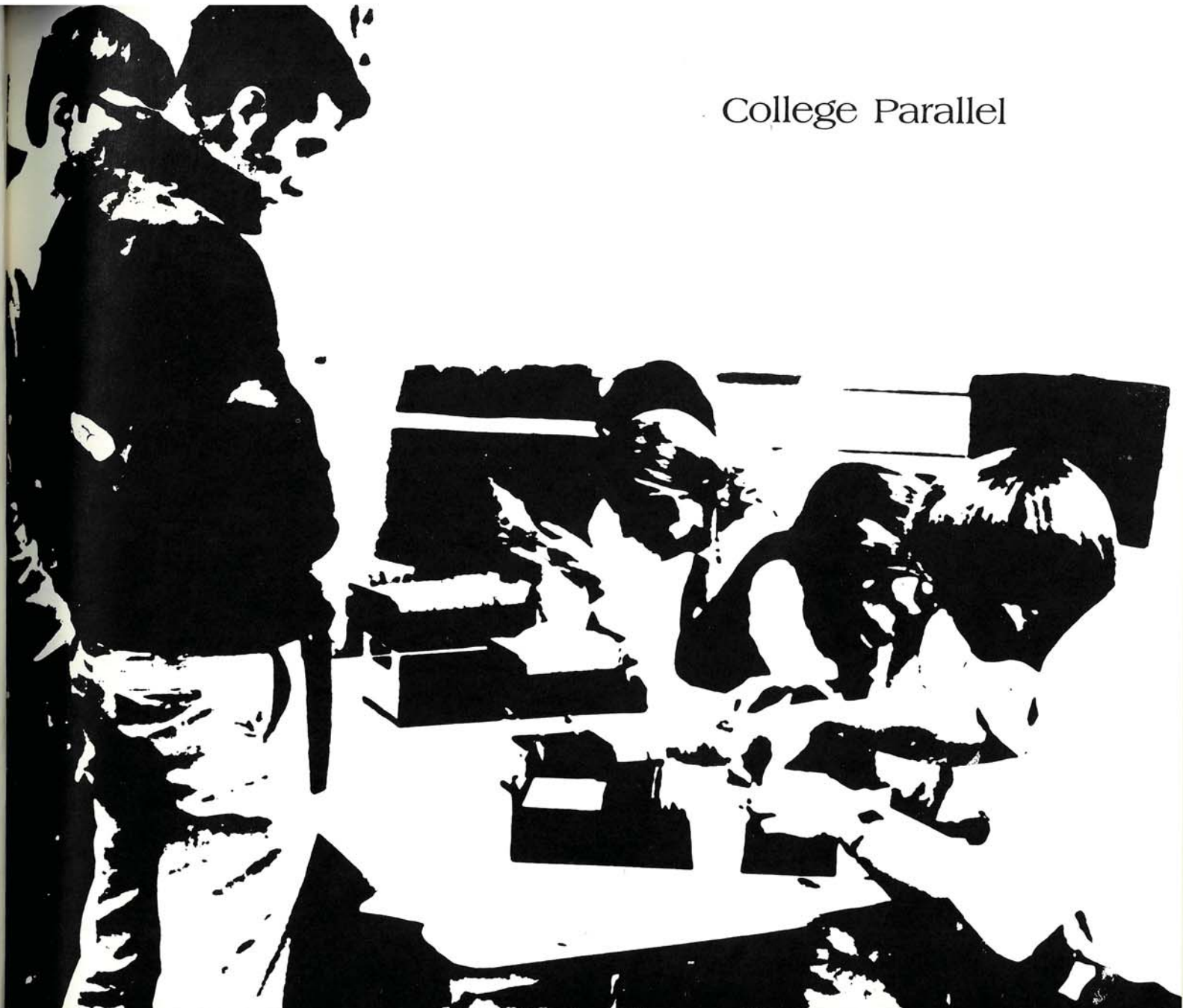
CONDUCT. The conduct of a student, both in and out of school, will be measured on an adult standard. He assumes full responsibility for the consequences of his actions and behavior. It is the personal responsibility of each student to uphold the rules and regulations of Isothermal Community College. 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 Parallel 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 Transfer Program

Transfer Procedures

The student at Isothermal Community College will have little difficulty in completing his transfer satisfactorily if he adheres to the following recommended procedures:

1. Decide early which senior institution to attend. Allow sufficient time for the acknowledgement of admission data and the transit of permanent records.
2. Obtain a current copy of the catalog of that college and study its entrance requirements and curriculum recommendations for freshman and sophomore level courses in the student's major field.
3. Obtain a curriculum standing form in the Student Personnel Office. This will help to insure that the student is scheduling and completing prescribed courses required for graduation.
4. Confer with an assigned faculty advisor about transfer preparation.
5. Contact the admissions officer at the senior institution periodically relative to admission status and additional information.
6. Check carefully at least two quarters in advance of anticipated transfer to insure proper scheduling of classes and meeting necessary requirements.

In the first two years of college, students secure a general education in the areas of humanities, social studies, science, and mathematics; in addition, they begin specialized work in their own particular fields of interest. It is the aim of Isothermal Community College to provide quality instruction in these areas for transfer credit to senior institutions.

Isothermal Community College promotes a series of counselor-student conferences to help the student plan his program for transfer to the college or university of his choice.

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	9
Laboratory Science	12
(At least 3 courses in sequence will be selected from one of the laboratory sciences.)	
Social Science	12
(History 101, 102, 103 will be required in all cases.)	
Physical Education	6
Education 101	1
Electives	35

Physical Education Exemption Requirements

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

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

Degree Offered

Curriculum Description

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	Hours
English 101	3
History 101	3
Math 101	3
Biology (or) Chemistry 101	4
Sociology 201	3
Phy. Ed.	1
Educational Orientation	1
	<u>18</u>

Winter Quarter

English 102	3
History 102	3
Math 102	3
Biology (or) Chemistry 102	4
Sociology 202	3
Phy. Ed.	1
	<u>17</u>

Spring Quarter

English 103	3
History 103	3
Math 103	3
Biology (or) Chemistry 103	4
Sociology 203	3
Phy. Ed.	1
	<u>17</u>

SOPHOMORE YEAR

Fall Quarter	Credit Hours
Course Title	Hours
English 201	3
Economics 201	3
History 251	3
Business 201	3
Phy. Ed.	1
Elective	3
	<u>16</u>

Winter Quarter

English 202	3
Economics 202	3
History 252	3
Business 202	3
Phy. Ed.	1
Elective	3
	<u>16</u>

Spring Quarter

English 203	3
Economics 203	3
History 253	3
Business 203	3
Phy. Ed.	1
Elective	3
	<u>16</u>

SUGGESTED ELECTIVES: Mathematics, Speech, Psychology, Health, Political Science

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	Credit Hours
Course Title	
English 101	3
History 101	3
Math 101	3
Biology 101 (or) Chemistry 101	4
Phy. Ed.	1
Pol. Sci. 201	3
Educational Orientation	1
	<u>18</u>

