COLLEGE
TECH
STATE
CATALOG
1997-1998
### Fall Quarter, 1997

- Pre-registration Begins: **August 4**
- Classes Begin: **September 2**
- Holiday, Veterans Day: **November 11**
- Classes Resume: **November 12**
- Last Day of Classes: **November 17**
- Final Exams: **November 18-20**

### Winter Quarter 1997-98

- Pre-registration Begins: **November 3**
- Classes Begin: **December 2**
- Holidays, Christmas & New Year: **December 22**
- Classes Resume: **January 5**
- Holiday, King/Lee: **January 19**
- Last Day of Classes: **February 23**
- Final Exams: **February 24-26**

### Spring Quarter 1998

- Pre-registration Begins: **February 2**
- Classes Begin: **March 3**
- Holidays, Spring Break: **March 30 - April 3**
- Classes Resume: **April 6**
- Last Day of Classes: **May 18**
- Final Exams: **May 1-21**

### Summer Quarter 1998

- Pre-registration Begins: **May 4**
- Classes Begin: **June 10**
- Holiday, Independence Day: **July 3**
- Classes Resume: **July 6**
- Last Day of Classes: **August 11**
- Final Exams: **August 12-14**

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The General Catalog of Bessemer State Technical College is published annually by the college, U.S. Highway 11 South West, Interstate 20/59, Bessemer, Alabama. Bessemer State Technical College reserves the right to revise contents of this catalog periodically without giving prior notice. The college also reserves the right to make adjustments in the quarterly schedule and to cancel classes for which there is not sufficient enrollment.
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1-800-235-5368

September, 1997 Vol. No. 9
GENERAL INFORMATION

HISTORY

During the 1963 session of the Alabama Legislature, a tax was approved that created a comprehensive system of technical colleges and institutes. Recognizing the urgent need to provide technical and skill training for persons in Jefferson County, Bessemer business and industrial leaders, and city officials proposed a resolution to the State Department of Education requesting that Bessemer be selected as the site for one of the technical institutes. The resolution was approved in the fall of 1963.

After a 34 acre site on U.S. Highway 11 South was selected, the city of Bessemer purchased the property and deeded it to the Alabama Trade School and Junior College Authority. Construction of the new technical school began shortly thereafter.

During the first stages of growth, the college, known then as the State Vocational-Technical School, accepted its first 47 day and 30 night students on April 4, 1966, in six programs of study. Although its first official name was John R. Pelham Technical-Trade School, on August 16, 1966, the name was changed by legislative action to Bessemer State Technical Institute. Bessemer State Tech was accredited by the Southern Association of Colleges and Schools in 1972 and in August, 1973, achieved college status. Accreditation enabled Bessemer State Technical College to award an Associate in Applied Technology degree in several program areas.

In order to meet the demands created by rapidly increasing student body, the City of Bessemer acquired and donated an additional 23 acres of property in 1973 to allow for future expansion of the College. Construction on the new property began in 1973 and has continued through the following decades with construction of the Jess Lanier Building, the Millsap Industrial Training Center, and the Ethel H. Hall Automotive Technology Center.

These additions have enabled the college to expand its services to business and industry by offering apprentice training, upgrade training, and multi-craft training. For example, the college began developing a program of cooperative education in the fall quarter 1981. It expanded this concept in 1984 with the implementation of the General Motors-sponsored Automotive Service Educational Program (ASEP), in 1990 with the Ford Motor Company Automotive Student Service Educational Training Program (ASSET), and in 1991 with the Toyota Technical Education Network Program (T-TEN). In addition to this training, the college offers 22 programs of study in technical, health, and business careers.

Today, Bessemer State Technical College is Alabama's largest technical college.

PHILOSOPHY

Bessemer State Technical College was created by legislative act for the purpose of providing skill and technical training for the citizens of Alabama. The college has adopted a philosophy that meets this obligation.

Bessemer State Technical College has the firm belief that this institution has an obligation to provide education that will train an individual for meaningful employment, leadership, and citizenship. The college is committed to the development of the individual's ability to think clearly and critically, to communicate effectively, and to use various disciplines to solve the problems which face a productive worker. The college operates according to the principle that theory and knowledge gained in the classroom should be reinforced by practical experience in shops and laboratories and that safe work practices will be strongly emphasized. The college believes that the necessary skills and knowledge can be acquired best under the instruction and supervision of an instructor who is proficient in his/her field.

There are three primary groups served by the college.
1. Students who attend on a full-time basis;
2. Students who attend on a part-time basis;
3. Students who attend special industry courses offered through both the regular programs and short-term, industrial programs.

In all cases, the emphasis is on quality instructional programs and support services.

Therefore, the institution seeks to offer training that is designed to meet the needs of students with varied educational backgrounds and wide ranges of interests, aptitudes, and abilities; to furnish a disciplined environment conducive to learning; to provide proficient instructors who offer leadership, guidance, and inspiration; and to develop a curricula to meet the needs of business, industry, and the community.

MISSION STATEMENT

To provide technical and academic preparation and support services for individuals who seek to develop the knowledge, skills, and attitudes necessary for successful employment and future education, and to provide training, testing, and consulting services for business and industry.

VISION STATEMENT

Bessemer State Technical College intends to meet the challenges that individuals and businesses face in a competitive, global economy through corporate partnerships and technical education.

ORGANIZATIONAL GOALS

1. Instruction - To develop and maintain educational programs that prepare students for employment, job advancement, occupational change, further educational opportunities and personal growth.
2. Finance - To utilize available financial resources effectively in order to provide educational opportunities to students.
3. Student Services - To provide Student Services including pre-enrollment, enrollment, and post-enrollment activities that enable students to achieve their career goals.
4. Public Information - To inform the general public of the educational opportunities provided through Bessemer State Technical College.
5. Organizational Management - To maintain a management system that achieves institutional goals and objectives.
6. Economic Development - To enhance the college's service to the community through advisory councils, networking, and the Business and Industry Training Division of Bessemer State Technical College.
7. Facilities/Environment - To provide buildings, grounds, and equipment to support the programs and services of the college.

THE CAMPUS

Bessemer State Technical College occupies approximately 50 acres of rolling, wooded property in southern Jefferson County. The main campus is composed of 34 acres and is connected with the North campus by a drive paralleling the interstate system.

CAMPUS BUILDINGS AND FACILITIES

The campus of Bessemer State Technical College is comprised of eight buildings. The buildings and the functions they contain are as follows:

Building A is located at the main entrance to the campus and provides facilities for administrative offices, the college's bookstore, and cafeteria. Instructional programs in this building are Licensed Practical Nursing, Nursing Assistant, Emergency Medical Technology, Dental Assisting, Computer Science, Data Entry, Air Conditioning and Refrigeration, Retailing,

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and Merchandising, Industrial Electronics, Student Support Services, Office Administration, Horticulture, Accounting, general education courses, and the Library/Learning Resource Center.

**Building B** is a two-story structure located adjacent to Building A. Programs occupying the building are Graphic and Printing Communication, Air Conditioning and Refrigeration, Welding, Drafting, Commercial Art, and automotive training.

**Building C** is a single-story building providing facilities for automotive training.

**Building D** is located on the southern most area of the main campus and houses the Diesel Mechanics program.

**Ethel H. Hall Automotive Technology Center** is a facility housing five General Motors classroom-labs and a conference auditorium for satellite telecasts. The President's Office and the Dean of Instruction and Associate Dean of Transportation Technology are also located in this building.

**Jess Lanier Building** provides facilities for specialized automotive training programs.

**Millsap Industrial Training Center** is designed to provide classroom and laboratory instruction for apprenticeship, upgrade, and multi-craft training for industry. The Office of the Assistant to the Dean of Instruction (Director of Community Relations), MIRROR Program, Industrial Training Director's Office, and the State Vocational Rehabilitation Office are located in this building.

**North Campus** is composed of a cluster of buildings housing Building Construction and Horticulture greenhouses/labs.

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**BUSINESS AND INDUSTRIAL TRAINING**

For over twenty-one years, Bessemer State Technical College has been actively involved in specialized/custom training courses, competency testing, and consulting for both business and industry. All three of these services have been offered with great success to companies in the Birmingham area, the State of Alabama, and the southeastern United States.

The College has the capability through its Business and Industrial Training Division to develop a unique training program or testing program for any company and to administer the program at the company's facility or at the college. The services offered include the following:

**A Quality Product** — Bessemer State Technical College is proud of its educational programs which span the occupational spectrum. Training begins with entry level skills, moves into specialized technologies, and includes retraining which provides for individual advancement.

**Start-Up Training** — The college offers start-up training which is implemented before or immediately after the employee is hired. The program assures quality training standards which will provide for a productive employee without additional on-the-job training or a time consuming break-in period.

**Program Flexibility** — On-site training is just one aspect that has earned Bessemer State Technical College a reputation of flexibility in meeting the needs of business and industry in Alabama. Scheduling, location and instructor utilization are all tailored to specific needs. One-time sessions, ongoing instruction, or around-the-clock training can be provided by the college.

**Enrichment Programs** — Bessemer State Technical College offers programs to enrich employee skills in traditional or non-traditional areas.

Training in CPR, first aid, management, technical areas, word processing, etc., are just a few of the topics of interest and benefits available to both the employee and the employer.

**Saving Dollars** — One of the best characteristics of Bessemer State Technical College's program is its reasonable cost. Our College is nationally recognized for its long-standing commitment to quality and low-cost business and industry training programs. All programs are economically designed.

For More Information...

The Business and Industrial Training Division at Bessemer State Technical College welcomes the opportunity to assist your company with all its training, testing, and consulting needs. Please feel free to contact the Business and Industrial Training office at (205) 428-6391, ext. 367.
ADMISSIONS

ADMISSION REQUIREMENTS

ADMISSION OF FIRST-TIME COLLEGE STUDENTS
Applicants who have not previously attended any regionally accredited postsecondary institution will be designated first-time college students or native students.

Admission to Course Creditable Toward an Associate Degree
To be eligible for admission to a course creditable toward an associate degree, a first-time college student must meet one of the following criteria:

1. Hold a diploma issued by a regionally and/or state accredited high school.
2. Have attended a nonaccredited high school and can present a diploma indicating successful completion of course of study on the secondary level based on the minimum Carnegie units required by the State Education Agency at the time of award and a minimum ACT score of 16 or the equivalent score on the SAT.
3. Applicants who cannot comply with either of the above conditions may submit a Certificate of High School Equivalent (GED Certificate) issued by Alabama or other state departments of education.

Students who meet one of the above criteria shall be classified as "degree-eligible" students.

The college may establish additional admission requirements when student enrollment must be limited or to assure ability-to-benefit.

Admission to a Course Not Creditable Toward an Associate Degree
Applicants to courses not creditable toward an associate degree and programs comprised exclusively of courses not creditable to an associate degree may be admitted provided they meet the above standards or provided they are at least 16 years of age and have not been enrolled in secondary education for at least one calendar year (or upon the recommendation of the local superintendent) and have specifically documented ability-to-benefit.

These students shall be classified as "non-degree-eligible" students and shall not be allowed to enroll in a course creditable toward an associate degree unless appropriate conditions are met.

The college may establish higher or additional admission requirements for specific programs or services when student enrollment must be limited or to assure ability-to-benefit.

Unconditional Admission of First-time College Students
For unconditional admission, applicants must have on file at the college a completed application for admission and either an official transcript from the high school attended or an official GED Certificate. All male students between the ages of 18 and 26 must show proof of registration with the U.S. Selective Service System in accordance with Act 91-584.

For admission to a course not creditable toward an associate degree, applicants with less than a high school diploma or GED must also have on file documented ability-to-benefit.

Conditional Admission of First-Time College Students
Applicants who do not have on file an official transcript from the high school attended, or an official GED Certificate, may be granted conditional admission. All male students between the ages of 18 and 26 must show proof of registration with the U.S. Selective Service System.

If all required admissions records have not been received by the college prior to the issuance of first quarter grades, the grades will be reported on the transcript, but the transcript will read CONTINUED ENROLLMENT DENIED PENDING RECEIPT OF ADMISSION RECORDS. This notation will be removed from the transcript only upon receipt of all required admission records.

ADMISSION OF TRANSFER STUDENTS
Applicants who have previously attended another regionally accredited postsecondary institution will be considered transfer students and will be required to furnish official transcripts of all work attempted at all said institutions. The college may also require the transfer of student documents required of first-time college students.

Transfer students who meet requirements for admission to a course creditable toward an associate degree shall be classified as "degree-eligible" students. Transfer students who do not meet these requirements shall be classified as "non-degree-eligible" students.

Applicants who have been suspended from another institution for academic or disciplinary reasons will not be considered for admission except upon appeal to the college admissions committee.

Unconditional Admission of Transfer Students
1. For Unconditional Admission, transfer students must have submitted to the college an application for admission and official transcripts from all regionally accredited postsecondary institutions attended and, as designated by the college, any other documents required for first-time college students.
2. Transfer students who attended another postsecondary institution who seek credit for transfer to that parent institution may be admitted to the college as transient students. The students must submit an application for admission and an official letter from the institution they have attended which certifies that the credits earned at the college will be accepted as a part of the students academic program. Such students are not required to file transcripts of their previously earned credits at other postsecondary institutions.
3. Applicants who have completed a baccalaureate degree will be required to submit only the transcript from the institution granting the baccalaureate degree.

Conditional Admissions of Transfer Students
Transfer students who do not have on file official transcripts from all postsecondary institutions attended and any additional documents required by the college, may be granted Conditional Admission. No transfer student shall be allowed to enroll for a second quarter unless all required admissions records have been received by the college prior to registration for the second quarter.

If all required admissions records have not been received by the college prior to issuance of first quarter grades, the grades will be reported on the transcript, but the transcript will read CONTINUED ENROLLMENT DENIED PENDING RECEIPT OF ADMISSIONS RECORDS. This notation will be removed from the transcript only upon receipt of all required admissions records.

Initial Academic Status of Transfer Students
1. Transfer students whose cumulative grade point average at the transfer institution(s) is 2.0 or above on a 4.0 scale will be admitted on CLEAR academic status.
2. Transfer students whose cumulative grade point average at the transfer institution(s) is less than 2.0 on a 4.0 scale will be admitted only on Academic Probation. The transcript will read ADMITTED ON ACADEMIC PROBATION.
3. Applicants who have been academically suspended from another regionally accredited postsecondary institution may be admitted as transfer students only after following the appeal process established at the college for "native" students who have been academically suspended. If the transfer student is admitted upon appeal, the student will enter the institution on Academic Probation. The transcript will read ADMITTED UPON APPEAL – ACADEMIC PROBATION.

General Principles for Transfer of Credits

1. Courses completed at other regionally accredited postsecondary institutions with a passing grade will be accepted for transfer as potentially creditable toward graduation requirements. For students admitted on academic probation, only courses in which they have earned a course grade of "C" or better will be accepted for transfer.
2. Awarding of transfer credit to fulfill graduation requirements will be based on applicability of the credits to the requirements of the degree sought.
3. Credit may be extended based on a comprehensive evaluation of demonstrated and documented competencies and previous formal training.