Winter Quarter

English 102	3
History 102	3
Math 102	3
Biology 102 (or) Chemistry 102	4
Phy. Ed.	1
Pol. Sci. 202	3
	<u>17</u>

Spring Quarter

English 103	3
History 103	3
Math 103	3
Biology 103 (or) Chemistry 103	4
Phy. Ed.	1
Pol. Sci. 203	3
	<u>17</u>

SOPHOMORE YEAR

Fall Quarter	Credit Hours
Course Title	
English 201	3
Sociology 201	3
Am. Hist. 251	3
Phy. Ed.	3
Phy. Sci. 101	4
Elective	3
	<u>17</u>

Winter Quarter

English 202	3
Sociology 202	3
Am. Hist. 252	3
Phy. Ed.	1
Phy. Sci. 102	4
Elective	3
	<u>17</u>

Spring Quarter

English 203	3
Sociology 203	3
Am. Hist. 253	3
Phy. Ed.	1
Phy. Sci. 103	4
Elective	3
	<u>17</u>

SUGGESTED ELECTIVES: Economics, Geography, Speech, Mathematics, Health, Foreign Language

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	3
Foreign Language	3
Phy. Ed.	1
Educational Orientation	1
	<u>18</u>

Winter Quarter

English 102	3
History 102	3
Biology 102 (or) Chemistry 102. .4	
Math 102	3
Foreign Language	3
Phy. Ed.	1
	<u>17</u>

Spring Quarter

English 103	3
History 103	3
Biology 103 (or) Chemistry 103. .4	
Foreign Language	3
Math 103	3
Phy. Ed.	1
	<u>17</u>

SOPHOMORE YEAR

Fall Quarter	Credit Hours
Course Title	
English 201	3
Am. Hist. 251	3
Foreign Language	3
Phy. Ed.	1
Phy. Sci. 101	4
Elective	3
	<u>17</u>

Winter Quarter

English 202	3
Am. Hist. 252	3
Foreign Language	3
Phy. Ed.	1
Phy. Sci. 102	4
Elective	3
	<u>17</u>

Spring Quarter

English 203	3
Am. Hist. 253	3
Foreign Language	3
Phy. Ed.	1
Phy. Sci. 103	4
Elective	3
	<u>17</u>

SUGGESTED ELECTIVES: Speech, Psychology, Music, Art, Mathematics, Health

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	<u>.1</u>
	17

Winter Quarter

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

Spring Quarter

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

SOPHOMORE YEAR

Fall Quarter

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

Winter Quarter

Mathematics 212 . . . . .	.5
English 202 . . . . .	.3
Physics 202 . . . . .	.4
Phy. Ed. . . . .	.1
Elective	<u>.3</u>
	16

Spring Quarter

Mathematics 213 . . . . .	.5
English 203 . . . . .	.3
Physics 203 . . . . .	.4
Phy. Ed. . . . .	.1
Elective	<u>.3</u>
	16

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

TEXTILES. The wide range of career opportunities in textiles includes production supervision, designing and styling, sales and marketing, research and development, and management. The following curriculum is generally what textile majors need to satisfy freshman and sophomore year requirements.

FRESHMAN YEAR

Fall Quarter

Course Title	Credit Hours
Math 111	5
English 101	3
Chemistry 101	4
History 101	3
Phy. Ed.	1
Educational Orientation	1
	<u>17</u>

Winter Quarter

Math 112	5
English 102	3
Chemistry 102	4
History 102	3
Pol. Sci. 101	3
Phy. Ed.	1
	<u>19</u>

Spring Quarter

Math 113	5
English 103	3
Chemistry 103	4
History 103	3
Phy. Ed.	1
	<u>16</u>

SOPHOMORE YEAR

Fall Quarter

Course Title	Credit Hours
Math 211	5
Physics 201	4
English 201	3
Economics 201	3
Elective	3
Phy. Ed.	1
	<u>19</u>

Winter Quarter

Math 212	5
Physics 202	4
English 202	3
Sociology 201	3
Phy. Ed.	1
Elective	3
	<u>19</u>

Spring Quarter

Math 213	5
Physics 203	4
English 203	3
Phy. Ed.	1
Elective	3
	<u>16</u>

SUGGESTED ELECTIVES: Speech, Geography, American History, Political Science, and Sociology

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.

ART.

- ART 201--Survey of Art3-3
An introduction to the principles of art; Egyptian Art, Greek Art, Roman Art, Early Christian and Byzantine Art, Medieval Art in the North, Renaissance Art, Baroque and Neo-Classical Art, Impressionism through Modern Art.

BIOLOGY.

- BIO 101--Principles of Biology6-4
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 Biology6-4
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 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.

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 Shorthand5-3
 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 Shorthand5-3
 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 I3-3
 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 II3-3
 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 Accounting3-3
 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 and BUS 202.
- BUS 205--Advanced Typewriting3-3
 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.

CHEMISTRY.

- CHM 101--General Chemistry6-4
 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 Chemistry6-4
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. Prerequisite: CHM 101.

CHM 103--General Chemistry6-4
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.

DRAMA.

DRA 201--Literature for the Theatre3-3
Survey of significant plays, both classic and contemporary.

ECONOMICS.

ECO 201--Economic Principles I3-3
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 II3-3
A continuation of Economics 201 with emphasis on the market and price system and the allocation of resources.

ECO 203--Economic Principles III3-3
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 Economics3-3
A study of personal financial problems in such areas as housing, budgeting, loans, banking, taxes, credit and insurance.

EDUCATION.

- 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.

- ENG 90--Fundamentals of Grammar 3-GS3
A guided studies course designed to review the fundamentals of grammar, including: spelling, punctuation, sentence structure, paragraph development, and theme writing.
- ENG 95--Reading Proficiency 3-GS3
A guided studies course for the improvement of reading and study skills through vocabulary study, use of the controlled reader, and timed tests for comprehension and speed.
- ENG 101--Freshman Composition I 3-3
A study of sentence structure for variety; a study of paragraph development: writing through use of exposition, narration, description, and argumentation. Writing compositions from books read and reviewed and writing from other experiences. Reviewing of books read.
- ENG 102--Freshman Composition II 3-3
Reading and writing. Both oral and written compositions developed through exposition, description, narration, and argumentation. A critical study of selected literary masterpieces.
Prerequisite: ENG 101.
- ENG 103--Freshman Composition III 3-3
Reading, writing, and speaking from assigned and selected topics. A detailed study of use of library and library materials for research; compiling a footnoted library paper.
Prerequisite: ENG 102.
- ENG 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. Prerequisite: Successful completion of freshman English courses.

- ENG 202--English Literature II 3-3
 A survey of English literature of nineteenth and twentieth centuries with special attention to development of literary types. Term paper. Prerequisite: Successful completion of freshman English courses.
- ENG 203--Major American Writers 3-3
 Survey of American literature presenting representative works and types selected by the instructor. Term paper. Prerequisite: Successful completion of freshman English courses.

FRENCH.