ADMISSION OF INTERNATIONAL STUDENTS

International students should have a valid passport and F-1 visa holders are required to be enrolled full-time (25 quarter credit hours) and should progress satisfactorily toward a certificate, diploma, or degree. Bessemer State Technical College admits only students who meet the necessary academic, linguistic, and financial requirements outlined below:

1. The prospective international student must submit a completed and signed Bessemer State Technical College application to the Admissions Office;
2. The prospective international student must submit original (English) translated copies of his/her high school or secondary school transcript(s);
3. A prospective international student must submit original copies of his/her Test of English as a Foreign Language (TOEFL) score(s) to the Admissions Office or designated advisor;
4. A current signed and notarized letter of financial support must be submitted to the college. The student will be responsible for all college related expenses while attending Bessemer State Technical College; and
5. Each student must have adequate accident and health insurance. Documentation of the policy/contract number and expiration date as well as the name, address, and telephone number of the insurance company must be provided.

EARLY ADMISSION FOR ACCELERATED HIGH SCHOOL STUDENTS

A high school student is eligible for early admission if the student meets all of the following criteria:

1. The student has successfully completed the 10th grade.
2. The student provides a certification from the local principal and/or his or her designee certifying that the student has a minimum cumulative "B" average and recommending the student be admitted under this policy;
3. The student may enroll only in postsecondary courses for which high school prerequisites have been completed (For example: A student may not take English Composition until all required high school English courses have been completed.).

Exceptions may be granted by the Chancellor of Postsecondary Education for students documented as gifted and talented according to the standards included in the State Plan of Exceptional Children and Youth. Exceptions apply only to requirements 1 and 3 above.

PROCEDURE FOR ADMISSION

1. Applicant must obtain an application from the Admissions Office, Room A-110. The application must be completed, signed, and submitted to the college as early as possible prior to the planned quarter of enrollment.
2. First-time college applicants must request an official transcript from the high school attended or have an official GED Certificate mailed to the Admissions Office. Transfer students must request colleges or universities previously attended to mail official transcript(s) of academic records directly to the Admissions Office.
3. Applicants must be administered the ACT/ASSET placement instrument according to the State Board Policy. Upon receipt of the application, the Admissions Office schedules applicants to take the ACT/ASSET.
4. If accommodations are needed to take the ACT/ASSET, the applicant should contact the Coordinator of Special Needs at least two weeks in advance of the testing date.
5. Applicants accepted for admission will be notified and provided directions for registration.

ASSESSMENT

Entering students who enroll for more than five credit hours or 10 weekly contact hours per quarter will be administered the ACT/ASSET. Students will be placed at the appropriate developmental level as indicated by the assessment results.

ADVANCED PLACEMENT CREDIT

The college offers students who enter an occupational program, and those who can document previous education or experience in the occupation, an opportunity to pass challenge examinations and receive advanced placement credit from the college. Results of nationally-recognized advanced placement examinations may also be considered for academic credit. A maximum of 30 quarter hours of credit may be awarded for advanced placement. Students desiring to apply for advanced placement should do so by submitting a written request to the Registrar.

ALLIED HEALTH PROGRAMS

Because graduates of the Dental Assisting, Nursing Assistant/Home Health Care Aide, Emergency Medical Technician and Licensed Practical Nursing Programs must pass formal state and/or national licensure/certification examinations upon completion of their respective programs, separate policies and guidelines, higher than the institutional standards, have been established. Each student will be given a copy of the appropriate policies upon registration and admission to the program.

For more information on the School of Practical Nursing, the Emergency Medical Technician Program, or other Allied Health Programs contact the Allied Health Programs Department Chair, 428-6391, ext. 348.

Each Applicant Must:

1. Have a high school diploma or GED Certificate.
2. Complete an application to Bessemer State Technical College.
3. Submit official transcripts from all high schools and/or colleges attended.
4. Provide scores on any entrance test, specifically for the program to which the applicant is applying (see specific program information).
5. Take the ACT/ASSET exam and score appropriately for the specific program.
A process called auditing.

Retention/Progression Criteria:
1. A grade of "C" (75%) is required in all courses for progression.
2. A minimum GPA of 2.0 is required for progression in the health programs.
3. Clinical competencies must be satisfactory in order to receive a passing grade in health program courses. Students who are not satisfactory in clinical performance will not pass the course.
4. Competency in drug calculation is mandatory to be considered satisfactory in the clinical setting (this applies to specific programs).
5. Students who receive less than a "C" grade in a health program course will not progress and must repeat the course. Each program states criteria for the number of repeats allowed in a given program and when repeats would be possible.
6. Students who demonstrate significant problems during the course of the program may be asked to undergo evaluation to determine their ability to continue in the program.

Additional Information Related To Application/Admission

Procedures:
1. Students must be able to provide their own transportation to clinical facilities.
2. Students should have medical insurance prior to clinical experience. The college assumes no liability in the event of injury/illness.
3. Admission to a program is on a space-available basis and will be based on a comparative evaluation of all test scores, transcripts, and application information.
4. An applicant may be denied admission if knowledge, character, or mental and/or physical fitness cast doubt upon his/her ability to perform in the chosen program of study.
5. Students accepted into a program will be required to furnish a physical examination form completed by a physician (form supplied by the Division of Nursing/Allied Health).
6. Applicants who are not accepted into their preferred program of study are encouraged to see an advisor who will assist them with other career options and/or taking additional courses to improve the chances of acceptance for the next class.
7. Prior convictions (excluding traffic violations) may affect licensure eligibility. (Please see program descriptions for specific information.)
8. Students accepted into a program must purchase liability insurance.

Retained/Progression Criteria:
6. Present proof of CPR certification prior to entering the clinical area.

Transfer credit may be approved for selected courses with an official transcript and a grade of "C" or better in each course. Anatomy and physiology, nursing, and allied health courses must be completed within two (2) years of application date.

An "audit" student will be listed on the official class rolls, but is not required to take tests, final examinations, or make reports. The grade for a course audited will be shown on the student's transcript as "AU." An "audit" student is not eligible for veterans benefits, JTPA, or federal financial assistance.

A student who desires to change from credit to audit, or audit to credit, must officially request a status change before the end of the drop/add period.

REGISTRATION

Each student is encouraged to pre-register each quarter. A new student who is accepted for admission will be notified of the pre-registration date(s). Due to the demand for many programs and/or courses, it is imperative that each student pre-register during the period designated. A student who is unable to pre-register during the period assigned or who decides not to enroll should contact the Registrar's Office immediately.

Pre-registration dates for each quarter are announced in the college bulletin. For additional information, which includes the steps for completion of registration, each student should see his/her faculty advisor or contact the Registrar's Office.

To pre-register or register, a student must meet with his/her faculty advisor who will review and approve the student's course of study for the quarter. Approval is indicated by the advisor's signature.

Next, each student will present his/her approved schedule to the Registrar.

Finally, registration is completed with the payment of tuition and fees. A student may be required to go to the Student Financial Services Office for payment authorization before proceeding to the Bookstore to complete the process.

A student will not be allowed to attend classes until his/her financial obligations have been met. A student cannot reserve space in classes without paying tuition and fees. A student who does not register prior to the first day of class will be charged a late fee.

RE-ENROLLMENT OF STUDENTS

A student who has not maintained continuous enrollment (i.e., has dropped during the previous quarter, has not been enrolled for one or more quarter, or has graduated from the college) and who wishes to re-enroll must complete a "Re-entry Form" that is available in the Admissions Office. Re-enrollment must be approved by the Director of Admissions and/or the Coordinator of Short-Term and Continuing Education.
ATTENDANCE

Class attendance is an essential part of the educational process at Bessemer State Technical College. A student must attend each class in which he/she is enrolled. Absences will be recorded each day that the class meets, including the first day of class.

Absences and tardies should be rare and should occur only under the most compelling circumstances.

The attendance policy for all courses is as follows:

1. Absences should not exceed 20 percent of the number of days a class meets each quarter. For example:
   - One (1) class per week - two (2) absences per quarter
   - Two (2) classes per week - four (4) absences per quarter
   - Three (3) classes per week - six (6) absences per quarter
   - Four (4) classes per week - eight (8) absences per quarter
   - Five (5) classes per week - ten (10) absences per quarter

2. Three (3) tardies count as an absence. A student is tardy when he/she is more than five (5) minutes late for a scheduled class or leaves a class before being dismissed by the instructor.

3. A student who exhibits poor attendance will be referred to meet with the college attendance counselor for a conference.

4. A student who accumulates absences in excess of 20 percent of the number of days a class meets each quarter will be terminated ("dropped") from the class by the instructor.

   **NOTE:** A student who does not officially withdraw after the drop/add period will receive an "FA" grade. It is the student’s responsibility to withdraw officially from a class.

5. The decision to reinstate a student dropped due to excessive absences will be based upon the reason for the period of absences and an evaluation by the instructor to determine if the student has demonstrated the ability to complete the course requirements for the quarter. A student is responsible for any lab or class work missed when he/she is absent from class.

In the event an instructor is not present when the class is scheduled to convene, each student must remain in the classroom until the instructor arrives or until official word of dismissal is received.

Termination or withdrawal from a class can affect eligibility for federal financial aid. A student should consult the Office of Student Financial Services for more information.

CLASSIFICATION OF STUDENTS

A student is classified according to credit-hour loads. In order to maintain full-time status, a student must be enrolled for a minimum of 12 credit hours per quarter. A student who enrolls for less than 12 credit hours per quarter is considered a part-time student.

A student who plans to register for 21 or more credit hours must secure approval from his/her academic advisor and the Dean of Students.

EVALUATION

The instructor will evaluate students through tests, quizzes (oral or written), projects, and work assignments. Final examinations will be administered during the last week of each quarter.

Students who miss tests and examinations have the responsibility of making arrangements with their instructors regarding make-up exams.

The criteria for determining grades are outlined in the course syllabus.

GRADING SYSTEM

Bessemer State Technical College computes quarterly and cumulative grade point averages on a 4.0 scale.

Each course for which a student has registered will be assigned one of the following letter grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (90 - 100)</td>
<td>Excellent</td>
<td>4 points</td>
</tr>
<tr>
<td>B (80 - 89)</td>
<td>Good</td>
<td>3 points</td>
</tr>
<tr>
<td>C (70 - 79)</td>
<td>Average</td>
<td>2 points</td>
</tr>
<tr>
<td>D (60 - 69)</td>
<td>Poor</td>
<td>1 point</td>
</tr>
<tr>
<td>F (Below 60)</td>
<td>Failure</td>
<td>0 points</td>
</tr>
</tbody>
</table>

FA Failure for lack of attendance as determined by college policy. Credit hours will be averaged into the grade point average.

I Incomplete. Required work must be made up no later than the first four weeks of the following quarter.

AU Audit. Course taken for no credit. Must be declared prior to the end of the drop/add period and is irrevocable.

W Official withdrawal from a course within three weeks of the quarter.

WP Official withdrawal from a course after three weeks and which the student is passing at the time of withdrawal.

WF Official withdrawal from a course after three weeks and which the student is failing at the time of withdrawal. Credit hours will be averaged into the grade point average.

The following grades may be assigned to institutional credit courses such as developmental courses and Training for Business/Industry courses:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Satisfactory</td>
<td>0 points</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory</td>
<td>0 points</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
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</table>
STANDARDS OF ACADEMIC PROGRESS

Standards of Progress Policy (See Definition of Terms)

Required GPA levels for each student according to number of hours attempted at the college:

1. A student who has attempted 12-32 credit hours at the college must maintain a 1.5 Cumulative Grade Point Average.
2. A student who has attempted 33-48 credit hours at the college must maintain a 1.75 Cumulative Grade Point Average.
3. A student who has attempted 49 or more credit hours at the college must maintain a 2.0 Cumulative Grade Point Average.

Intervention For Student Success

When a student is placed on Academic Warning, Academic Probation, One Quarter Academic Suspension, or One Calendar Year Academic Suspension, college officials may provide intervention for the student by taking steps including but not limited to, imposing maximum course loads, requiring a study skills course, and/or prescribing other specific courses.

Application of Standards of Progress

1. When the Cumulative GPA is at or above the GPA required for the total number of credit hours attempted at the institution, the student’s status is Clear.
2. When a student's Cumulative GPA is below the GPA required for the number of credit hours attempted at the institution, the student is placed on Academic Warning.
3. When the Cumulative GPA of a student who is on Academic Warning remains below the GPA required for the total number of credit hours attempted at the institution but the Quarterly GPA is 2.0 or above, the student remains on Academic Warning.
   - When the Cumulative GPA of a student who is on Academic Warning remains below the GPA required for the total number of credit hours attempted at the institution and the Quarterly GPA is below 2.0, the student is placed on Academic Probation.
   - When the Cumulative GPA is at or above the GPA required for the total number of credit hours attempted at the institution, the student’s status is Clear.

4. When the Cumulative GPA of a student who is on Academic Probation remains below the GPA required for the total number of credit hours attempted at the institution but the Quarterly GPA is 2.0 or above, the student remains on Academic Probation.
   - When the Cumulative GPA of a student who is on Academic Probation remains below the GPA required for the total number of credit hours attempted at the institution and the Quarterly GPA is below 2.0, the student is suspended for one quarter. The transcript will read: SUSPENDED—ONE QUARTER.
   - When the Cumulative GPA is at or above the GPA required for the total number of credit hours attempted at the institution, the student’s status is Clear.

5. The student who is suspended for one quarter may appeal. If, after appeal, the student is readmitted without serving the one quarter suspension, the transcript will read: SUSPENDED—ONE QUARTER/READMITTED UPON APPEAL.
   - The student who is readmitted upon appeal re-enters the institution on Academic Probation.
   - The student who serves a one quarter academic suspension re-enters the institution on Academic Probation.

6. A student who is on Academic Probation after being suspended for one quarter (whether the student has served the suspension or has been readmitted upon appeal) without having since achieved Clear academic status and whose Cumulative GPA falls below the level required for the total number of hours attempted at the institution but whose Quarterly GPA is 2.0 or above will remain on Academic Probation.
   - A student who is on Academic Probation after being suspended for one quarter (whether the student served the suspension or was readmitted upon appeal) without having since achieved Clear academic status and whose Cumulative GPA remains below the level required for the total number of hours attempted at the institution and whose Quarterly GPA is below 2.0 will be suspended for one calendar year. The transcript will read: SUSPENDED—ONE YEAR.

7. The student suspended for one calendar year may appeal. If, upon appeal, the student is readmitted, the transcript will read: SUSPENDED—ONE YEAR/READMITTED UPON APPEAL.
   - The student who is readmitted upon appeal re-enters the institution on Academic Probation.
   - The student who serves the calendar year suspension re-enters the institution on Academic Probation.

All applicable academic designations except Clear will appear on the student’s transcript.

Process for Appeal for Readmission

If a student declares no contest of the facts leading to suspension but simply wishes to request consideration for readmission, the student may submit a request in writing for an “appeal for readmission” to the Admissions Committee within a designated, published number of days of receipt of the notice of suspension. During the meeting of the Admissions Committee, which shall not be considered a “due process” hearing but rather a petition for readmission, the student shall be given an opportunity to present a rationale and/or statement of mitigating circumstances in support of immediate readmission. The decision of the Admissions Committee, together with the materials presented by the student, shall be placed in the college’s official records. Additionally, a copy of the written decision shall be provided to the student. Equity, reasonableness, and consistency should be the standards by which such decisions are measured.

Definition of Terms

Quarterly Grade Point Average (GPA) - The grade point average based on all hours attempted during any one quarter at the institution based on a 4.0 scale.

Cumulative Grade Point Average (GPA) - The grade point average based on all hours attempted at the institution based on a 4.0 scale.

Clear Academic Status - The status of a student whose Cumulative Grade Point Average (GPA) is at or above the level required by this policy for the number of credit hours attempted at the institution.

Academic Warning -

1. The status of a student whose academic status the previous quarter was Clear and whose Cumulative Grade Point average falls below the level required by this policy for the total number of credit hours attempted at the institution, or
2. The status of a student who was on Academic Warning the previous quarter and whose Cumulative GPA remained below the level required by this policy for the total number of credit hours attempted at the institution but whose Quarterly GPA for that quarter was 2.0 or above.

Academic Probation -

1. The status of a student who was on Academic Warning the previous quarter and whose Cumulative GPA that quarter remained below the level required by this policy for the total number of credit hours attempted at the institution and whose Quarterly GPA for that quarter was below 2.0, or
2. The status of a student who was on Academic Probation the previous quarter and whose Cumulative GPA for that quarter
remained below the level required by this policy for the total number of credit hours attempted at the institution but whose Quarterly GPA for that quarter was 2.0 or above; or
3. The status of a student who has re-entered the institution after being suspended for one quarter or one year (or being granted readmission upon appeal).

One Quarter Academic Suspension - The status of a student who was on Academic Probation the previous quarter and who has never been suspended or who, since suspension, has achieved Clear Academic Status and whose Cumulative GPA that quarter was below the level required by this policy for the total number of credit hours attempted at the institution and whose Quarterly GPA for that quarter was below 2.0.

One Calendar Year Academic Suspension - The status of a student who was on Academic Probation the previous quarter and who had been previously suspended without since having achieved Clear Academic Status and whose Cumulative GPA that quarter remained below the level required by this policy for the total number of credit hours attempted at the institution and whose Quarterly GPA for that quarter was below 2.0.

Appeal of Suspension - The process by which an institution shall allow a student suspended for one quarter or one year (whether a "native" student or a transfer student) to request readmission without having to serve the suspension.

Academic Failure
The college wants every student to be successful in his or her studies. It is important for a student who is not meeting his or her academic goals to take advantage of advising and academic services offered by the college. Should a student begin failing a course, it is his/her responsibility to schedule a conference immediately with his/her instructor to discuss the matter.

Standards of Progress for Institutional Credit Courses
Institutional credit courses are those courses which are not creditable toward a formal award and include Training for Business and Training for Industry courses and courses numbered below the 100 level.

1. A student who is enrolled in an institutional credit course and who receives a grade of "U" or "IP" for two quarters may not take the course a third quarter until he/she receives special academic advising. This process may include, but is not limited to, imposing maximum course limits, requiring a study skills course, and/or prescribing other specific courses.
2. After the third quarter in which the student receives a grade of "U" or "IP" in the same course, the student must appeal through the institution's appeal process before the student will be allowed to re-enroll in the course.

Standards of Academic Progress: Transfer Students
The following standards of progress shall apply to students who have previously attended another regionally accredited postsecondary institution:

1. A transfer student who is admitted on Clear academic status is subject to the same standards of academic progress as a first-time college student. Grades accrued at another regionally accredited postsecondary institution are not included in GPA calculations.
2. A transfer student who is admitted on Academic Probation retains that status until the student has attempted at least 12 credit hours at the institution. If, at the conclusion of the quarter in which the student has attempted a total of 12 or more credit hours, the Cumulative GPA at the institution is below 1.5, the student is suspended for one quarter. The transcript will read SUSPENDED-ONE QUARTER.
3. If, at the conclusion of the quarter in which the transfer student admitted on Academic Probation has attempted a total of 12 or more credit hours at the institution, the Cumulative GPA at the institution is 1.5 or above, the student's status is Clear.

ACADEMIC BANKRUPTCY
1. A student may request in writing to the Registrar a declaration of academic bankruptcy under the following conditions:
   a. If fewer than three (3) calendar years have elapsed since the quarter for which the student wishes to declare bankruptcy, the student may declare academic bankruptcy on all course work taken during the one quarter provided the student has taken a minimum of 30 quarter credit hours of coursework at the institution since the bankruptcy quarter occurred. All coursework taken, even hours completed satisfactorily during the quarter for which academic bankruptcy is declared, will be disregarded in the cumulative grade point average.
   b. If three (3) or more calendar years have elapsed since the most recent quarter for which the student wishes to declare bankruptcy, the student may declare academic bankruptcy on all coursework taken during 1-3 quarters provided the student has taken a minimum of 30 quarter credit hours of coursework at the institution since the bankruptcy quarter occurred. All coursework taken, even hours completed satisfactorily during quarter(s) for which academic bankruptcy is declared, will be disregarded in the cumulative grade point average.
2. When academic bankruptcy is declared, the term "ACADEMIC BANKRUPTCY" will be reflected on the transcript for each quarter affected. When academic bankruptcy is declared, the transcript will reflect the quarter of its implementation and the transcript will be stamped "ACADEMIC BANKRUPTCY IMPLEMENTED "
3. A student may declare academic bankruptcy only once.
4. Implementation of academic bankruptcy at an institution does not guarantee that other institutions will approve such action. This determination will be made by the respective transfer institutions.

ACADEMIC HONORS
Bessemer State Technical College provides selected academic honors to recognize and promote notable student achievements. These academic honors include: (1) Dean's List and (2) President’s List.

Dean's List
The Dean’s List is compiled at the end of each quarter. Requirements for the Dean's List are (1) a quarterly grade point average of 3.5 or above but below 4.0 and (2) completion of a minimum quarterly course load of 12 quarter credit hours of college-level work. Developmental (pre-collegiate) courses carrying grades of A-F will be calculated in the quarterly GPA; however, developmental courses will not count toward the minimum course load requirement.

President’s List
The President’s List is compiled at the end of each quarter. Requirements for the President’s List are (1) a quarterly grade point average of 4.0 and (2) completion of a minimum quarterly course load of 12 quarter credit hours of college-level work. Developmental (pre-collegiate) courses carrying grades of A-F will be calculated in the quarterly GPA; however, developmental courses will not count toward the minimum course load requirement.

GRADUATION REQUIREMENTS
A student successfully completing his/her course requirements will be awarded either an Associate in Applied Technology Degree, a diploma or a certificate depending on the courses completed.

ACADEMIC AFFAIRS 13
Graduation exercises are held each year at the end of Spring Quarter.

All fees and bills for services rendered by the college and a $10 graduation fee must be paid to the Cashier's Office before a student is granted an Associate in Applied Technology Degree or a diploma.

Each Associate in Applied Technology Degree, diploma, or certificate will stipulate the specialty area in which it is earned.

The student's advisor must submit a request to the registrar recommending the student for either an Associate in Applied Technology Degree, diploma, or certificate.

It is the responsibility of each student to check with his/her major advisor in scheduling classes in order to complete graduation requirements.

Associate in Applied Technology Degree Requirements

A student shall be awarded the Associate in Applied Technology degree upon satisfactory completion of the requirements of the specific program as specified by the college and the State Board of Education.

A student must:

1. Satisfactorily complete 96 quarter hours or more of college credit in an approved program of study, including prescribed general education courses.
2. Earn a 2.0 cumulative grade point average in all courses attempted at the college. The calculation of the grade point average for graduation shall not include grades earned in institutional credit courses. A course may be counted only once for purposes of meeting graduation requirements.
3. Complete at least 24 quarter credit hours at the college granting the degree.
4. Be enrolled during the quarter in which the degree is earned; or, with approval of the Dean of Instruction, within a calendar year of the last quarter of attendance receive the degree by transferring from a regionally accredited institution no more than the last ten credit hours required for completion of the program with a minimum grade of "C" in the courses transferred.
5. Submit a formal application.
6. Fulfill all financial obligations to the college.

Diplomas and Certificates Requirements

A student may be granted a diploma or certificate upon satisfactory completion of the requirements of the program as specified by the college in accordance with policies of the State Board of Education.

A student must:

1. Satisfactorily complete an approved program of study.
2. Earn a 2.0 cumulative grade point average in all courses attempted at the college. The calculation of the grade point average for graduation shall not include grades earned in institutional credit courses. All grades in repeated courses shall be averaged into the grade point average; however, a course may be counted only once for purposes of meeting graduation requirements.
3. Complete at least one-half of the total quarter credit hours required in the program at the college granting the award.
4. Be enrolled during the quarter in which the award is earned or, with approval of the Dean of Instruction and within a calendar year of the last quarter of attendance, transfer from a regionally accredited institution no more than the last ten hours required for completion of the program, with a minimum grade of "C" in the courses transferred.
5. Submit a formal application for graduation.
6. Fulfill all financial obligations to the college.

The college provides academic honors to recognize and promote notable student achievement. These academic honors include: (1) Graduation Honors for Degrees to include Graduation with Honors, Graduation with High Honors, and Graduation with Highest Honors, and (2) Graduation Honors for Other Formal Awards (Diplomas and Certificates) to include Graduation with Distinction.

Graduation Honors for Degrees

Superior academic achievement by graduating students shall be recognized by the following designations on transcripts:

Graduation with Honors (or Cum Laude) ........................................ 3.50 to 3.69 GPA
Graduation with High Honors (Magna Cum Laude) .................................. 3.70 to 3.89 GPA
Graduation with Highest Honors (Summa Cum Laude) .......................... 3.90 to 4.00 GPA

Graduation Honors for Other Formal Awards (Diploma or Certificate)

Graduation with Distinction .................................................. 3.50 to 4.00 GPA

NOTE: Calculation of the grade point average (GPA) for graduation honors shall be identical to that method used to calculate the GPA to fulfill graduation requirements for the degree, diploma, or certificate being earned. In addition, in order to be eligible for a graduation honor, the student must have completed a minimum of 48 quarter credit hours at the college conferring the degree or other formal award.

FALSIFICATION OF RECORDS

Any falsifying of records by a student will disqualify the student from receiving academic credit or earning a graduation award from Bessemer State Technical College.
FINANCIAL INFORMATION

TUITION AND FEES
The following tuition and fees are applicable to students. Tuition and fee rates are subject to change.

Tuition:
$24.00 per credit hour

Fees:
- Instructional: $3.00 per credit hour
- Facility Renewal: $1.00 per credit hour ($15.00 maximum)
- Transcript: $3.00 (three copies free)
- Student Accident Insurance: $6.00 per quarter
- Malpractice Insurance (Health Occupations Only): $15.00 per quarter
- Late Registration: $10.00 (Assessed after the first day of quarter)
- Returned Check: $15.00
- Graduation: $10.00

(NOTE: Tuition for out-of-state and international students is double that for in-state students and fees remain the same.)

REFUND POLICY
Students registering and paying tuition and fees will receive a refund under the following conditions:
1. A student who registers, pays tuition and fees, and does not attend any classes will be refunded the full amount paid.
2. A student who withdraws totally during the first week of classes will be refunded 50 percent of his/her tuition.
3. A student who withdraws totally during the second week of classes will be refunded 25 percent of his/her tuition.
4. A student who withdraws totally during the third week of classes will be refunded 75 percent of his/her tuition.
5. No refunds will be made after more than three weeks of attendance.
6. Late registration fees and student insurance premiums are not refundable.
7. If the student received federal financial aid, a portion or all of the refund may be applied to repayment of the aid program.
8. The refund policy is applicable to tuition, the instructional fee, and the facility renewal fee.

Refunds for Students Receiving Federal Financial Aid
Refunds of tuition and other school expenses for first time students receiving federal financial aid are subject to a different refund calculation in accordance with federal regulations. Such funds are first returned to the program from which the expenses were paid.

For more information or examples of these calculations, please refer to the Bessemer State Technical College Financial Aid Information and Application packet or contact the Business Office.

Partial Withdrawal
Students who do not completely withdraw from the college but drop a class during the regular drop/add period will be refunded the difference in the tuition paid and the tuition rate applicable to the reduced number of hours, including fees appropriate to the classes dropped. There is no refund due to a student who partially withdraws after the official drop/add period.

Addition of Classes
Students who add credit hours during the drop/add period will be charged additional tuition at the applicable rate.

FINANCIAL ASSISTANCE PROGRAMS
Through the Office of Student Financial Services, located in Room 106 of Building A, Bessemer State Technical College offers a variety of federal, state, and institutional financial aid programs. Financial Services Office hours are 7:30 a.m. - 4 p.m. weekdays and 5-7 p.m. Monday and Tuesday nights. Students needing financial assistance with the costs of attending college are encouraged to visit the office to obtain applications and more information.

Applying for Federal Financial Aid: Three Easy Steps!
1. Come by the Office of Student Financial Services and pick up a Free Application for Federal Student Aid which covers the academic year (Summer, Fall, Winter, and Spring terms) beginning with summer term. Students who applied for financial aid during the previous year will be sent a Renewal Application which may be used to apply for aid. Be sure to read the instructions carefully while completing the application. If you need help in completing the form, you should bring your federal tax return to the Office of Student Financial Services for assistance.
2. After the application is completed, mail it to the Federal Student Aid Processing Center in the envelope provided. Your eligibility for the Federal Pell Grant and other federal financial aid will be assessed by using a national formula that takes into account your income, assets, family size, and, if applicable, your parent’s financial information.
3. In approximately four weeks after your application has been received by the federal processor, you should receive a three-part Student Aid Report (SAR) in the mail. When you receive the SAR, contact the Office of Student Financial Services as soon as possible. You will need to complete a Student Data Form and may be asked to provide additional information (copies of tax returns, verification work sheet, etc.).

NOTE: Funds received by grant and work programs are not repayable. However, if a student drops out or reduces enrollment, a grant overpayment may occur. All overpayments must be repaid before a student may re-enter the college. Funds received from loan programs must be repaid according to the terms and conditions of the loan.

General Eligibility Criteria
To receive aid from the major student aid programs, the student must:
1. Demonstrate financial need.
2. Have a high school diploma or GED Certificate or pass a test approved by the U.S. Department of Education. (NOTE: Students who do not pass the high school exit exam do not have a high school diploma.)
3. Be enrolled as a regular student working toward a degree, diploma, or certificate in an eligible program.
4. Be a U.S. citizen or eligible noncitizen.
5. Have a valid Social Security Number.
6. Make satisfactory academic progress in your program of study.
7. Sign a statement of educational purpose and a certification statement on overpayment and default.
8. Register with the Selective Service (if required).
FEDERAL AID PROGRAMS

Federal Pell Grant Program is money from the federal government for eligible students. Eligibility is based on the cost of attendance at the college, the student's enrollment level, and the family's "expected family contribution" (EFC) as determined by the Federal Student Aid. The Federal Pell Grant ranges in value from $400 to $2,700 for a 12 month period at Bessemer State Technical College. It must be used toward the costs of tuition, fees, books and supplies. Any balance is given to the student approximately 14 days into the quarter to be used for other school-related expenses such as transportation and living expenses.

Federal Supplemental Educational Opportunity Grant (FSEOG) is a limited amount of money from the federal government for "exceptionally needy" Pell Grant recipients. FSEOG ranges in value from $100 to $600 per year.

State Student Incentive Grant (SSIG) is a limited amount of money from the federal and state governments for the most needy Pell Grant recipients. SSIG ranges in value from $100 to $1,000 per year. Nonresidents must apply for the SSIG from the State Agency in their home state. The Office of Student Financial Services can provide students with procedures and addresses.

Federal Work-Study Program (FWSP) is a job program which gives part-time employment opportunities to students who show financial need. All eligible students indicating an interest in FWSP can be considered for these limited funds. Most job placements are on campus, and work hours are usually after classes each day. Students earn minimum wage while working 8-20 hours each week. Job placement is based on job availability and job skills as well as the student's need and desire to work.