- FRE 101, 102, 103--Elementary French (each) 3-3
 Basic elements of French in conversation, reading, and composition designed for beginning students. Compulsory language laboratory attendance. Students with two high school units in French are not allowed credit for this sequence. These courses must be taken in sequence.
- FRE 201, 202, 203--Intermediate French (each) 3-3
 Includes two areas of study: (1) An intensive review of basic grammar and syntax. (2) Development of reading skills through the study of significant literary works. Prerequisite: FRE 103 or two high school units and a satisfactory score on the placement test.

GEOGRAPHY.

- 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.

GEOLOGY.

- 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.

HEALTH.

- 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.

HISTORY.

- 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.

MATHEMATICS.

- MAT 90--Developmental Mathematics 3-GS3
An intensive review and application of basic mathematical concepts, designed for the student whose mathematical background is not strong enough to enable him to meet with success in college mathematics. This course is considered a three hour course for scheduling purposes.
- MAT 101, 102, 103--Foundation of Mathematics (each) 3-3
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 103.
- 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 103.
- 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.

MUSIC.

- MUS 110, 111, 112--Chorus (each) 2-1
A course of instruction in the basic fundamentals of music reading and part singing designed to help those who like to sing but lack the necessary musical training to follow the music score and to sing in parts.
- MUS 210--Chorus (each) 2-1
A study-activity course of vocal techniques and choral interpretation. Ensemble singing including the performance of works from standard choral repertory with emphasis on improving understanding, enjoyment and taste for a variety of good music. Students may enroll in and receive credit for six quarters of Music 210.
- MUS 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.

PHYSICAL EDUCATION.

- 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

PHYSICS.

- PHY 201--General Physics I 6-4
An introduction to systems of measurements, properties of matter (solids, liquids, gases).
Laboratory experiments in mass, pressure, and volume.
- PHY 202--General Physics II 6-4
Electron theory. Magnetism, electricity, and heat. Direct and alternating currents, series and
parallel circuits. Heat temperature and change of state. Laboratory experiements in resistance,
voltage and current measurements, and magnetic and electromagnetic effects. Prerequisite: PHY
201.
- PHY 203--General Physics III 6-4
A study of light and sound wave motion, measurements of intensity, velocities, frequencies, and
qualitative analysis. Prerequisite: PHY 202.

POLITICAL SCIENCE.

- POL 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 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 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.

PHYSICAL SCIENCE

- 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.

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.

SOCIAL SCIENCE.

SOC SCI 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.

SOCIOLOGY.

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.

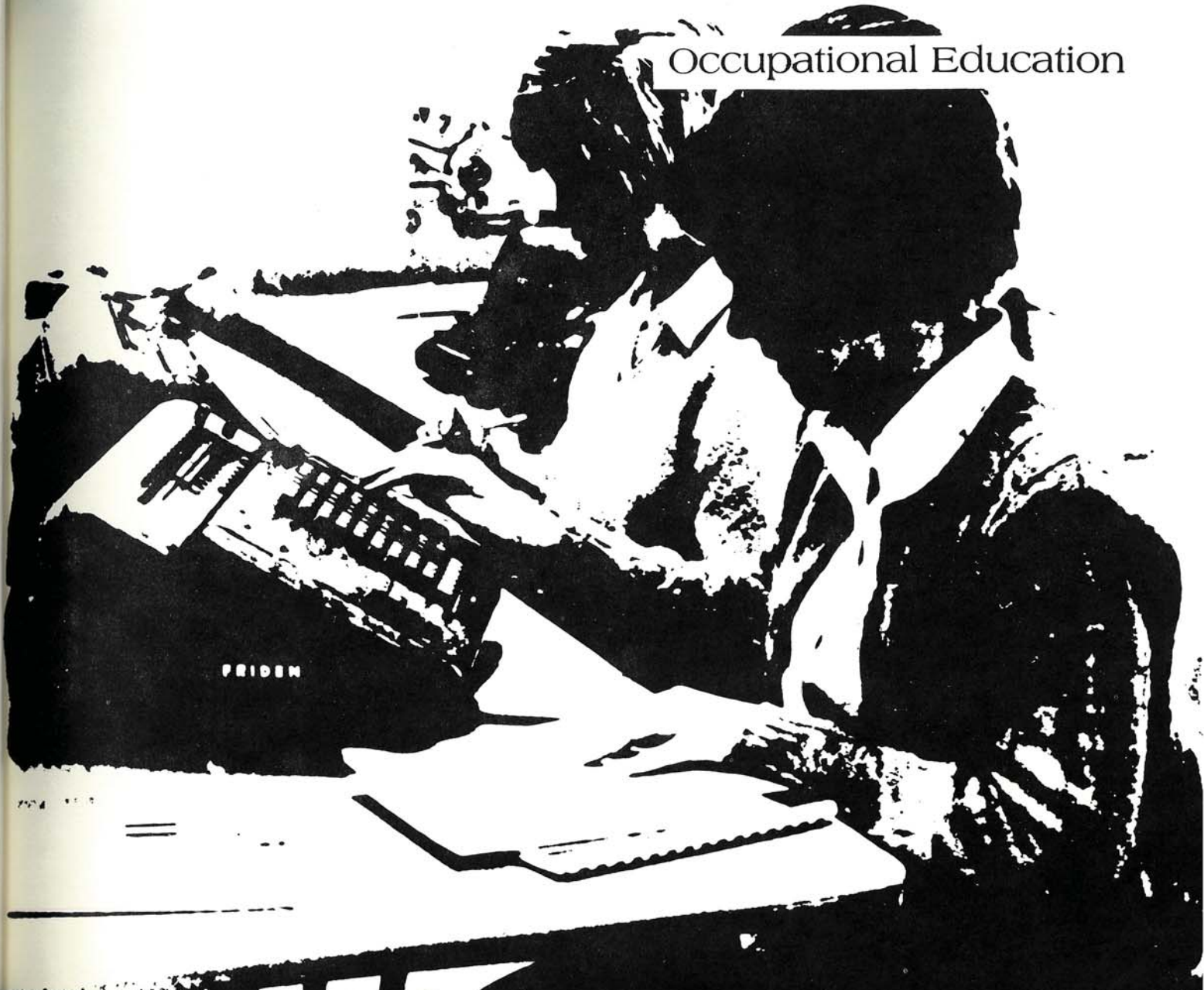
SOC 203--Sociology of the Family 3-3
Study of the American family with attention given to courtship, marriage, family relationships and interdependencies, and social cultural stresses emerging from contemporary family life.

SPANISH.

SPA 101, 102, 103--Elementary Spanish (each) 3-3
Basic elements of Spanish in conversation, reading, and composition. Designed for beginning students. Compulsory language laboratory attendance. Students with two high schools units in Spanish are not allowed credit for this sequence. These courses must be taken in sequence.

SPA 201, 202, 203--Intermediate Spanish (each) 3-3
Includes two areas of study: (1) An intensive review of basic grammar and syntax. (2) Development of reading skills through the study of significant literary works. Prerequisite: SPA 103 or two high school units.

Occupational Education



FRIDEN

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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:

Agri-Business Technology
Business Administration
Electronics Technology
Executive Secretary
General Office 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

AGRICULTURE—BUSINESS TECHNOLOGY. This course is designed specifically for the student who seeks opportunity in agricultural related business or industry.

Today's farmer is a producer of tremendous amounts of food and fiber, in a process which requires equally tremendous quantities of basic raw materials and services.

The agriculture-business graduate will be qualified to enter the field of farm supplies, agriculture finance and insurance, distribution and processing, or agriculture communications.

The agriculture-business curriculum incorporates those courses pertaining to both business management and agriculture, to allow the graduate to compete in these specialized areas of service.

AGRICULTURE—BUSINESS TECHNOLOGY.

Course Title	Class	Lab.	Quarter Hours Credit
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
T-MAT 110 Business Math	5	0	5
EDU 101 Orientation	1	0	1
T-BUS 101 Introduction to Business	3	0	3
T-AGR 125 Animal Science	<u>5</u>	<u>2</u>	<u>6</u>
	17	2	18
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
T-BUS 120 Accounting	5	2	6
T-CHM 101 Chemistry	4	2	5
T-BUS 123 Business Finance	<u>3</u>	<u>0</u>	<u>3</u>
	15	4	17

THIRD QUARTER

T-ENG 103 Report Writing	3	0	3
T-BUS 110 Office Machines	2	2	3
T-BUS 121 Accounting	5	2	6
T-AGR 104 Introduction Agr. Econ.	3	0	3
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	16	4	18

FOURTH QUARTER

T-BUS 232 Sales Development	3	0	3
T-ENG 204 Oral Communication	3	0	3
T-AGR 204 Farm Business Management	3	0	3
T-AGR 170 Plant Science	5	2	6
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	17	2	18

FIFTH QUARTER

T-AGR 205 Ag. Marketing	5	3	6
T-AGR 201 Ag. Chemicals	5	2	6
Horticulture	3	2	4
Elective	<u>3</u>	<u>0</u>	<u>3</u>
	16	7	19

SIXTH QUARTER

T-AGR 228 Livestock Dis. & Parasites	3	2	4
T-AGR 218 Ag. Mechanization	5	2	6
Elective	3	0	3
T-AGR 236 Soil Sci. & Fert.	<u>4</u>	<u>4</u>	<u>6</u>
	15	8	19

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 Hours Credit
	Class	Lab.	
FIRST QUARTER			
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	1	0	1
	<u>15</u>	<u>5</u>	<u>17</u>
SECOND QUARTER			
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	3	0	3
	<u>17</u>	<u>2</u>	<u>18</u>
THIRD 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 110 Office Machines	2	2	3
T-BUS 124 Business Finance	3	0	3
	<u>16</u>	<u>4</u>	<u>18</u>

FOURTH 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	3	0	3
	<u>17</u>	<u>2</u>	<u>18</u>

FIFTH 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	5	0	5
	<u>17</u>	<u>2</u>	<u>18</u>

SIXTH 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
Elective	9	0	9
	<u>18</u>	<u>2</u>	<u>19</u>

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.	
FIRST 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>
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
T-MAT 101 Math	5	0	5
T-DFT 112 Drafting	2	3	3
T-ELC 101 DC Circuit Analysis	5	3	6
T-MAT 100 Slide Rule	0	2	1
Elective	3	0	3
	<u>18</u>	<u>8</u>	<u>21</u>
THIRD 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	5	3	6
	<u>18</u>	<u>6</u>	<u>20</u>
FOURTH QUARTER			
T-END 204 Oral Communication	3	0	3
T-MAT 103 Technical Mathematics	5	0	5
PHY 201 Physics	3	3	4
T-ELN 101 Electronic Instruments & Measurements	1	3	2
T-ELN 205 Electronic Circuits	5	3	6
	<u>17</u>	<u>9</u>	<u>20</u>

FIFTH 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	3	0	3
	<u>18</u>	<u>9</u>	<u>21</u>
SIXTH 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	3	0	3
	<u>13</u>	<u>10</u>	<u>17</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.	
FIRST QUARTER			
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	3
EDU 101 Educational Orientation	<u>1</u>	<u>0</u>	<u>1</u>
	15	7	18
SECOND QUARTER			
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
THIRD QUARTER			
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
T-PSY 112 Personality Development	<u>3</u>	<u>0</u>	<u>3</u>
	16	7	19
FOURTH QUARTER			
T-BUS 119 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
Elective	<u>9</u>	<u>0</u>	<u>9</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
T-ECO 102 Economics or 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

THIRD 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
T-BUS 116 Business Law	3	0	3
T-PSY 112 Personality Development	<u>3</u>	<u>0</u>	<u>3</u>
	16	5	18

FOURTH 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 229 Taxes	3	2	4
T-BUS 199 Accounting	3	1	3
T-BUS 232 Sales Development	<u>3</u>	<u>0</u>	<u>3</u>
	16	8	19

FIFTH 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

SIXTH QUARTER			
T-BUS 271 Office Management	3	0	3
T-EDP 104 Introduction to Data Processing	3	2	4
Electives	<u>11</u>	<u>0</u>	<u>11</u>
	17	2	18

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.

AGRICULTURE-BUSINESS TECHNOLOGY.

- T-BUS 104--Introduction to Agriculture Economics3-3
An introduction to economics, the functions of the economic system, and agriculture's role in the economy. A review of the functions of the manager, and an introduction to the principles he uses in making decisions to adjust to changing conditions. Analysis of the main sources of change which affect agricultural firms.
- T-AGR 125--Animal Science5-6
An introductory animal science course covering the fundamental principles of livestock production. A study of the animal body and the basic principles of reproduction, genetics, growth, fattening, and digestion along with the selection, feeding improvement, processing, and marketing of livestock.
- T-AGR 170--Plant Science5-6
An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of the seed bearing plants with application to certain commercially important plants in North Carolina. Prerequisite: T-CHM 101.
- T-AGR 204--Farm Business Management3-3
A study of basic concepts and principles of oral communication to enable the students to communicate with others. 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. Prerequisite: T-AGR 104.

- T-AGR 205--Agriculture Marketing5-6
 An analysis of the functions of marketing in the economy and a survey of the problems marketing faces. A review of the market structure and the relationship of local, terminal, wholesale, retail, and foreign markets. Problems in the operations of marketing firms including buying and selling, processing, standardization and grading, risk taking and storage financing, efficiency, and cooperation. Discussion of procedures of marketing such commodities as grain, cotton, livestock, and tobacco. Prerequisite: T-AGR 104.
- T-AGR 218--Agriculture Mechanization5-6
 A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed grinders and mixers, storage facilities, materials handling systems, and other labor-saving devices. Prerequisite: T-AGR 204.
- T-AGR 288--Livestock Diseases & Parasites3-4
 A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis upon the cause, damage, symptoms, prevention, and treatment of parasites and disease; management factors relating to disease and parasite prevention and control. Prerequisite: T-AGR 125.
- T-AGR 236--Agriculture Soil Science & Fertilization TBA-6
 A course dealing with the basic principles of efficient classification, evaluation, and management of soils; care, cultivation and fertilization of the soil, and conservation of soil fertility. Prerequisite: T-CHM 101.