Other Financial Assistance

Academic Scholarships which cover the cost of tuition and fees are available to outstanding currently enrolled students, high school seniors, and Vocational Industrial Clubs of America (VICA) tournament winners. The scholarships are renewable quarterly if recipients maintain an overall GPA of 3.0, (B), or above.

Technical Discovery Scholarships which cover tuition and fees for summer term are available to high school seniors recommended by school personnel who have a 2.5 GPA or better.

Senior Adult Scholarships which cover the cost of tuition are available to residents of Alabama, age 60 and above, who are taking credit courses.

Veterans Benefits are available for eligible students. See the Office of Veterans Affairs (VA) section for more information.

Job Training Partnership Act (JTPA) benefits are available for eligible unemployed or economically disadvantaged students. Students must receive approval to participate from the State Employment Service Office and be selected as a participant by the college before receiving benefits from JTPA.

Alabama National Guard Education Assistance Program (ANGEAP) provides benefits of up to $1,000 per year that are available for students in the Alabama National Guard. Applications must be obtained and completed first by a Unit Commander. Only students enrolled in Associate Degree programs are eligible.

Seas and Pat Vacca Emergency Loans are limited institutionally controlled funds which are available for prospective financial aid students needing help to pay tuition. Applicants must be determined eligible for financial aid. Repayment is due within 30 days of loan receipt.

Student Rights

Students have the right to know:
-- What financial assistance is available
-- How to apply for available assistance
-- The cost of attending Bessemer State Technical College
-- How financial need is determined.
-- How financial aid recipients are selected

Student Responsibilities

Students have the responsibility to:
-- Carefully review all materials related to applying for assistance
-- Complete all forms accurately and completely
-- Read and understand all forms that they are asked to sign
-- Retain copies of all forms you submit and receive
-- Notify the Office of Student Financial Services of any changes that may affect your financial situation. Examples of these changes are receipt of external assistance such as scholarships, new address, and change in program of study. All changes must be submitted in writing.

Students applying for assistance may be required to submit copies of tax returns, proof of financial independence from parents, household size, number in college and any other item identified by the Student Financial Services Office.

The amount of aid a student receives is based, in part, on enrollment level. Twelve credit hours or more is considered full time, 9-11 hours is 3/4 time, and 6-8 hours is 1/2 time. Hours taken for audit are not considered in determining enrollment.

The credit hours of students in non-Associate degree programs may be prorated in accordance with federal regulations, for the purpose of awarding federal financial aid.

SATISFACTORY ACADEMIC PROGRESS POLICY FOR FEDERAL FINANCIAL AID

Students receiving federal financial aid through the Federal Pell Grant, Federal Supplemental Education Opportunity Grant (FSEOG), State Grant (SSIG), and/or Federal Work Study Program (FWSP), must make satisfactory progress toward a degree or certificate according to federal regulations to receive and retain eligibility for these funds. There are three components to satisfactory academic progress as explained below:

1. Students must maintain a grade point average each term of at least 2.0 ("C") for all classes attempted.
2. Students must successfully complete with a grade of "D" or better at least 67% (2/3) of the classes attempted each quarter.

A student in violation of either of these two components will be placed on probation for one quarter. During this probationary term, the student will continue to receive financial aid but must improve the GPA to 2.0 and successfully complete at least 67% of the hours attempted. Failure to do so will result in suspension of financial aid.

A student wishing to be considered for financial aid after termination must bring their academic record into compliance with the above policy while attending school at least one term full-time at his/her own expense. When the student is in compliance with the policy again, he must request in writing that his financial aid be reinstated.

3. Students must also complete program requirements within a certain time frame. Bessemer State Technical College will allow students to receive federal financial aid for up to 1.5 times the normal number of terms required for the degree or certificate. This applies to both full-time and part-time students. Part-time students' terms will be prorated.

FINANCIAL INFORMATION
**Examples:**

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<tr>
<th>Normal Length of Program</th>
<th>Number of Quarters Allowed on Financial Aid to Complete Program</th>
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**Other Important Information**

1. Excessive withdrawals, incompletes, and/or repeated classes may also result in a probationary quarter or suspension of federal financial aid.
2. Students wishing to appeal the decision to terminate federal financial aid may do so by writing the Director of Student Financial Services explaining the reason(s) the student failed to meet the requirements. Documentation to support the reason(s) may be required.

**OFFICE OF VETERANS AFFAIRS**

Bessemer State Technical College maintains a full-time Office of Veterans Affairs (OVA). This office assists the veteran in minimizing the problems of adaptation to an educational environment. Services provided by the Office of Veterans Affairs include counseling, referral services, general and specific information about all available benefits, and assistance in filing claims for such benefits. The Office of Veterans Affairs is located in Room 106 of Building A.

All persons using veteran's educational assistance while enrolled at Bessemer State Technical College should contact the Office of Veterans Affairs as soon as initial admission requirements are completed. All questions concerning regulations governing the use of veteran's educational assistance should be directed to that office.

After course and beginning date have been determined, the student should come by the Office of Veterans Affairs with his/her discharge papers (DD Form 214 or NOBE), marriage license, divorce decree, if the student or spouse had previous marriages, and birth certificates of your children. If veteran's educational benefits have been used before, also bring the OVA file number. At this time, the student will meet with the Veterans Affairs Advisor.

If your paperwork is submitted to the OVA at least six weeks prior to enrollment, advance pay for the first two months of school attendance may be received. This advance pay check will be sent to the college; all other checks will go to the student's home. Monthly veteran's assistance is paid at the completion of one month's schooling rather than in advance. Each month the student will receive an enrollment certification form. He/she should sign this form and send it to the regional VA office immediately. This form generates the next check, so it should be returned promptly.

Students going on military leave will be responsible to notify instructor(s) and the OVA of their orders and will be terminated from all classes. Upon return a re-entry is processed. If the student does not return within the designated timeframe, the regional OVA is notified of the termination.

Students receiving benefits are required to pre-register for classes. Failure to meet this requirement may result in termination or delay of your monthly benefits.

Veteran benefits at Bessemer State Technical College are based on contact (clock) hours of attendance by the veteran if the veteran is in a diploma or certificate program. Twenty-two contact hours per week is full-time and 11 hours is half-time. Benefits are based on credit hours if the veteran is enrolled in an associate degree program. Twelve credit hours is full-time and six credit hours is half-time.

The Veterans Administration has a policy which states that a veteran is not entitled to benefits for any period for which credit toward graduation will not be received. This means should the student terminate training before the end of any quarter, he/she would be liable to repay any benefits received for that quarter. The veteran should inform the Veterans Administration of any change in major, class schedule or termination from classes.

Please note that any courses taken outside the required course work in the student's program of study and repeated courses for which a satisfactory grade has already been received, will not be eligible for VA benefits. The "IP" grade assigned in some developmental classes is considered unsatisfactory for OVA purposes.

If any veteran should encounter problems during training at Bessemer State Technical College, please contact the Office of Veterans Affairs as soon as the problem becomes evident.

**Advance Payment For Veterans**

An advance payment request must be made at least six (6) weeks prior to enrollment for the advance payment to be made during pre-registration.
ACADEMIC ADVISEMENT

Academic advisement is designed to assist the student in the development of appropriate educational plans. An academic advisor is assigned during the admission process to the student with his/her academic or career concerns and a class schedule. As a college liaison, the academic advisor can provide the student with information about career programs, resources, and opportunities that will enhance the student's chances of academic success. Though the student is ultimately responsible for his/her academic and career plans, the advisor has a special interest in student success. Each student is expected to meet with his/her advisor at least once per quarter.

ACCOMMODATIONS FOR THE DISABLED

In compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, special services and accommodations are given on an individual basis once supporting documentation is provided. It is the responsibility of the student to notify the college of a disability which requires assistance. Requests for accommodations should be made prior to enrollment. All students requesting assistance should contact the Special Needs Coordinator in Building A, Room 100, at 428-6391 Ext. 383.

For TDD users in Alabama, the Alabama Relay Center is available by calling 1-800-548-2545 (TT only) or 1-800-548-2547 (voice only). A TDD is available to hearing impaired students in Room A-100.

CAREER PLANNING AND JOB PLACEMENT

It is the philosophy of Bessemer State Technical College to provide skill training which will lead to productive employment. Included in this process is the development of the student’s personal traits and habits which are important for job success and awareness of the realities of the job market.

The Placement Office maintains an up-to-date file of part-time and full-time jobs for students. These jobs are located with off-campus businesses and organizations in the area. Students are referred to positions that will benefit them financially as well as educationally. Job referrals may be obtained upon request.

Other services include career planning assistance, resume development, job search assistance, career announcements for federal, state, and county listings, career resource library, job fairs, on-campus interviews, and workplace readiness seminars.

Students or former students in need of assistance should contact the Career Planning and Job Placement Office.

COUNSELING AND GUIDANCE

The guidance program is committed to the establishment of an environment in which students are provided with the opportunity to become a responsible, self-directed learner, and to maximize their potential as they prepare for the world of work. Students will be provided information and support in the achievement of realistic career and educational goals commensurate with their expressed interest and abilities.

Though the classroom instructor or advisor may be able to address immediate needs and concerns, student may also be referred to a counselor in Student Development Services for more in-depth counseling or advice. The counselor will also serve as a resource for off-campus referral. In instances where discipline or disputes must be addressed, faculty and staff should refer to the lines of communication that is referenced in this catalog.

JOB TRAINING PARTNERSHIP ACT (JTPA)

JTPA students are enrolled under requirements established by federal and state regulations. These policies are made available to the JTPA students through the college's Student Development Services Office.

STUDENT SUPPORT SERVICES

The college's Student Support Services (SSS) Program is a federally funded project that offers support services to low income, first generation college, and disabled students. Services include basic instruction in communication skills, mathematics, and algebra; assistance with study, test taking, and survival skills; tutoring in many subjects; and advisement/counseling.

The goal of the program is to increase the retention and graduation rate of eligible students by providing the support they need to remain in college and successfully complete their courses. The program depends on referrals from the Admissions Office and faculty/staff in identifying eligible students and complying with federal requirements regarding the number of participants and outcomes.

Advanced or transfer students, who have maintained a high academic average, may apply to become tutors for the program. Successful tutor applicants earn an hourly wage while tutoring eligible students.

Students can receive information or apply for services at the Student Support Services Office, Building A, Room 212. Office hours are from 8 a.m. to 4 p.m., Monday through Friday or by appointment. For more information, call (205) 428-6391 Ext. 360.

STUDENT ACTIVITIES AND ORGANIZATIONS

The college's faculty and staff encourage students to participate in extracurricular activities that develop individual initiative, group leadership, and cooperation. These student activities are faculty/staff supervised and must be approved by the president. The college sponsors the following student organizations.

- ADAA (American Dental Assistants Association)
- AWS (American Welding Society)
- CSI (Collegiate Secretaries International)
- PBL (Phi Beta Lambda)
- (SME) Society of Manufacturing Engineers
- Student Ambassadors
- VIC (Vocational Industrial Clubs of America)
BOOKSTORE
The College Bookstore, located in the North Wing of Building A, is open Monday through Friday. Hours of operation are posted at the entrance. The Bookstore sells textbooks and supplies required for each course. In addition, many hand tools and sundry items are available. Free parking permits and combination lockers are available through the bookstore.

CAMPUS SECURITY
The college maintains a staff of uniformed security officers 24 hours a day for your protection. Students should report any suspicious activity to the college telephone operator or a security officer. The security officers are radio dispatched.

Students are requested to promptly report any safety hazard or security concern to the Dean of Finance.

FOOD SERVICES
For students' convenience and pleasure, the cafeteria is located in Building A with snack bar, salad bar, and dining area with banquet facilities. These facilities are available to the faculty, staff, and students.

IDENTIFICATION CARDS
Each student is required to obtain and carry a Bessemer State Technical College Identification (I.D.) Card at all times. Valid I.D. cards are used for checking out books from the library and for other occasions requiring identification. The following regulations apply to I.D. cards:

1. Photo (I.D.) cards are issued at the beginning of each quarter (days and times will be posted). When I.D. cards are requested by an administrator, a faculty member or security officer for proper identification, the student must present his/her card. Failure to present an I.D. card may result in disciplinary action or arrest for trespassing. Student I.D. cards are made for personal use only. A student violating the I.D. card privileges is subject to disciplinary action.
2. Loss or theft of the card should be reported to the Office of Student Development Services immediately.
3. The replacement card fee is $1.00 and is payable to the cashier in the college bookstore. A duplicate I.D. card can be obtained in the Office of Student Development Services upon presentation of the replacement fee receipt.
4. A student may be required to show his or her I.D. card to instructors upon first attending a class.

LOCKERS
Each student may request a locker from personnel in the college Bookstore. A student is encouraged to keep books and personal possessions in his/her locker; the college cannot be responsible for personal property. At the end of the summer quarter, or upon leaving the college, each student is responsible for cleaning out his/her locker.

MOTOR VEHICLE INFORMATION
A student who operates a motor vehicle on campus must register this vehicle in the college Bookstore and obey all rules and signs pertaining to motor vehicle operation. At the time the vehicle is registered, a free parking permit will be issued. The parking permit must be displayed appropriately on all vehicles. Only current permits should be displayed. Parking permits expire at the end of summer quarter.

The campus roadways and parking lots are designed to facilitate traffic safety and convenient parking. Each student must adhere to speed limit, one way, employee/reserved parking, loading zone, and no parking signs.

A student who violates traffic and parking regulations will be issued a citation. The following will apply:

1. The student to whom the vehicle is registered will be responsible for all citations issued to his/her vehicle.
2. Payment of fines will be due within three days. Delinquent fines will be doubled and added to the student's financial account with the college. The student will not be permitted to re-enroll until fines are paid.
3. A citation will be issued for failure to display the registration permit. A $3 fine for each violation will be charged.
4. A student parking in loading zones or faculty/reserved parking spaces will be charged a fine of $3.
5. A student charged with speeding or reckless driving will be charged a fine of $15.
6. An individual may appeal his/her parking or traffic fee assessment and have the appeal heard by the Dean of Finance.

MINOR CHILDREN ON CAMPUS
From time to time, activities that minor children may be invited to attend are scheduled at BSTC. However, on all other occasions, minor children are neither permitted to be on campus nor to attend classes with their parents.

STUDENT ACCIDENT PROCEDURE
It is the policy of Bessemer State Technical College to provide immediate medical attention to students in the event of an accident occurring on campus. All accidents should be immediately reported to the Dean of Finance, Dean of Students, and Security Officer.

TELEPHONES
Pay phones are provided for the use of students. The college phones are not to be used by students except in case of an emergency.

VISITORS
All visitors to Bessemer State Technical College, regardless of the nature of their visit, must report to the Receptionist's Office and secure a visitor's pass. The visitor's pass must be in the possession of the individual at all times. Unauthorized visitors will not be permitted on campus.

RESPONSIBILITIES AND PRIVILEGES
Each student must assume complete responsibility for compliance with the instructions and regulations set forth in the College Catalog, for selecting the courses which will permit him/her to achieve his/her educational objectives, and for satisfying prerequisites for any course which he/she plans to take. Faculty advisors and counselors are available to assist a student in planning his/her program.

The college likewise assumes no responsibility for misinterpretation by a student of policies and procedures presented in the College Catalog or other official documents. Any questions or doubt concerning Catalog information should be referred to the Dean of Instruction or the Dean of Students.

STUDENT CONDUCT
The college recognizes that students enrolled at Bessemer State Technical College are both citizens and members of the academic community. Upon enrolling in the college, each student assumes an obligation to conduct himself/herself in a manner compatible with the college's function as an educational institution. Students are on campus for serious educational pursuits and should conduct themselves as responsible citizens in the campus community.
STUDENT DRESS CODE

The following dress code has been formulated by a committee with the objective of creating and maintaining an atmosphere conducive to learning. These policies are consistent with efforts to improve the health, physical appearance, safety and welfare of Bessemer State Technical College students.

1. Students should always be well groomed and dressed appropriately for classes. Being well groomed refers to cleanliness of the body, hair and clothing.
2. Students should not wear any sign, symbol or other mode of dress which would antagonize other students, disrupt the atmosphere of learning, or attract undue attention to the wearer.
3. Students must wear shoes at all times on campus.
4. Hats may be worn in classrooms, laboratories and shops only in accordance with sound safety practices.
5. Students wearing long hair in shop training are required to follow sound health and safety rules of controlling the hair from hanging down in the face and being exposed to moving equipment.
6. All instructors are charged with the responsibility of requiring their students to wear appropriate clothing in keeping with good, sound safety rules of the Federal Occupational Safety and Health Act.

Some examples of inappropriate attire are headwear worn in the classroom, bare midriffs, obscene or profane language or symbols on clothing, clothing which allows undergarments to be visible when the student is sitting or walking, white undergarment type T-shirts, cut-offs, tank tops, shorts, or purposely frayed clothing. For health reasons, footwear is necessary. Prohibited are the nude look, see-through blouses, and revealing fashions without appropriate concealing undergarments.

In many programs, students may be encouraged to purchase clothing applicable to the career or occupation. Student dress should reflect the program in which he/she is enrolled. Protective eye glasses and protective footwear will be a requirement in some programs.

CHANNELS OF COMMUNICATIONS

Each student has the right to express an opinion, make suggestions, and submit grievances. Channels of communication are always open to a student with a legitimate problem. For the simplest, most direct, and best action, the student should use the channels in the order presented in this catalog. Otherwise, the student may forfeit his/her right to seek resolution of his/her complaint.

If a student will first take his/her complaint to the person or group of persons who have the authority to deal with such complaints, much misunderstanding and ill feeling can be eliminated. The channels of communication are as follows:

1. Instructor
2. Division Chairperson
3. Counselor
4. Dean
5. President

For additional information and/or a copy of the Student Grievance Procedures, contact the Dean of Students, Room A-105.

DUE PROCESS RIGHTS OF STUDENTS

Student Misconduct

The College recognizes the right of both substantive and procedural due process in any matter involving a student misconduct violation. The student is entitled to notice, a hearing and an explanation before being suspended or expelled from the college.

Notice of the charges and their implications will be given orally or in writing prior to the hearing. The list of witnesses and their expected testimony will be given to the accused student prior to the hearing or at the hearing itself.

Because the college is an academic institution and not a court of law, an informal hearing will be conducted by an administrator or committee designated by the president of the college. The chief hearing officer is not bound by the common laws of evidence or civil procedure; therefore, hearsay may be used during the hearing and either a committee or a hearing officer may conduct the hearing.

At the hearing, the student has the right to present his defense against the charges and to produce other oral testimony or written affidavits of witnesses in his behalf. A student may be represented by counsel. If so, the college expects the courtesy of notification. The counsel will be allowed only to advise the student and not to actively participate in the hearing. The college is not required to provide the opportunity for cross-examination but may do so at the discretion of the chief hearing officer.

The president of the college will notify the student of the results of the hearing and the implications of the decision. The decision of the President will be final.

Immediate Temporary Suspension

Immediate temporary suspension will be imposed in a situation when a student's presence poses a continuing danger to persons or property or an ongoing threat of disrupting the academic process. Notice will be given within 10 hours, and a hearing will be held as soon as practicable, usually within 72 hours.

Academic Failure

The college wants every student to be successful in his/her studies. A student who is not meeting his/her academic goals should take advantage of advising and academic services offered by the college. If a student begins failing a course, it is his/her responsibility to schedule a conference immediately with the instructor to discuss the matter.
POLICY STATEMENTS

EQUAL OPPORTUNITY STATEMENT

It is the official policy of the State Board of Education, Alabama Department of Postsecondary Education, and Bessemer State Technical College that no person on the grounds of race, color, national origin, religion, age, disability, marital status or gender be excluded from participation in, be denied the benefits of or be subject to discrimination under any program, activity, or employment practices and other educational services.


FEDERAL STATUTES RELATING TO NONDISCRIMINATION

2. Title IX of the Education Amendments of 1972, as amended (20 U.S.C., subsections 1681-1683, 1685-1686), prohibits discrimination on the basis of sex. Section 106.8 provides protection against acts of sexual harassment.
5. The Americans with Disabilities Act of 1990 (ADA) provides that no otherwise qualified person shall be discriminated against in the provision of an educational service or benefit on the basis of disability. Bessemer State Technical College endeavors to provide reasonable accommodations to qualified students with a disability.

For more information, contact the Dean of Students, Building A, Room 105, (205) 428-6391, ext. 396.

DRUG-FREE WORKPLACE POLICY

In compliance with the Drug-Free Workplace Act of 1988 (Public Law 100-690) and in recognition of the institution's responsibility to serve as a beneficial influence on students, employees, and the community, the following policy is in effect for Bessemer State Technical College.

1. The unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited by Bessemer State Technical College or during any activity conducted, sponsored, or authorized by or on behalf of Bessemer State Technical College. A "controlled substance" shall include any substance defined as a controlled substance in section 102 of the Federal Controlled Substance Act (Code of Alabama, Section 20-2-1, et seq.).
2. Bessemer State Technical College has and shall maintain a drug-free awareness program to inform employees about:
   a. the dangers of drug abuse in the workplace;
   b. Bessemer State Technical College's policy of maintaining a drug-free workplace;
   c. any available drug counseling, rehabilitation, and employee assistance program; and
   d. the penalties that may be imposed upon employees for drug abuse violations.
3. All employees of Bessemer State Technical College shall comply with paragraph 1 above.
4. Any employee who is convicted by any Federal or State Court of an offense which constitutes a violation of Paragraph 1 shall notify President W. Michael Bailey in writing of said conviction within five (5) days after the conviction occurs. Conviction, as defined in P.L. 100-690, shall mean "a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both."
5. In the event of a report of conviction pursuant to paragraph 4 where the employee is working in a project or a program funded through a Federal contract or grant, Bessemer State Technical College shall notify in writing within ten (10) days any Federal agency to whom such notification by Bessemer State Technical College is required under P.L. 100-690.
6. In the event an employee violates paragraph 1 or receives a conviction as described in paragraph 4, the respective employee shall be subject to appropriate disciplinary action which may include, but is not limited to, termination of employment. Bessemer State Technical College shall also reserve the right to require said employee, as a condition of continued employment, to satisfactorily complete a drug treatment or rehabilitation program of a reasonable duration and nature.
7. Bessemer State Technical College shall make a good faith effort to ensure that paragraphs 1-6 are followed.
8. Each employee of Bessemer State Technical College shall receive a copy of this policy.

FAMILY EDUCATION AND PRIVACY ACT

Under the Federal Family Educational and Privacy Act, 20 U.S.C. 1232g, Bessemer State Technical College may disclose certain student information as "directory information." Directory information includes the names, addresses, telephone numbers, dates of birth, and major fields of study of students, as well as information about students' participation in officially recognized activities and sports, the weight and height of members of athletic teams, the date of attendance by students' degrees and awards received, and the most recent previous educational agency or institution attended by a respective student. If any student has an objection to any of the aforementioned information being released during any given quarter or academic year, the student should notify, in person or in writing, the Dean of Students.

HARASSMENT

Bessemer State Technical College will not tolerate harassment of employees or students. Any form of harassment related to employees and students race, color, gender, religion, national origin, age, or disability is a violation of this policy and will be treated as a disciplinary matter. For these purposes, the term "harassment" includes, but is not necessarily limited to: slurs, jokes, or other verbal, graphic, or physical conduct relating to an individual's race, color, gender, religion, national origin, age, or disability. Harassment also includes unwelcome sexual advances, requests for sexual favors, and other verbal, graphic, or physical conduct of a sexual nature.

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Violation of this policy by an employee of the college shall subject that employee to disciplinary action, up to and including discharge. Violation of this policy by a student of the college shall subject the student to disciplinary action under the institution's disciplinary code, up to and including expulsion.

Harassment of employees in connection with their work by non-employees other than students may also be a violation of this policy. Any employee who becomes aware of any harassment of any employee by a non-employee should report harassment to his or her supervisor and to the Dean of Instruction.
LIFE THREATENING ILLNESSES

Bessemer State Technical College (BSTC) recognizes that students, faculty, and staff with life threatening illnesses (LTI), including but not limited to cancer, heart disease, diabetes, and HIV/AIDS, may wish to engage in as many of their normal pursuits as their condition allows, including work. As long as the students, faculty, or staff members are able to meet the same performance standards as those persons without LTI, and medical documentation indicates that their conditions are not a threat to others, administrators should be sensitive to their conditions and ensure that they are treated consistently with other students, faculty, and staff members. It is the policy of Bessemer State Technical College to provide safe environment for all students, faculty, and staff. Policy guidelines are as follows:

1. BSTC will not undertake programs of mandatory testing of either employees or students for the presence of indicators of LTI. For health status testing and/or counseling, students, faculty, and staff should be aware of appropriate community health agencies.

2. The existence of conditions related to LTI in an applicant for BSTC admission or employment will not be considered in the initial admission or employment decisions.

3. BSTC students with LTI conditions, whether or not symptomatic, will be allowed regular classroom attendance in an unrestricted manner, as long as they are able to attend classes.

4. BSTC faculty and staff who have LTI-related conditions, whether or not symptomatic, will be allowed to continue their work in an unrestricted manner, so long as they are able to perform the duties of their jobs, in compliance with BSTC employment policies and federal guidelines.

5. The access of BSTC students or employees with LTI or LTI-related conditions to BSTC public areas will not be restricted, in compliance with BSTC and Federal guidelines.

6. There will be an ongoing program to educate students, faculty, and staff in regard to LTI.

7. Information regarding a patient diagnosed as having an LTI or LTI-related conditions will be maintained in the strictest confidence. Only people within the college with a legitimate need to know should be informed of the identity of students, faculty, or staff who have LTI or LTI-related conditions; this number should be kept to an absolute minimum. Individuals should be aware that medical information cannot be released to anyone outside the college without the specific written consent of the patient, except required by law.

8. Any breach of the above guidelines will be handled as follows:
   a. Breaches of these guidelines involving students, staff or faculty should be reported to the office of the Dean of Instruction.
   b. Complaints regarding such breaches should be made in writing within seven (7) days of their occurrence.

TOBACCO POLICY

The Environmental Protection Agency has classified second-hand smoke as a human carcinogen which has been found to cause cancer in humans. Therefore, the use of tobacco (in any form) is prohibited in all buildings on campus, outside the front of Building A, in all areas containing flammable materials, and in any state vehicle. This policy shall include but not be limited to all classrooms, shops, laboratories, hallways, rest rooms, the cafeteria, and offices within all buildings on campus.

RIGHT-TO-KNOW AND CAMPUS AWARENESS

In accordance with U.S. Public Law 101-542, (Student Right-to-Know and Campus Awareness Security Act), Bessemer State Technical College is required to report graduation and safety information of our students annually. The graduation information is based on first time, full-time students who entered the college for the fall quarters, 1991, 1992 and 1993, respectively. These groups include students who have continued their enrollment, those who received a degree as well as some who transferred to other institutions one year from their initial enrollment.

The graduation/completion rate for 1992-1993 was 59.1 percent. The projected graduation/completion rate for 1993-1994 is 60.3 percent and 81.25 percent for 1994-1995. These figures do not include part-time students, who reflect a substantial percentage of our enrollment.

Bessemer State Technical College has enjoyed a crime-free environment between 1991-1994. There were three reportable accidents.

For additional information contact the Student Development Services Office, 428-6391, Ext. 351.
ADMINISTRATION AND CONTROL

Bessemer State Technical College is part of the state system of two-year colleges authorized by the Alabama Legislature under Act No. 93, approved May 3, 1963. This institution is under the supervision of the Alabama State Board of Education. The president of the college is directly responsible to the State Board of Education through the Department of Postsecondary Education, Dr. Fred Gainous, Chancellor.

President ......................................................................................... W. Michael Bailey

Human Resources and Academic Support
Dean of Instruction ................................................................. Ron Moon
Assistant to the Dean, Vocational and Technical Programs .......... Charles Murray
Associate Dean, Transportation Technology ......................... Mike Hobson
Allied Health Programs ............................................................ Bobbie Daniel
Related Studies Department Chair ........................................... Margaret Filipowski
Short-Term and Continuing Education Director ...................... Dennis Winn
Training for Business and Industry ........................................... Al Craig
High School Relations Coordinator ......................................... Rick Sandretto
Library ..................................................................................... Diane Gregg

Student Development Services
Dean of Students ................................................................. Mattie H. Ray
Assistant to the Dean ............................................................ Cynthia Anthony
Career Planning and Job Placement Coordinator .................... Sandra Smith
MIRROR Program Coordinator ............................................. Barbara Hosea-Studdard
Special Needs Coordinator .................................................... Dana Chang
Student Support Services Director ......................................... Claretha Finley
Student Support Services Counselor/Coordinator .................. Elijah Anthony
Director of Admissions ............................................................. Jim Natale
Registrar .............................................................................. Lori Wright
Counselor ................................................................................ Sherry Quan
Counselor ................................................................................ Jerone Levy

Management and Operations
Dean of Finance ..................................................................... Al Cox
Financial Assistance Coordinator ............................................ Deborah Marcus
Bookstore Manager ................................................................. Greg Murray
Bookstore Assistant Manager ................................................ Lillie Pearson
Cafeteria Manager ................................................................. Lesley Romano
Plant Operations Director ..................................................... John Hayes
Plant Operations Assistant Manager ..................................... Cleveland Martin
Inventory Control and Safety Officer ....................................... Joel McFall
Lenette Baker ................................ Office Administration
B.S., M.A., Auburn University

Gale Bearden ................................ Licensed Practical Nursing
B.S., Athens State College; M.A., University of Alabama in Birmingham

Al Blethen .................................. Automotive Service Technology
B.S., Ed., University of Alabama

Carol J. Copeland ........................... Licensed Practical Nursing
B.S., Athens State College

Melissa Crusoe .............................. Office Administration
B.S., M.A., University of Alabama in Birmingham

Bobbie S. Daniel ............................ Licensed Practical Nursing
B.S., Athens State College; M.A.Ed., University of Alabama in Birmingham

Don Daniel .................................. Drafting Technology
B.S., Ed., Athens State College; M.A., University of Alabama in Birmingham

Leevell Dansby .............................. General Motors/ASEP Instructor/Acting Coordinator
B.S., Athens State College

Joy Davis .................................... General Education
B.A., University of Montevallo; M.A., University of Alabama in Tuscaloosa

Charles Ellison ............................. General Education
B.S., M.A., University of Montevallo

Phillip Epps ................................ General Motors/ASEP Instructor

Margaret Filipowski ....................... General Education
B.A., Indiana University; M.A., Valparaiso University