BUSINESS.

- T-BUS 101--Introduction to Business3
 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--Typewriting3
 Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation and manuscripts.
- T-BUS 103--Typewriting3
 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--Typewriting3
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--Shorthand4
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--Shorthand4
Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: T-BUS 106 or the equivalent.
- T-BUS 108--Shorthand4
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 Machines3
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--Filing3
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 Law3
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 Law3
Includes the study of laws pertaining to bailments, sales, riskbearing, partnership-corporation, mortgages, and property rights.

- T-BUS 117--Business Law3
 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--Accounting6
 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--Accounting6
 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 Finance3
 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 183--Terminology and Vocabulary3
 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--Accounting3
 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 Typewriting3
 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 Transcription4
 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 Transcription4
 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 Transcription4
 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 Machines3
 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 Transcription2
 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 Procedures4
 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 Application2
 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
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 229--Taxes	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
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
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
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
The development of wholesaling; present day trends in the United States. As study of the function of wholesaling.	
T-BUS 239--Marketing . . . . .	.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 . . . . .	.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.	

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- T-BUS 245--Retailing3
 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
 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 Records3
 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 Keeping3
 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 Management3
 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 Supervision3
 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.

CHEMISTRY.1

- T-CHM 101--Chemistry5
 Study of the physical and chemical properties of substances, chemical changes; elements, compounds, gases, chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents solution, and emulsions. In addition, study of carbohydrates; electro-

chemistry, electrolytes, and electrolysis in their application of chemistry to industry.
Prerequisite: T-MAT 110.

DATA PROCESSING.

T-EDP 104--Introduction to Data Processing Systems4
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.

DRAFTING.

T-DFT 101--Technical Drafting2
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 102--Electronic Drafting3
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--Economics3
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--Economics3
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.

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- T-ECO 108--Consumer Economics3
 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-ELEC 100--Introduction of Electricity3-3-4
 A survey course covering elementary principles of electricity including basic electric units, Ohm's Law, power laws, magnetics, inductance, capacitance and materials used in components. Laboratory experiences will provide manual skill development as well as basic measuring techniques. Slide rule experience will develop a skill with this valuable instrument.

- T-ELC 101--D. C. Circuit Analysis5-3-6
 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-ELEC 102--A. C. Circuit Analysis5-3-6
 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 Instruments and Measurements2
 A study of basic electronic instruments, their theory of operation, function, tolerances, and calibration. Both service and laboratory instruments will be studied. Laboratory experience will provide application of each type instrument studied. Prerequisite: T-ELEC 102.

- T-ELN 105--Control Devices6
 A study in depth of the electrical characteristics of vacuum tubes and transistors. Basic parameters and applications of each type device to the three configurations of a three terminal two port system will be included. Prerequisite: T-ELEC 102.

- T-ELN 205--Application of Vacuum Tubes and Transistors7
 Practical applications of vacuum tubes and transistors to amplifiers, radio frequency amplifiers,

detectors, modulators, and oscillators. Prerequisite: T-ELN 105.

- T-ELN 210--Semiconductor Circuit Analysis6
A study in some depth of the analysis and design of transistor circuits. Network theorems and equivalent circuits are used extensively in evaluating total circuit performance. Device peculiarities and limitations pertinent to reliable operations are considered. H. Y. Z. and T. parameters are employed as well as signal-flow graphs. Prerequisite: T-ELN 105.
- T-ELN 214--Wave Shaping and Pulse Circuits3
Broadband amplifiers, magnetic amplifiers, multivibrators, wave shaping techniques, chopper amplifiers, clipper and clamper circuits. Prerequisites: T-ELN 105 and T-MAT 103.
- T-ELN 215--Wave Shaping and Pulse Circuits3
Pulse techniques, diode switches, gates, step-counters, restorers and other specific circuits which function as switches. Prerequisite: T-ELN 214
- T-ELN 220--Electronic Systems7
A block diagram course investigating numerous electronic systems. Modules or block of various circuits already studied are arranged in various manners to produce complex electronic systems. Systems will be explained and reduced to functions and then to block diagrams. AM, FM and Single Sideband transmitters and receivers, multiplexing, TV transmitters and receivers, pulse-modulated systems, computers, telemetry, navigational systems, sonar and radar will be considered. Corequisite: T-ELN 215.
- T-ELN 225--Transmission and Propagation3
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 Systems7
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.

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- T-ELN 230--Television Systems7
 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 Instrumentation7
 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 Computers3
 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 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
 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--Composition3
 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 Writing3

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 Communication3

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 Communication3

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 Rule2-0-1

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 Mathematics5

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 Mathematics5

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 Mathematics5
 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 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 201--Technical Mathematics5
 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 Electronics5
 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 Mechanisms4
 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.

PHYSICS.

- T-PHY 101--Physics: Properties of Matter4
 A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course.

T-PHY 102--Physics: Work, Energy, Power4
Major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas. Prerequisite: T-MAT 101, T-PHY 101.

T-PHY 104--Physics: Light and Sound4
A survey of the concepts involving wave motion leads to a study of sound, its generation, transmission and detection. The principles of wave motion also serve as an introduction to a study of light, illumination and the principles involved in optical instruments. Application is stressed throughout. Prerequisite: T-MAT 101, T-PHY 101.

POLITICAL SCIENCE.

T-POL 201--United States Government3
A study of government with emphasis on basic concepts, structure, powers, procedures and problems.

PSYCHOLOGY.

T-PSY 112--Personality Development3
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 206--Applied Psychology3
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.

SOCIAL SCIENCE.

T-SSC 201--Social Science3
An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology.

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T-SSC 202--Social Science	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
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.	

Vocational Division

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.

Diploma and Certificate Offered

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

Automotive Body Repair	Masonry
Automotive Power Mechanics	Mechanical Drafting
Electrical Installation	Welding

A certificate is awarded at the completion of the following program:
Nurse's Assistant

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	Hours per Class	Week Lab.	Quarter Hours Credit
FIRST QUARTER				
AUT 1111	Auto Body Repair	5	12	9
MAT 1101	Fundamentals of Mathematics	5	0	5
PHY 1101	Applied Science	3	2	4
WLD 1101	Basic Gas Welding.	0	3	1
		<u>13</u>	<u>17</u>	<u>19</u>
SECOND 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>
THIRD QUARTER				
AUT 1113	Metal Finishing and Painting	3	13	7
PSY 1101	Human Relations	3	0	3
AUT 1115	Trim, Glass & Radiator Repair	2	9	5
		<u>8</u>	<u>22</u>	<u>15</u>

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FOURTH QUARTER

AUT 114	Body Shop Applications	3	24	10
BUS 1103	Small Business Operations	3	0	3
		<u>6</u>	<u>24</u>	<u>13</u>

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.