Cynthia Grimes ............................. Licensed Practical Nursing
B.A., University of Alabama in Tuscaloosa;
B.S.N., University of Alabama in Birmingham;
M.A.Ed., University of Montevallo; M.S.N., Troy State University

Jimmy Hall ................................. Air Conditioning and Refrigeration
B.S., Ed., Athens State College

M. C. Hartley .............................. Drafting Technology
B.S., M.A., University of Alabama in Birmingham

Judy House .................................. Office Administration
B.S., M.A., University of Alabama in Birmingham

Judy Johnson ................................ Commercial Art
B.F.A., M.Ed., University of Montevallo

Fred Kapp ................................... Horticulture
B.S., Clemson University; M.A., University of Alabama

Harold Kirkpatrick ......................... Automotive Mechanics
B.S.Ed., Athens State College

Karen Kirkpatrick .......................... Computer Science Technology

Tom Land ................................... Accounting
B.S., Jacksonville State University; M.A., Ed.D., University of Alabama

Roy Ledford ................................. Welding
B.S., Athens State College

David Mitchell ............................. General Motors/ASEP Instructor
B.S., Eastern Kentucky University

Rick Partain ................................. Computer Science Technology
B.S., Samford University; M.S., University of Alabama in Birmingham

Fred Ranelli ................................. Computer Science Technology
B.A., University of Alabama in Birmingham

Clifford Ray ............................... Air Conditioning and Refrigeration
B.S., Ed., Athens State College;
M.S., Alabama Agriculture and Mechanical University

Marie Annette Ray ........................ Student Support Services
B.S., University of Missouri; M.A.T., University of Montevallo

Rich Raymond .............................. Electronics Technology
A.A.T., Bessemer State Technical College

Sharon Romine ............................. Licensed Practical Nursing
B.S.N., M.S.N., University of Alabama in Birmingham

Carol Scroggins ........................... Licensed Practical Nursing
B.S., Athens State College; M.A., University of Alabama in Birmingham

Deborah Smith .............................. Dental Assisting
B.S., M.A., University of Alabama in Birmingham

Robert Smith .............................. Automotive Service Technology
B.A., University of Montevallo

Laura Steadman ............................ Nursing Assistant
B.S.N., Auburn University in Montgomery; M.S.N., Troy State University

Mary Frances Stewart .................... Student Support Services
B.A., Birmingham Southern College, M.A.,
University of Alabama in Birmingham

Judy Stowe ................................. Licensed Practical Nursing
B.S.N., M.A.Ed., M.S.N., University of Alabama in Birmingham

Gorden Thomason ......................... Building Construction Technology
B.S.Ed., Athens State College; M.A., University of Alabama in Birmingham

Chris Tortorici ........................... Automotive Mechanics
B.S., Ed., Athens State College

Barbara Warren .......................... Accounting
B.S. Ed., Auburn University; B.S., Samford University; CPA

Annette Wright ............................ Licensed Practical Nursing
B.S.N., Auburn University; M.S.N., Troy State University

Allen Young ............................... Retailing and Merchandising
B.S., East Tennessee State University; M.A., University of Montevallo
PROGRAMS OF STUDY and COURSE DESCRIPTIONS

GENERAL INFORMATION
The programs of study and course descriptions offered at Bessemer State Technical College are included in this section of the catalog. A specific schedule will be arranged each quarter with the student's faculty advisor.

The theory and laboratory hours listed in the curricula are based on the number of hours the theory classes and laboratory session meet each week. Those hours are computed to determine credit hours for each course. The students quarterly and cumulative grade-point averages are determined by the grade earned for each course on a 4.0 system.

General education courses required vary according to award and major course of study.

Bessemer State Technical College identifies each course offered by catalog numbers which are composed of a three-letter prefix and three numerals. The prefix is an abbreviation of the program title. Course descriptions for each program are listed in numerical order.

The college may substitute courses when necessary with the approval of the Dean. The college reserves the right to revise program requirements, and/or withdraw any course for which there is insufficient student demand.

ABBREVIATIONS
The following are the official catalog course abbreviations used by Bessemer State Technical College.

- Accounting Technology: ACT
- Air Conditioning/Refrigeration: ACR
- Automotive Mechanics: AUM
- Automotive Service Technology: ASE
- Building Construction: BUC
- Building Maintenance: BLM
- Commercial Art/Photography: CAT
- Computer Science: DPT
- Data Entry: DPT
- Dental Assisting: DAT
- Diesel Mechanics: DEM
- Drafting and Design: DDT
- Electronics: ILT
- Emergency Medical Technician: EMT
- English: COM, SSS, VTE
- Graphics and Printing: GPC
- Horticulture, Ornamental: OHT
- Humanities: HMN
- Industrial Maintenance: INT
- Licensed Practical Nursing: LPN
- Machine Tool Technology: MTT
- Mathematics: MAH, SSS, VTM
- Nursing Assistant: NAS
- Office Administration: SET
- Orientation: ORN
- Physics: PHC
- Psychology: PSH
- Retail Merchandising: REM
- Speech: SPC
- Student Support Services: SSS
- Welding: WDT
The Accounting Technology program is designed to teach, through a sequence of experiences, those students interested in learning accounting skills. Fundamental accounting principles and procedures, cost accounting, income tax procedures, payroll accounting, auditing concepts, and the use of microcomputers in accounting are presented in detail. Students usually complete the Associate Degree Program in six (6) quarters.

**Course Descriptions**

**ACT 110** Introduction to Accounting  Computer Resources  5 0 5
**ACT 111** Accounting I  5 0 5
**ACT 112** Payroll Accounting  5 0 5
**ACT 121** Accounting II  5 0 5
**ACT 122** Income Tax I  5 0 5
**ACT 123** Cost Accounting  5 0 5
**ACT 131** Accounting III  5 0 5
**ACT 132** Income Tax II  5 0 5
**ACT 133** Microcomputer Accounting  5 0 5
**ACT 140** Intermediate Accounting  5 0 5
**ACT 141** Managerial Accounting I  5 0 5
**ACT 210** Managerial Accounting II  5 0 5
**ACT 211** Auditing  5 0 5
**ACT 212** Governmental Accounting  5 0 5
**ACT 220** Accounting Case Studies  5 0 5
**COM 101** English Composition I  5 0 5
**COM 102** English Composition II  5 0 5
**COM 106** Fundamentals of Speech Communication  5 0 5
**FOH 270** Business & Industrial Psychology  5 0 5
**MAH 101** College Mathematics  5 0 5
**MAH 102** Business Mathematics  5 0 5
**MAH 103** College Mathematics  5 0 5
**MAH 104** Business Mathematics  5 0 5

**Required General Education Courses:**

- **HMN 100** Humanities Forum (3 courses)  3 0 3
- **MAH 100** College Mathematics  5 0 5
- **MAH 102** Business Mathematics  5 0 5
- **PSH 270** Business & Industrial Psychology  5 0 5
- **COM 101** English Composition I  5 0 5
- **SPC 106** Fundamentals of Speech Communication  5 0 5
- **COM 102** English Composition II  5 0 5

**TOTAL CREDIT HOURS 113**
ACT 132 INCOME TAX II, 5 CREDITS.
A study of the procedures and principles of business, corporate, and partnership taxation, and preparation of these tax returns. Attention is also given to special tax problems which may be encountered. PREREQUISITE: ACT 122

ACT 133 MICROCOMPUTER ACCOUNTING, 5 CREDITS.
An introduction to the utilization of microcomputers in the accounting environment using Peachtree for Windows accounting software. Transactions will be recorded involving the general journal, invoicing, cash receipts, purchasing, accounts payable/receivable, and payroll. PREREQUISITE: ACT 111

ACT 140 INTERMEDIATE ACCOUNTING, 5 CREDITS.
A continuation of the study of financial accounting with emphasis on selected accounting topics. PREREQUISITES: ACT 111, ACT 121, and ACT 131

ACT 141 MANAGERIAL ACCOUNTING I, 5 CREDITS.
This course examines the managerial accounting environment, the concept of costs and cost accounting systems, cost behavior and estimation, cost-volume-profit relationships, relevant information and decision making and budgeting. PREREQUISITE: ACT 111

ACT 210 MANAGERIAL ACCOUNTING II, 5 CREDITS.
A continuation of Managerial Accounting I (ACT 224). Emphasis is placed on standard cost systems, differential analysis, project evaluation, and quantitative techniques for decisions. PREREQUISITE: ACT 141

ACT 211 AUDITING, 5 CREDITS.
An introduction to the concepts and procedures for external public sector auditing by independent certified public accountants. Emphasis is placed on the actual procedures to be used, the resulting reports to be written, and the accounting standards to be followed. PREREQUISITES: ACT 111, ACT 121 and ACT 131

ACT 212 GOVERNMENTAL ACCOUNTING, 5 CREDITS.
An introduction to the principles, concepts, and practices of accounting for governmental and non-profit organizations. The course is designed to provide the student with a basic understanding of fund accounting and its utilisations in governmental agencies, colleges and universities, hospitals, and other non-profit organizations. PREREQUISITE: ACT 111 and ACT 121

ACT 220 ACCOUNTING CASE STUDIES, 5 Credits.
Practical application of previously acquired accounting knowledge through a series of case studies. The case studies method of learning places emphasis on the preparation for, and classroom discussion of a situation which is described in the case. PREREQUISITES: ACT 111, ACT 121, ACT 131, and ACT 141 or ACT 123.

AIR CONDITIONING/REFRIGERATION (ACR)
The Air Conditioning/Refrigeration program is designed to provide the learner with the necessary knowledge and skills to enter the world of work. The instructional process begins with the fundamentals of refrigeration and electricity. Other course material focuses on system operational sequences, diagnosis, service, repair, and installation. Information, assignment and job sheets are provided to guide the student through all phases of the program. Students usually complete the Diploma Program in six quarters.

AIR CONDITIONING/REFRIGERATION
Diploma Program

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>THEORY</th>
<th>LAB</th>
<th>CR. HR.</th>
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</thead>
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<tr>
<td>ACR 111</td>
<td>Basic Refrigeration</td>
<td>2</td>
<td>6</td>
<td>4</td>
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<tr>
<td>ACR 112</td>
<td>Duct Design &amp; Air Distribution</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 113</td>
<td>Basic Electricity for A/C</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 114</td>
<td>Load Calculations</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 121</td>
<td>Piping &amp; Brazing</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 122</td>
<td>Wiring Diagrams</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 131</td>
<td>Cooling System Service</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 132</td>
<td>Heating: Electric &amp; Gas</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 141</td>
<td>Psychrometrics</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 142</td>
<td>Ice Machines</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 144</td>
<td>Advanced Troubleshooting</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 212</td>
<td>Refrigeration Service</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>ACR 222</td>
<td>Heat Pumps</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

Choose one of the following:

- ACR 105 Computer Assisted Troubleshooting 4
- ACR 145 Proper Refrigerant Practices 2 6 4
- ACR 203 Certification Review for Contractors 2 6 4

Required General Education Courses:

- VTE 101 Technical Communication Skills 5 5 5
- VTM 101 Technical Mathematics 5 5 5

Total Credit Hours 66

AIR CONDITIONING/REFRIGERATION
Certificate Program

<table>
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<tr>
<th>COURSE</th>
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<th>CR. HR.</th>
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<tr>
<td>ACR 111</td>
<td>Basic Refrigeration</td>
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</tr>
<tr>
<td>ACR 113</td>
<td>Basic Electricity for A/C</td>
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<td>6</td>
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<tr>
<td>ACR 121</td>
<td>Piping &amp; Brazing</td>
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<tr>
<td>ACR 122</td>
<td>Wiring Diagrams</td>
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<td>6</td>
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<tr>
<td>ACR 132</td>
<td>Heating: Electric &amp; Gas</td>
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<tr>
<td>ACR 144</td>
<td>Advanced Troubleshooting</td>
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<td>6</td>
<td>4</td>
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<tr>
<td>ACR 222</td>
<td>Heat Pumps</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

Required General Education Courses:

- VTE 101 Technical Communication Skills 5 5 5
- VTM 101 Technical Mathematics 5 5 5

Total Credit Hours 42

Optional Related Courses:

- ACR 143 Troubleshooting for HVAC 1 3 2
- ACR 145 Proper Refrigerant Practices 2 6 4
- ACR 221 Business Practice and Introduction to DELTA 21 1 3 2
- ACR 203 Certification Review for Contractors 2 6 4
- BLM 120 Plumbing I 2 6 4
- ILT 111 DC Fundamentals 4 6 6
- ILT 133 Residential Wiring 5 2 6
- WDT 111 Basic Shielded Metal Arc Welding - Part I 1.5 6 3.5

Total Credit Hours 42

PROGRAMS OF STUDY and COURSE DESCRIPTIONS 27
Course Descriptions

ACR 105 Computer Assisted Troubleshooting, 4 credits.
This course is designed to enhance the student's knowledge of the proper troubleshooting procedures to identify system electrical and mechanical malfunctions.

ACR 111 Basic Refrigeration, 4 credits.
This course is the foundation for the Air Conditioning and Refrigeration program. Instruction is provided in the theory and principles of refrigeration, refrigeration system components, the mechanical cycle of operation, and refrigerant characteristics.

ACR 112 Duct Design and Air Distribution, 4 credits.
This course is designed to introduce the student to the basic principles of residential duct design. The student will determine appropriate sizing for various duct systems. This course also provides instruction on duct construction and CFM calculations and measurements.

ACR 113 Basic Electricity for A/C, 4 credits.
This course is designed to provide the student with the basic knowledge of electrical theory and circuitry as it pertains to air conditioning and refrigeration. The course also provides detailed instruction on the use of various electrical meters used in the HVAC industry. Electrical symbols and basic wiring diagrams are emphasized during this course.

ACR 114 Load Calculations, 4 credits.
This course is designed to introduce the student to procedures which can be used to estimate the heat gain and heat loss of structures for both residential and commercial structures. The students will determine the correct size of equipment that should be installed in a particular structure using the manual "J" for residential and the manual "N" for commercial structures.

ACR 121 Piping and Brazing, 4 credits.
This course is designed to provide the student with an in-depth knowledge of tubing characteristics, types and applications, and the procedures used in flaring, swagging, and brazing. Various types of fittings are also covered. PREREQUISITE: ACR 111

ACR 122 Wiring Diagrams, 4 credits.
This course is a step-by-step approach to reading, understanding, troubleshooting, and developing installation pictorial and schematic wiring diagrams for HVAC (heating, ventilating, and air conditioning) equipment. PREREQUISITES: ACR 111 and ACR 113

ACR 131 Cooling System Service, 4 credits.
The primary focal point of this course is residential and commercial comfort cooling. The course provides detailed instruction in mechanical and electrical operational sequences, general service procedures, system diagnosis and corrective measures, methods of leak detection, system evacuation, charging, and performance checks, and basic installation procedures. PREREQUISITES: ACR 111 and ACR 113

ACR 132 Heating: Electric and Gas, 4 credits.
This course covers the fundamentals of electric and gas furnaces—components, operational sequences, general service procedures, system diagnosis, repair, and basic installation procedures. PREREQUISITES: ACR 111 and ACR 113

ACR 141 Psychrometrics, 4 credits.
This is a systematic study of the properties (conditions) of air as it relates to the design features and performance of comfort cooling and heating systems. PREREQUISITES: ACR 111 and ACR 113

ACR 142 Ice Machines, 4 credits.
This course is designed to introduce the student to the components, electrical/mechanical operational sequences, control adjustment procedures, preventive maintenance, repair, and installation of ice machines. PREREQUISITES: ACR 111 and ACR 113

ACR 143 Troubleshooting for HVAC, 2 credits.
This course is designed to provide students with troubleshooting skills and practices relating to various types of HVAC equipment. PREREQUISITES: ACR 111 and ACR 113

ACR 144 Advanced Troubleshooting, 4 credits
This course is designed to provide the student with an overview of the diagnosis, repair and service procedures for all cooling and heating systems that are covered in the air conditioning/refrigeration program. PREREQUISITES: ACR 111 and ACR 113

ACR 145 Proper Refrigerant Practices, 4 credits.
This course is designed to provide the students with current EPA regulations pertaining to refrigerant handling. The students also receive instruction and application in the use of various recovery/recycling units.

ACR 212 Refrigeration Service, 4 credits.
A distinct line is drawn between comfort cooling and product preservation. This course focuses on the components, operational sequences, pressure/temperature readings, charging procedures, system diagnosis, and repair for specific medium and low temperature refrigeration systems. PREREQUISITES: ACR 111 and ACR 113

ACR 221 Business Practices and Introduction to Delta 21, 2 credits.
A course designed to provide the student with the basic concepts of customer relations, supply house procedures, preparing/presenting customer invoices, business licenses, and the use of computerized systems for energy management. PREREQUISITES: ACR 111 and ACR 113

ACR 222 Heat Pumps, 4 credits.
This is a comprehensive study of heat pump components, electrical/mechanical operational sequences, system diagnosis, repair, supplemental heat, and installation procedures. PREREQUISITES: ACR 111 and ACR 113

ACR 203 Certification Review for Contractors, 4 credits.
This course is designed to cover subject materials that relate to requirements to be a certified contractor. The course does not qualify the student as a certified contractor, but assists toward becoming a certified contractor. The course will cover subject material of Standard Mechanical Code, Standard Gas Code, Safety Code, Duct Design, HVAC/R General, Mechanical Safety Code, Piping, HVAC/R Controls, HVAC/R Insulation, Refrigeration Maintenance, System Sizing, and Application.
AUTOMOTIVE MECHANICS (AUM)

The Automotive Mechanics program teaches the student to diagnose mechanical problems and to make necessary repairs to all components of the automobile. The program is designed to teach students to immediately apply their newly gained knowledge in shop experiences. Students usually complete the Diploma program in six quarters.

AUTOMOTIVE MECHANICS
Diploma Program

<table>
<thead>
<tr>
<th>COURSE</th>
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<th>THEORY</th>
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<td>Engine Repair</td>
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<td>13</td>
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<td>AUM120</td>
<td>Brakes</td>
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<tr>
<td>AUM123</td>
<td>Suspension and Steering</td>
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<td>10</td>
<td>7</td>
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<tr>
<td>AUM130</td>
<td>Manual Transmissions and Transaxles</td>
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<tr>
<td>AUM132</td>
<td>Automotive Heating and Air Conditioning</td>
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<td>AUM140</td>
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<tr>
<td>AUM211</td>
<td>Electrical Systems</td>
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Required General Education Courses:

- VTM 101 Technical Mathematics 5 5 5
- VTE 101 Technical Communication Skills 5 5 5

Total Credit Hours 80

AUTOMOTIVE MECHANICS
Certificate Program

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Optional Related Courses:

- AUM 133 Automotive Air Conditioning 3 6 4.5
- AUM 134 Differentials and Drive Lines 3 6 4.5
- AUM 220 Emission Controls 3 6 4.5
- AUM 222 Tune-up and Testing 3 6 4.5
- AUM 223 Fuel and Exhaust Systems 3 6 4.5
- VTE 101 Technical Communication Skills 5 5 5
- VTM 101 Technical Mathematics 5 5 5

Total Credit Hours 45.5

Course Descriptions

AUM 110 Basic Mechanics, 5 credits.
This course is designed to provide the student the basic and fundamental knowledge of the automotive shop, safety in the shop, tools and equipment, and various systems on the automobile.

AUM 111 Engine Repair, 9 credits.
This course is designed to provide the student with the basic and fundamental knowledge of automotive engines, engine related systems, removal and replacement, and overhaul procedures. The course also provides the student with the opportunity to practice the skills necessary to safely machine parts and disassemble and reassemble automotive engines.

AUM 112 Engines I, 4.5 credits.
A study of engine construction, including types, cylinder arrangements, valve arrangements, engine cooling systems and lubricating systems.

AUM 113 Engines II, 4.5 credits.
The student studies engine operation, measurements and performance, pistons, rings, valves and connecting rods, and learns the proper methods of grinding valves and seats.

AUM 120 Brakes, 7 credits.
A detailed study of types of braking systems, their components, service requirements and machining of brake drums and rotors. The course also provides the student an opportunity to practice the skills necessary for the service of vacuum, manual and hydraulic power brakes as well as ABS systems.

AUM 122 Hydraulic Brakes, 4.5 credits.
A detailed study of types of braking systems and their service requirements, machine turning of brake drums and rotors, and vacuum power brakes.

AUM 123 Suspension and Steering, 7 credits.
A study of suspension design, front end and rear suspension components, front end and rear suspension geometry, steering, and types and construction of tires. The course also provides the student an opportunity to practice the skills necessary to diagnose, service, and align front and rear suspension and to balance tires.

AUM 124 Front End and Steering I, 4.5 credits.
The student learns to service and align front suspension and to replace and service steering sectors and linkage.

AUM 125 Front End and Steering II, 4.5 credits.
A continuation of the study of front end and steering.

AUM 130 Manual Transmissions and Transaxles, 7 credits.
A study of drive shafts, universal joints, rear axles, differentials, bearings, seals, types and construction of clutches, synchronesh transmissions, transaxles and transfer cases. The course also provides the student an opportunity to practice the skills necessary for removal, overhaul and replacement of clutches, synchronesh transmissions, transaxles, transfer cases, drive shafts, differential and axles.

AUM 131 Clutches and Standard Transmissions, 4.5 credits.
An in-depth study of types and construction of clutches, service, and troubleshooting.

AUM 132 Automotive Heating and Air Conditioning, 7 credits.
A study of fundamentals and principles of the operation and construction of the automotive air conditioning and heating systems. The course provides the student an opportunity to practice the skills necessary to perform compressor overhaul and air conditioning service work.
AUM 133 AUTOMOTIVE AIR CONDITIONING, 4.5 CREDITS
A study of the fundamentals and principles in the construction and operation of automotive air conditioning systems.

AUM 134 DIFFERENTIALS AND DRIVE LINES, 4.5 CREDITS
A study of drive shafts, universal joints, rear axles, differentials, bearings and seals.

AUM 140 AUTOMATIC TRANSMISSION AND TRANSAXLES, 8 CREDITS
A study of construction, operation, and service of automatic transmissions including hydraulics. The course also provides the student an opportunity to practice the skills necessary for disassembly and reassembly, making all necessary repairs, services, and adjustments.

AUM 141 AUTOMATIC TRANSMISSION AND TRANSAXLES I, 4.5 CREDITS
A course designed to provide the student with an understanding of the construction and operation of automatic transmissions. Includes hydraulics, fluid couplings, planetary gear systems, governor control valves, clutch units, servos and bands.

AUM 142 AUTOMATIC TRANSMISSION AND TRANSAXLES II, 4.5 CREDITS.
A continuation of the study of automatic transmissions to include methods of disassembly and assembly and making necessary repairs and adjustments.

AUM 210 AUTOMOTIVE ELECTRICITY, 4.5 CREDITS
A course that includes fundamentals of electricity and magnetism, basic circuitry, and electrical charging systems.

AUM 211 ELECTRICAL SYSTEMS, 8 CREDITS.
This course is designed to provide the student the fundamentals of electricity, automobile electrical systems and components and time to practice skills necessary to diagnose and repair automotive electrical systems.

AUM 212 FUNDAMENTALS OF COMPUTER COMMAND CONTROL, 4.5 CREDITS.
The student will be presented with an in-depth and comprehensive study of the General Motors Fuel Systems in use since 1980, including Computer Command Controls Systems. Since an understanding of basic electronics is essential to the subject matter, the course will include a review of the principles of electricity and magnetism, and will advance into current automotive electronics, circuitry and theory. The student will study the details of on board computer systems, input sensors and output actuator devices. This course will also include a detailed study of GM feedback carburetors, including overhaul procedures and external adjustments procedures. The last segment of the course will direct study toward use of diagnostic equipment, interpretation of the on board computer data stream, and scan tool usage.

AUM 214 FUNDAMENTALS OF FORD ELECTRONIC ENGINE CONTROLS, 4.5 CREDITS.
This course will provide the participant with theory and operation of Ford Electronic Engine Controls. Course material evolves from Ford's First Generation System (E.E.C.-I) through the Fourth Generation System (E.E.C.-IV) with primary emphasis on all aspects of the E.E.C.-IV system. Participants will gain knowledge in Ford Feedback Carburetion Electronic Fuel Injection, T.F.I. ignition, distributorless ignition and other related emission systems. This course will include a multitude of "hands-on" activities to support practical diagnosis and testing procedures.

AUM 215 FUNDAMENTALS OF GM FUEL INJECTION SYSTEMS, 4.5 CREDITS.
A fundamental course in the principles of General Motors fuel injection systems. The course begins with an introduction to GM fuel injection systems, both throttle body (T.B.I.) and port fuel injection (P.F.I.). The student will study microprocessor controls of fuel injection systems including diagnostic procedures and repair. The course will include a basic study of distributorless ignition systems (D.I.S.). The student will practice troubleshooting and diagnostic procedures for the General Motors fuel injection systems including use of various scan tools. PREREQUISITE: AUM 212.

AUM 220 EMISSION CONTROL, 4.5 CREDITS
This course provides the student with knowledge necessary to understand automotive emission control systems and the effects automotive emissions have on the environment.

AUM 221 ENGINE PERFORMANCE, 12 CREDITS.
This course is designed to provide the technical knowledge necessary for testing and diagnosing malfunctions in the ignition system, fuel system, and emission control systems. This course includes various types of systems—point type, solid-state, computer-controlled, and distributorless ignition systems, carburetor systems, manual and feedback types, fuel injection—and the various types of emission control systems that are used to protect the environment. The course also provides the student an opportunity to practice the skills in the use of mechanical and electrical testing equipment and procedures to diagnose malfunctions in the ignition system, fuel system, and emission control system and to remove, repair, and/or replace components of those systems. PREREQUISITE: AUM 221.

AUM 222 TUNE-UP AND TESTING, 4.5 CREDITS
The student becomes familiar with mechanical and electrical testing equipment used to diagnose malfunctions of the ignition system and to determine the general condition of the engine. The purpose of this course is to provide the student the knowledge necessary to understand automotive emission control systems and the effects automotive emissions have on our environment.

AUM 223 FUEL AND EXHAUST SYSTEMS, 4.5 CREDITS.
A study of the components of the fuel system including lines, pumps, and carburetors; and components of the exhaust system including manifolds, exhaust pipes, mufflers, resonators and tail pipes.

AUTOMOTIVE SERVICE TECHNOLOGY (ASE)
GM, FORD AND TOYOTA

The General Motors Automotive Service Educational Program (ASEP), the Toyota Technical Education Network (T-TEN) Program, and the Ford Motor Company Automotive Student Service Educational Training Program (ASSET), are two-year automotive programs designed to upgrade the technical competence and professional level of the incoming dealership technician. The curriculum is designed by General Motors, Toyota, Ford and Bessemer State Technical College and leads to an Associate Degree in Automotive Service Technology. The program involves attending on-campus classroom and laboratory sessions and on-the-job work experience through a sponsoring dealership. Content of the courses differs in product specific application as it relates to General Motors, Toyota or Ford models.
### GENERAL MOTORS ASEP PROGRAM

**Associate in Applied Technology**

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**Total Credit Hours** 114

### FORD ASSET PROGRAM

**Associate in Applied Technology**

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**Required General Education Courses:**

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<th>COURSE</th>
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**Total Credit Hours** 114

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**Programs of Study and Course Descriptions**

31
ASE 10 Shop Safety and Environmental Practices, 1 credit.
The student will be introduced to dealership service procedures and tech-
niques with an emphasis on safety, accident prevention and emergency
procedures. The student will practice the correct and safe use of shop
equipment and hand tools, and will learn proper environmental practices,
waste handling, chemical spill and containment procedures.

ASE 111 Automotive Electricity, 3 credits.
An introduction to the fundamental laws of electricity and the principles of
magnetism and induction. Included is a study of Ohm’s Law and Kirchoff’s
Laws of Electricity, electrical circuit schematic reading, wire repair, the
proper use of electrical test equipment, together with a study of the
automotive batteries, starting systems and charging systems in current use
by major automobile manufacturers.

ASE 112 Electrical Accessories, 3 credits.
This course provides a study of electrical troubleshooting and repair
techniques currently used in the removal and replacement of automotive
accessories. The use of wiring diagrams and special service tools described
in current service manuals are included.

ASE 121 Braking Systems, 3 credits.
A study of brake and brake control systems, including brake system
hardware and hydraulics. The student will practice approved brake service
procedures. System diagnosis and troubleshooting methods. Includes is a
study of anti-lock brake and traction control systems such as RIVAL, 4WAL,
Bosch and Delco. In addition the course will include a study of the on-board
computers and sensors that control these systems. PREREQUISITES: ASE
111 and ASE 112

ASE 122 Steering, Suspension and Alignment, 3 credits.
This course provides a study of conventional and strut-type suspension
systems, and rack and pinion steering systems. The student will develop
approaches to diagnosing and repairing steering and suspension systems
and will apply vehicle wheel alignment procedures.

ASE 131 Engines, 3 credits.
A study of the internal combustion automobile engine with emphasis on the
engines currently in use by major automobile manufacturers. The student
will be introduced to engine construction types, valve and camshaft arrange-
ments, cooling systems, lubrication systems and aspiration systems, includ-
ing turbocharging and supercharging. The student will apply engine
teardown/reassembly methods, measurement techniques, part wear/failure
analysis methods and will practice approved engine testing methods in the
laboratory.