	Course Title	Hours per Class	Week Lab.	Quarter Hours Credit
FIRST QUARTER				
PME 1101	Internal Combusion Engines	5	15	8
MAT 1101	Fundamentals of Mathematics	5	0	5
PHY 1101	Applied Science	3	2	4
		<u>13</u>	<u>17</u>	<u>17</u>
SECOND QUARTER				
PME 1102	Engne Electrical and Fuel Systems	10	15	19
ENG 1102	Communication Skills	3	0	3
ENG 1101	Reading Improvement	2	0	2
		<u>15</u>	<u>15</u>	<u>19</u>
THIRD QUARTER				
AUT 1123	Automotive Chassis and Suspensions Systems	3	10	6
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
		<u>11</u>	<u>19</u>	<u>17</u>
FOURTH QUARTER				
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>

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.

	Course Title	Hours per Class	Week Lab.	Quarter Hours Credit
FIRST QUARTER				
ELC 1112	Direct and Alternating Current	10	10	9
MAT 1115	Electrical Math	5	0	5
PHY 1101	Applied Science	3	2	4
		<u>18</u>	<u>12</u>	<u>18</u>
SECOND QUARTER				
ENG 1101	Reading Improvement	2	0	2
ELC 1113	Alternating Current and Direct Current Machines and Controls	10	7	9
DFT 1110	Blueprint Reading: Building Trades	0	3	1
ENG 1102	Communication Skills	3	0	3
MAT 1116	Electrical Math	5	0	5
		<u>20</u>	<u>10</u>	<u>20</u>

THIRD QUARTER

ELC 1124	Residential Wiring	5	9	8
ELN 1118	Industrial Electronics	5	5	5
PSY 1101	Human Relations	3	0	3
DFT 1113	Blueprint Reading: Electrical	<u>0</u>	<u>3</u>	<u>1</u>
		13	17	17

FOURTH QUARTER

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

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 masosns 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>
MECHANICAL DRAFTING.				

Purpose of Curriculum

This curriculum is designed to prepare students to enter the field of drafting. The first three quarters of study include courses basic to all fields of drafting. The fourth quarter involves specialization and related courses that prepare one to enter any one of several drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understanding and confidence in his relations with other persons. The Mechanical Drafting curriculum is a one year program.

Job Description

Draftsmen prepare clear, complete, and accurate working plans and detail drawings from rough or detailed sketches or notes according to the specified dimensions. They make final sketches of the proposed

drawing, checking dimensions of parts, materials to be used, the relation of the various parts to the whole structure. They make any adjustments or changes necessary or desired. Draftsmen ink in all lines and letters on pencil drawings as required. They exercise manual skill in the manipulation of the triangle, T-Square, and other drafting tools. They utilize their knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

	Course Title	Hours per Class	Week Lab.	Quarter Hours Credit
FIRST QUARTER				
	DFT 1121	Drafting 5	17	9
	MAT 1103	Geometry 3	0	3
	PHY 1101	Applied Science 3	2	4
		<u>11</u>	<u>19</u>	<u>16</u>
SECOND QUARTER				
	DFT 1122	Drafting 5	10	7
	DFT 1125	Descriptive Geometry 2	3	3
	MAT 1102	Algebra 5	0	5
	ENG 1101	Reading Improvement 2	0	2
	ENG 1102	Communication Skills 3	0	3
		<u>17</u>	<u>13</u>	<u>20</u>
THIRD QUARTER				
	DFT 1131	Mechanical Drafting 3	11	7
	MAT 1104	Trigonometry 3	0	3
	PSY 1101	Human Relations 3	0	3
	MEC 1113	Shop Processes 2	3	3
	MEC 1115	Treatment of Ferrous Metals 2	3	3
		<u>13</u>	<u>17</u>	<u>19</u>
FOURTH QUARTER				
	DFT 1132	Mechanical Drafting 3	14	7
	MEC 1114	Shop Processes 2	3	3
	MEC 1116	Treatment of Non-Ferrous Metals 2	3	3
	BUS 1105	Industrial Organizations 3	0	3
		<u>10</u>	<u>20</u>	<u>16</u>

Western Michigan Community College Library

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.

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.

		Hours per Class	Week Lab.	Quarter Hours Credit
FIRST QUARTER				
WLD 1120	Oxyacetylene Welding and Welding	5	12	9
MAT 1101	Fundamentals of Mathematics	5	0	5
DFT 1104	Blueprint Reading: Mechanical	3	1	
PHY 1101	Applied Science	3	2	4
		<u>13</u>	<u>17</u>	<u>19</u>

SECOND 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>

THIRD QUARTER

WLD 1124	Pipe Welding	3	13	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
PSY 1101	Human Relations	3	0	3
		<u>8</u>	<u>22</u>	<u>15</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 Class	Week Lab.	Quarter 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	2 3
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.		
AUT 1111--Auto Body Repair . . . . .	.5	12 9
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.		
AUT 1112--Auto Body Repair . . . . .	.5	17 10
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. Prerequisites: AUT 1111, WLD 1101, PHY 1101, MAT 1101.		
AUT 1113--Metal Finishing and Painting . . . . .	.3	13 7
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. Prerequisites: AUT 1112, WLD 1105		
AUT 1114--Body Shop Applications . . . . .	.3	24 10
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		

AUT 1115--Trim, Glass and Radiator Repair	2	9	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. Prerequisite: SHY 1101			
AUT 1123--Automotive Chassis and Suspension Systems	3	10	6
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: PHY 1101, AUT 1123			
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			

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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			
DRAFTING.			
DFT 11-4--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, jibs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.			
DFT 1121--Drafting	5	17	9
An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, singlestroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views are emphasized. Dimensioning and note practices are studied with reference to the American Standards Association practices. Methods of reproducing drawing are included at the appropriate time.			
DFT 1122--Drafting	5	10	7
The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions are studied, and both detail and assembly sections will be drawn. Intersections and developments are studied by relating the drawing to the sheet metal trades. Models of the assigned drawings are made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn. Methods of drawing and projecting axonometric, oblique, and perspective drawings are studied with emphasis on the practical applications of pictorial drawings. Various methods of shading are introduced, and dimensioning and sectioning of oblique and axonometric pictorials are done. Prerequisite: DFT 1121			
DFT 1125--Descriptive Geometry	2	3	3
Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution is accompanied by the analytical solution. Prerequisite: DFT 1121			
DFT 1131--Mechanical Drafting	3	11	7
An Introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners; keys, rivets, springs, and welding. Symbols are studied and drawings are made involving these items. Principles of design are introduced with study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions are studied. Drawings are made involving these mechanisms. Prerequisite: DFT 1122			

DFT 1132--Mechanical Drafting	3	14	7
Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings are made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool jig, fixture or simple machine and learn principles of design, handbook and manual usage. Prerequisite: DFT 1131			

ELECTRICITY.

ELC 1112--Direct and Alternating Current	10	10	9
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	7	9
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	9	8
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. Prerequisites: ELC 1113, DFT 1110			
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: ELN 1118, ELC 1124			

ELECTRONICS.

ELN 1118--Industrial Electronics	5	5
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
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			

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 College Library

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	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 1102--Algebra	5	0	5
Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratios and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by addition and subtraction, substitution, graphing; exponents, logarithms, tables and interpolation. Prerequisite: MAT 1101			
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 Mathematics3 0 3
 Practical problems dealing with volumes, weights, ratios; mensuration, and basic estimating practices for building materials. Prerequisite: MAT 1101

MAT 1115--Electrical Math5 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 116--Electrical Math5 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 113--Shop Processes2 3 3
 Study of practices used in metal working shops; introduction to how materials can be utilized, and to the processes of shaping, forming and fabricating metals. Demonstration of the metal working lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear cutting machines and finishing machines. A study of the capabilities of these machines. Prerequisite: None

MEC 1114--Shop Processes2 3 3
 Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes are demonstrated and discussed. Mass-production methods are studied in relationship to precision dimensional control. Prerequisite: MEC 1113

MEC 1115--Treatment of Ferrous Metals2 3 3
 Investigates the properties of ferrous metals and tests to determine their uses. Instructions will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous

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metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cast iron will be topics for study. Prerequisite: None

MEC 116--Treatment of Non-Ferrous Metals	2	3	3
Continuation of the study of physical metallurgy. The nonferrous metals; bearing metals (brass, bronze, lead) light metals (aluminum and magnesium) and copper and its alloys are studied. Powder metallurgy, titanium, zirconium, indium and vanadium are included in this course. Prerequisite: MEC 1115			

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.			
PHY 1102--Applied Science	3	2	4
The second in a series of two courses of applied physical principles. Topics include waves, light and color, atomic structure, descriptive chemistry including pigmentation, vehicles or bases and additives Prerequisite: PHY 1101			

POWER MECHANICS.

PME 1101--Internal Combustion Engine	5	15	8
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.

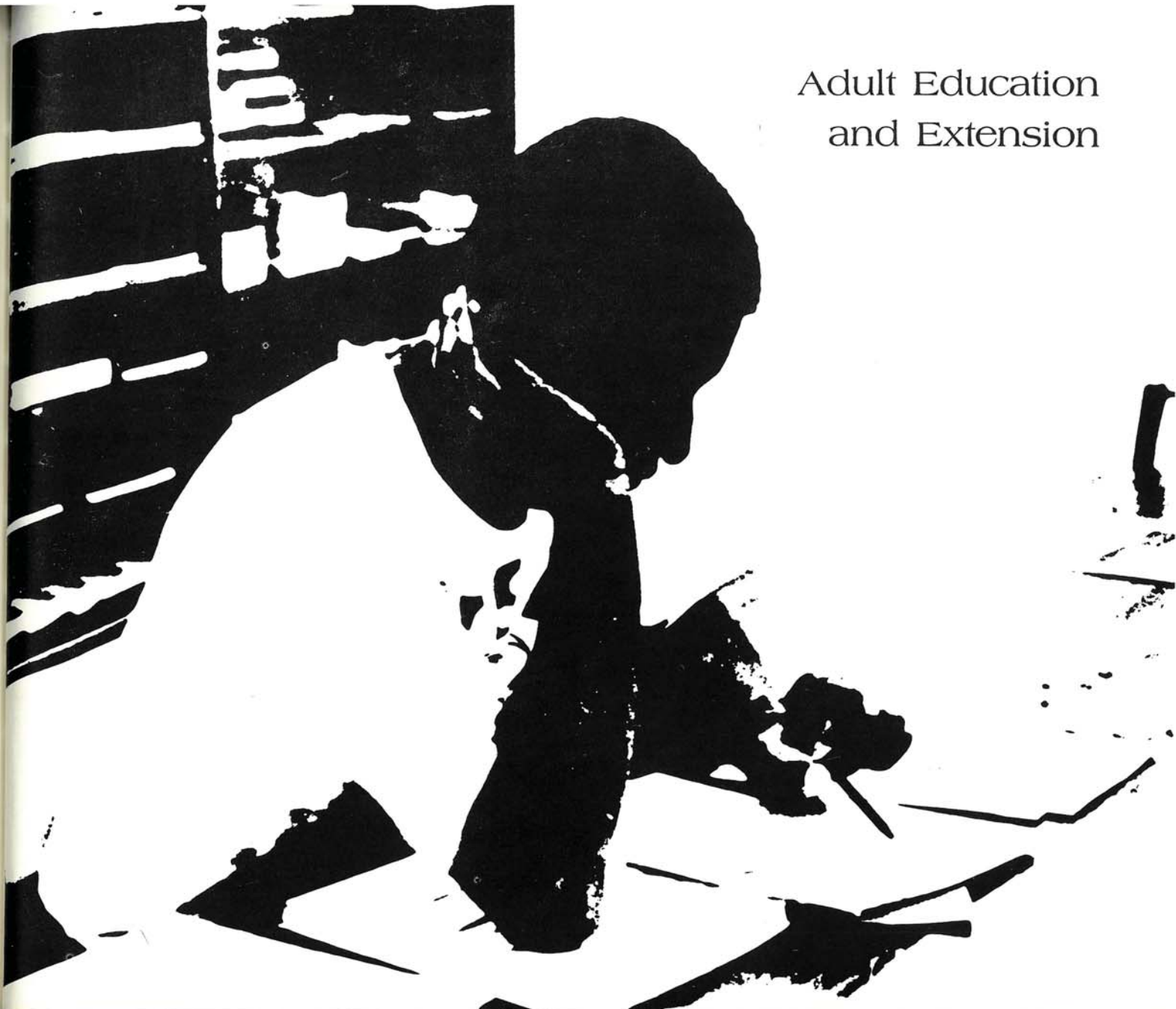
WLD 1101--Basic Gas Welding . . . . .	.0	3	1
Welding demonstrations by the instructor and practice by the students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice is given for surface welding ; bronze welding, silver-soldering, and flamecutting 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	12	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			

College Library

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
<p>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</p>			
WLD 1123--Inert Gas Welding	1	3	2
<p>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, sheilding gases, filler rods, process variations and applications, manual and automatic welding. Prerequisites: WLD 1120, WLD 1121</p>			
WLD 1124--Pipe Welding	3	13	7
<p>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.</p>			
WLD 1125--Certification Practices	3	6	5
<p>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</p>			

Adult Education
and Extension



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 to utilize programmed materials. There are no lectures, no scheduled classes. Each student is assigned to his subject area on the basis of his ability and uses materials provided in the Lab for individual instruction.

Learning Laboratory

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, to develop one's ability to function in modern society. 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. A partial list of programs with accompanying subjects follows:

1. High School Diploma Program
 - a. Requirements for entrance into the program.
 - 1) a minimum reading level of 8th grade,
 - 2) a resident of Polk or Rutherford County, and
 - 3) 21 years of age or obtain special permission if between the age of 18 - 21.

- b. Requirements for graduation
 - 1) English 4 units
 - 2) Math 1 unit
 - 3) Social Studies 2 units
 - 4) Science 2 units

- 2. North Carolina High School Equivalency Certificate.
 - a. Lab preparation for the GED Test.
 - b. Passing score on GED Test. (The Guidance Office administers the test by appointment only.)
- 3. Language Arts --- the language arts program consists of programmed texts and reading laboratories that range from the basic levels to the 14th year level. A partial listing of available courses are:
 - a. Reading instruction (grades 6-14)
 - b. Improving Your Writing
 - c. The Dictionary
 - d. Spelling
 - e. English Syntax
 - f. English Grammar
 - g. English (2200, 2600, 3200)
- 4. Mathematics -- all courses in the area of math are fully programmed for individual instruction. Courses available include:
 - a. Elementary Math
 - b. General Math
 - c. Algebra I
 - d. Algebra II
 - e. Plane Geometry
 - f. Solid Geometry
 - g. Plane Trigonometry
 - h. Analytic Trigonometry
 - i. Calculus
 - j. Modern Math
 - k. Modern Algebra

Learning Laboratory

Community College Library

Learning Laboratory

5. Foreign Languages -- these programs utilize the self-instructional potential of modern language-laboratory type tape recorders which embody the latest and most effective language learning principles. Courses available are:
 - a. French
 - b. German
 - c. Spanish

6. Science -- the programmed textbooks in this area are designed for individual instruction in the mastery of the basic concepts of science and instruction in the more advanced courses of chemistry and physics. Some of the courses available are:
 - a. General Science
 - b. Biology
 - c. Chemistry
 - d. Physics

7. Supplemental Business Courses -- the business courses, fully programmed and in many instances enriched with audio-visual supplements, are designed primarily for students who wish to improve their office skills for job advancement. However, the courses are basic enough for beginning students who wish to become proficient in any of the subjects listed below:

a. Letter Writing	f. Business Math
b. Written Communications	g. Bookkeeping
c. Public Relations	h. Filing
d. Secretarial	i. Stenocript
e. Accounting	j. Gregg Shorthand
	k. Data Processing
	1. Payroll Processing
	2. Source Records

8. General Interest -- there are many courses available in this area for the student who wants to spend his leisure time studying subjects for pleasure or profit. A partial listing follows:

- a. Book of Romans
- b. Book of Ephesians
- c. Interior Decoration
- d. Contract Bridge for Beginners
- e. Introduction to the Game of Chess
- f. Improving Your Chess Skills
- g. Practical Mathematics
- h. The Arithmetic of Computers
- i. The Slide Rule
- j. The Log Log Scales

HOURS

The hours of the Lab are consistent with Library hours.

A branch Lab in Tryon offers many of the same -- and some additional courses and programs -- that are available in the Spindale Lab. Any adult may attend either the Tryon Learning Center (telephone 859-6744) or the Spindale Lab (telephone 631-3639).

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

Learning Laboratory

Extension

Extension

CAR 3469 Carpentry
CHM 3470 Breathalyzer
GIV 3473 Estimating Construction Costs
CIV 3474 Plane Surveying
DFT 3479 Blueprint Reading
DFT 3480 Drafting
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 Procedures

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

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Faculty

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- Austin, William W. Welding
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- Whiteside, Joseph A.Coordinator, Learning Laboratory
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NOTES

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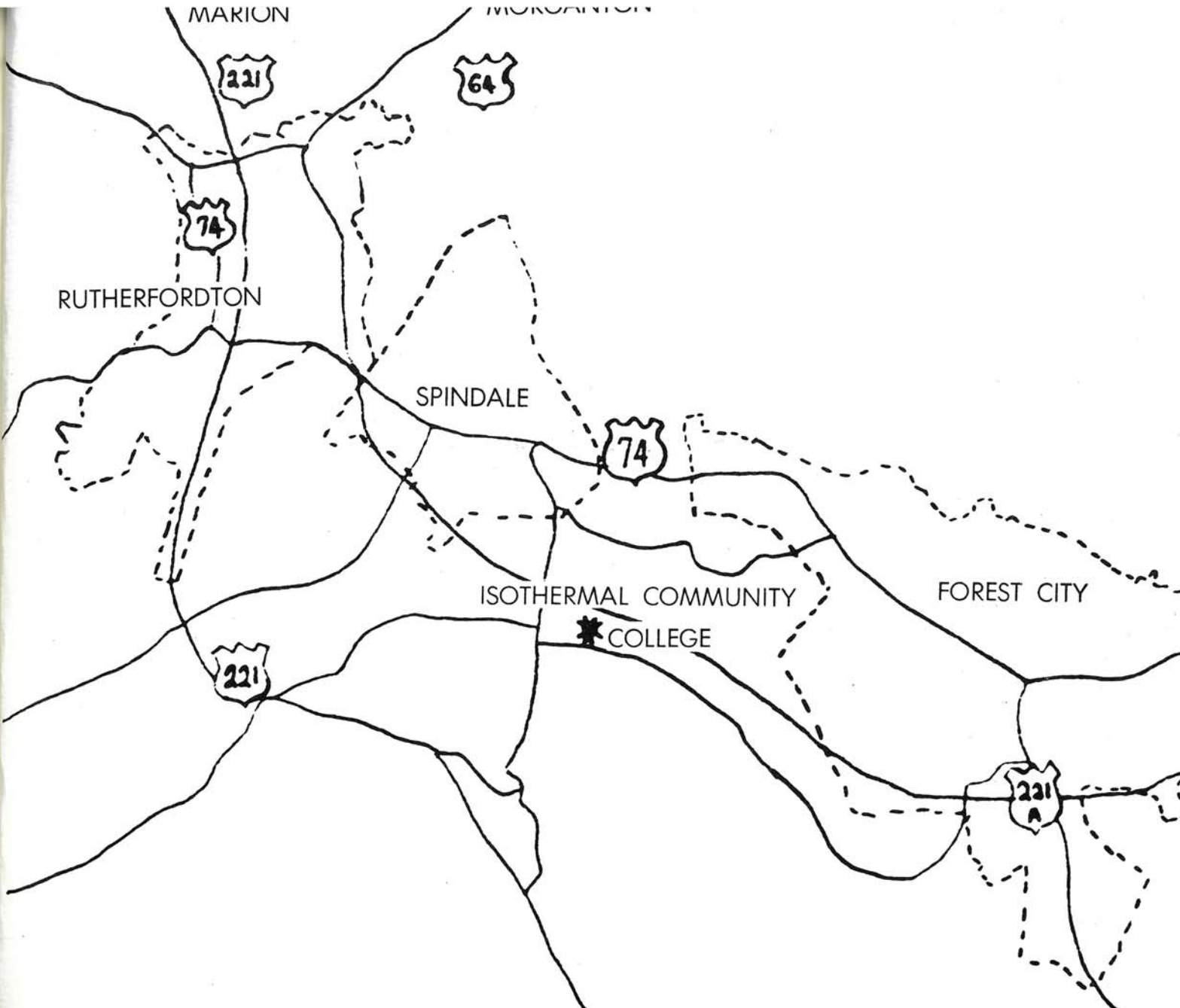


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