ASE 132 Air Conditioning Systems, 3 credits.
A study of the principles of refrigeration and the heating and air conditioning
systems currently used by major automobile manufacturers, including
manual, semi-automatic, and automatic systems. The course will includes
details of the electrical control circuits for the compressor clutch, blower
motor, and coolant fan(s). The description, purpose and function of air
conditioning system components are explained in this course. Service and
repair procedures are presented and practiced by the student. Safety
procedures for handling R-12 are discussed. Environmental issues, refriger-
ant recycling methods and procedures are emphasized. PREREQUISITES:
ASE 111 and ASE 112

ASE 141 Power Train Fundamentals, 7 credits.
A study of the current methods and components used to deliver power from
the engine to the drive shafts. The course includes a study of powerflow in
the manual transmission/transaxle, gear ratios, clutch systems, drivelines,
ASE 211 Specialized Electronics, 4 credits.
This course is designed to build on the principles and laws of electricity studied in ASE 111 and will progress into a study of solid state devices, diodes, transistors, variable resistors, bipolar transistor switching circuits, light emitting diodes, vacuum fluorescent displays and silicon controlled rectifiers. PREREQUISITES: ASE 111, ASE 112, and MAH 154 (or) approved alternate

ASE 212 Automotive Microprocessors, 4 credits.
A study of on-board computer systems (ECM), including multiple computer applications and multiplexing circuits. Applications to be covered include body computers (BCM), instrument panel computers (IPC), vehicle control modules (VCM) and powertrain control modules (PCM). The course will also include an introduction to the principles of microprocessors, central processing units (CPU), binary numbering systems, logic circuits, inputs, outputs, analog/digital converters, data stream, interpretations and future computer application considerations. COREQUISITE: ASE 211

ASE 221 Fuel and Ignition Systems, 4 credits.
A fundamental course in the principles of contemporary fuel systems, beginning with a review of traditional aspiration and fuel delivery methods and an introduction to the principles of electronic ignition systems. The student will progress into a detailed study of closed loop fuel systems and will be introduced to Electronic Fuel Injection Systems. The student will practice diagnostic techniques and repair procedures for current production ignition systems including traditional distributor and distributorless spark systems. PREREQUISITES: ASE 111 and ASE 112

ASE 222 Emission Controls, 4 credits.
A study of the exhaust and evaporative emissions produced by the modern automobile that affect the environment and the emission control systems developed and used by major automobile manufacturers to control pollutants. The student will be introduced to the current federal regulations that influence the design and production of the automobile (EPA Regulations) and he/she will study the various devices that are used to meet these regulations. Emission device testing procedures will be developed and the student will practice troubleshooting methods for these devices. COREQUISITE: ASE 221

ASE 231 Advanced Fuel and Ignition Systems, 4 credits.
This course is an advanced study of the fuel and ignition management systems presently used by major automobile manufacturers to meet present day EPA mandated emission, fuel economy and performance requirements. The course includes an in-depth study of Electronic Fuel Injection including on Board Diagnostic - Generation II. Included will be detailed studies of the components that make up these system(s), diagnostic procedures such as Strategy Based Diagnostics, on car test procedures and methods presently used to interpret the data available from on board computer systems. The student will be introduced to the use of Electronic Service Information (ESI) and current generation diagnostic tools and platforms. PREREQUISITES: ASE 211 and ASE 221

ASE 232 Engine Performance Testing, 4 credits.
A study of engine performance testing methods and the testing equipment presently approved for diagnostic troubleshooting. The course includes a study of engine analyzers (oscilloscopes), interpretation of oscilloscope patterns and waveforms and the use of other diagnostic information that is available from current engine analyzers and approved diagnostic equipment. The application and use of other accepted diagnostic tools also are included e.g., Tech1, Tech 2, Techline Terminals, vehicle service monitors (VSM) or data recording devices. PREREQUISITES: ASE 211 and ASE 221

ASE 241 Automatic Transmission/Transaxle, 6 credits.
This course builds on the principles of power flow studied in ASE 141 and progresses into the construction, design, and repair of the automatic transmission and automatic transaxle. The student will remove, disassemble and repair transmission/transaxle assemblies and will study the torque converter clutch, torque converter clutch circuits, both hydraulic and electrical, and study the computer logic approaches that are used to enable/disable the TCC. The student will be introduced to current generation electronically shifted units, electronic control units and their various sensors and inputs. PREREQUISITE: ASE 141

ASE 242 Product Update, 2 credits.
This course will include available current year model automotive product training classes, such as new model familiarization and current high priority update courses offered in the major automobile training centers. Course content will change with each new year model change to ensure that the student receives the most up-to-date information possible prior to graduation from the program. PREREQUISITE: 7th Quarter Standing

ASE 150 - ASE 280 Dealership Work Experience, 1.5 credits.
At the end of each on-campus instruction period, the student returns to the sponsoring dealership to complete this segment of the program, under the supervision of the dealership student work coordinator. During this student internship period the student works full-time with the sponsoring dealership. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. An evaluation of the student's in dealership work performance and progress is completed by the dealership supervisor.
BUC 132 Construction Print Reading III 5 0 5
BUC 133 Plans, Specifications & Codes 5 0 5
BUC 141 On-Grade Concrete Systems 3 4 5
BUC 142 Estimating 5 0 5
BUC 143 Above Grade Concrete Systems 3 4 5
BUC 211 Metals, Sheetrock & Metal Studs 3 4 5
BUC 212 Construction Sketching & Detailing I 3 0 3
BUC 213 Construction Sketching & Detailing II 3 0 3
BUC 221 Field Problems 5 0 5

Required General Education Courses:

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Total Credit Hours 113

BUILDING CONSTRUCTION
Residential or Commercial Certificate Program

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Total Credit Hours 38

Select two of the following print reading courses:

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<td>BUC 122</td>
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<td>BUC 141</td>
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Course Descriptions

BUC 110 Construction Basics I, 5 credits.
The purpose of this course is to provide the student with an understanding and knowledge of construction safety and the various types of tools and materials and the technical knowledge associated with the industry.

BUC 111 Construction Basics II, 4 credits.
The purpose of this course is to provide the student with an understanding and knowledge of the builder’s level, transit, differential leveling procedures, and basic site layout techniques. PREREQUISITE: BUC 110

BUC 112 Construction Basics III, 4 credits.
The purpose of this course is to provide the student with an understanding and knowledge of the math required for the general building construction functions. PREREQUISITES: BUC 110

BUC 113 Construction Print Reading I, 5 credits.
The purpose of this course is to provide the technical knowledge required to read basic construction blueprints and provide adequate opportunity to practice those skills by the employment of true-to-life architectural residential drawings.

BUC 121 Foundations and Framing, 5 credits.
The purpose of this course is to provide the student with an understanding and appreciation of the basic components of construction and technical knowledge such as site identification, building layout for foundations and basic construction framing for floors, walls and roof systems.

BUC 122 Construction Print Reading II, 5 credits.
The purpose of this course is to provide the technical knowledge required to read construction blueprints and provide adequate opportunity to practice those skills by the employment of true-to-life architectural working drawings for residential and light commercial applications. PREREQUISITES: BUC 113

BUC 131 Interior and Exterior Finish & Trim, 5 credits.
This course is designed to provide the student an in-depth understanding of interior and exterior framing for finishes, construction finishes, trim, and hardware installation.

BUC 132 Construction Print Reading III, 5 credits.
The purpose of this course is to provide the technical knowledge required to read construction blueprints and provide adequate opportunity to practice those skills by the employment of true-to-life architectural working for light commercial to multi-story high-rise drawings. PREREQUISITES: BUC 113 and 122

BUC 133 Plans, Specifications & Codes, 5 credits.
The purpose of this course is to provide the student with an understanding of the components of construction and the technical knowledge associated with building codes, real estate, and scheduling.

BUC 141 On-Grade Concrete Systems, 5 credits.
The purpose of this course is to provide the student with the technical knowledge required to design on grade concrete forms and to provide practice in constructing the forms.

BUC 142 Estimating, 5 credits.
The purpose of this course is to provide the student with a foundation for construction estimating using simulated construction jobs from a supervisor’s perspective. PREREQUISITE: BUC 112

BUC 143 Above-Grade Concrete Systems, 5 credits.
The purpose of this course is to provide the student with the technical knowledge required to design concrete forms and to provide practice in constructing above grade concrete forms.

BUC 211 Metals, Sheetrock & Metal Studs, 5 credits.
The purpose of this course is to provide the student with the technical knowledge and understanding of structural steel and metals used in construction and to provide an opportunity to practice the skills necessary to perform these tasks and install drywall.

BUC 212 Construction Sketching & Detailing I, 3 credits.
Introductory drafting techniques and procedures are presented to include lettering, line work, instrument use, and geometric construction techniques as basics. Also, multiview orthographic projection, sectioning, and dimensioning, concepts are addressed. A drafting project relevant to the students area of specialization will be completed.
BUC 213 CONSTRUCTION SKETCHING & DETAILING II, 3 CREDITS.
This course is an extension of BUC 212. Students are introduced to basic residential planning, light construction principles, and architectural detailing techniques. Students will be required to draft a set of working drawings of a residence they have designed. PREREQUISITE: BUC 212

BUC 221 FIELD PROBLEMS, 5 CREDITS.
This is a directed studies course that allows the student to research construction field problems. While the basics of construction are standard, there are many new tools, techniques, and material applications which support major segments of the industry. This course is intended to allow the student to investigate new technological advancement of the industry and to explore those areas. Topics chosen in this course must be construction field oriented as opposed to office application.

BUC 210 CURRENT TOPICS, 2 CREDITS.
This is a survey of current trends and developing technology for the construction technician. This optional course will help students develop new skills or specialization in the ever progressive and energizing field of construction. Possible topics include, but are not limited to: Field Engineering, Ironwork and Welding for Construction, Concrete System Design, Materials and Methods of Construction, Residential Steel Framing, Construction Scheduling, and Sketching for Builders.

BUC 220 SPECIAL PROBLEMS, 5 CREDITS.
This course is intended to allow the student to investigate new technological advances in the industry and to explore those areas.

BUILDING MAINTENANCE (BLM)

Building Maintenance includes theory, laboratory experiences, and live work projects relative to the repair, alteration, and modernization of existing structures. Students completing the nine-month course will qualify to enter the maintenance field in several job areas: industrial, commercial, institutional as well as apartment and condominium buildings. The college also offers specialty certificate programs in carpentry, electrical, and plumbing. Students usually complete the program in three quarters.

BUILDING MAINTENANCE - PLUMBING Certificate Program

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Required General Education Courses:

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Total Credit Hours: 22

Optional Related Course:

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Course Descriptions

BLM 110 BASIC ELECTRICITY FOR A/C, 4 CREDITS.
This course is designed to provide the student with the basic knowledge of electrical theory and circuitry as it pertains to air conditioning and refrigeration. The course also provides detailed instruction on the use of various electrical meters used in the HVAC industry. Electrical symbols and basic wiring diagrams are emphasized during this course.

BLM 111 BASIC REFRIGERATION, 4 CREDITS.
This course provides instruction in the theory and principles of refrigeration, refrigeration system components, the mechanical cycle of operation, and refrigerant characteristics.

BLM 120 PLUMBING I, 4 CREDITS.
Lecture and practical lab exercises in the basic skills needed to be a maintenance plumber. Job safety, plumbing materials and plumbing tools are studied in detail.

BLM 122 GENERAL MAINTENANCE, 5 CREDITS.
This course is designed to provide the student with the basic skills and technical knowledge necessary to maintain commercial facilities. Instruction will include the use of relevant hand tools, floor and carpet maintenance, glazing and painting interior and exterior surfaces.

BLM 130 PLUMBING II, 4 CREDITS.
A continuation of the skills learned in Plumbing I. The joining, installing, and supporting of different type pipes are emphasized. Sizing of sanitary drainage and vent piping is also studied.

BLM 140 PLUMBING III, 4 CREDITS.
A study of water supplies, plumbing fixtures, and appliances. The student also learns testing and inspection procedures.

TOTAL CREDIT HOURS 48

PROGRAMS OF STUDY and COURSE DESCRIPTIONS 35
The Commercial Art program at Bessemer State Technical College enhances and maximizes artistic skills for persons who desire to work in this career field. Sources of employment are advertising agencies, advertising departments, art studios, mass media (newspapers and TV), printers and publishers, and as free-lance commercial artist. Speciality certificate programs in Advertising and Design and Commercial Photography are offered in the evening program.

Students usually complete the Diploma program in six quarters.

COMMERCIAL ART

Diploma Program

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<td>CAT 215</td>
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<td>GPC 122</td>
<td>Composition &amp; Paste-up</td>
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<tr>
<td>GPC 124</td>
<td>Graphic Imaging</td>
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<tr>
<td>GPC 136</td>
<td>Estimating</td>
<td>2</td>
<td>6</td>
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Required General Education Courses:

| VTE 101 | Technical Communication Skills | 5 | 5 | 5 |
| VTM 101 | Technical Mathematics | 5 | 5 | 5 |

Total Credit Hours 80

COMMERCIAL ART - PHOTOGRAPHY

Certificate Program

<table>
<thead>
<tr>
<th>COURSE</th>
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<td>Introduction to Computer Graphics</td>
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<td>Computer Graphics</td>
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<td>CAT 140</td>
<td>Basic Photography</td>
<td>2</td>
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<tr>
<td>CAT 216</td>
<td>Basic Studio</td>
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<td>CAT 217</td>
<td>Advertising Studio</td>
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<tr>
<td>CAT 225</td>
<td>Photojournalism</td>
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<td>CAT 226</td>
<td>Photo Marketing</td>
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Choose one of the following:

| CAT 218 | Black & White Photography | 2 | 6 | 4 |
| CAT 221 | Photo Airbrush I | 2 | 6 | 4 |
| CAT 222 | Photo Airbrush II | 2 | 6 | 4 |
| CAT 223 | Photo Airbrush III | 2 | 6 | 4 |
| CAT 260 | Publication Lab | 2 | 6 | 4 |
| CAT 275 | Studio (Fashion) | 2 | 6 | 4 |
| CAT 276 | Advanced Studio | 2 | 6 | 4 |
| GPC 124 | Graphic Imaging | 2 | 6 | 4 |

Required General Education Courses:

| VTE 101 | Technical Communication Skills | 5 | 5 | 5 |
| VTM 101 | Technical Mathematics | 5 | 5 | 5 |

Total Credit Hours 41

Course Descriptions

CAT 110 Introduction to Computer Graphics, 3 credits.
This course is designed to prepare students for courses which use specific desktop publishing, and drawing and photography software packages. The basic functions of the computer, Microsoft Windows, MS-DOS commands, and the file utilities are covered in this introductory course.

CAT 111 Technical Graphics, 5 credits.
An introductory course for both the Commercial Art and Graphics and Printing programs. The course includes basic lettering, line work, instrument use, and geometric construction techniques. Specific lab projects are assigned to reinforce the course of study.

CAT 112 Airbrush I, 4 credits.
Introduces the beginning student to the fundamentals of airbrush art using basic control and modeling exercises. Care and maintenance of the airbrush is stressed. Double action airbrush is required.

CAT 113 Airbrush II, 4 credits.
This course explores advanced airbrush techniques, rendering of textures and surfaces such as chrome, glass, wood, reflections and others used in technical illustrations. Students will begin to formulate portfolio quality work. PREREQUISITE: CAT 112

CAT 114 Airbrush III, 4 credits.
This is an advanced course for art students already proficient in airbrush techniques. Technical illustrations include editorials, advertising and self-promotional pieces. Design concepts are stressed. Competition entries are encouraged. PREREQUISITE: CAT 112, CAT 113
CAT 120 **Computer Graphics, 4 credits.**
Students will learn to use a personal computer to edit and colorize images, to create originals and composite artwork. Students will scan photographs on both the flatbed scanner and 35mm slide scanner. Photographs will be manipulated using filters and retouching tools in the software program Photoshop. **PREREQUISITE:** CAT 110

CAT 121 **Design Drawing, 2 credits.**
A drawing course that introduces the five basic component skills, which include the perception of edges, spaces, relationship, lights and shadows, and of the whole. The fundamentals of drawing are addressed using different media, and an introduction to perspective drawing is offered. This course covers quick sketching, charcoal drawing, ink wash, and pen and ink line drawings.

CAT 123 **Computer Drawing, 4 credits.**
Design illustrations for art projects, newsletters and brochures with Adobe Illustrator. The screen itself is the pasteboard, complete with drawing tools. The student learns to define, apply, and change colors, drawing layers, and graphic styles with customizable on-screen palettes. **PREREQUISITE:** CAT 168

CAT 126 **Typesetting Fundamentals, 2 credit.**
This course is a study of type and text productions. Students learn the development of the typographic form—from historic pictography representation and hand rendering to modern type styles and high-resolution electronic image setting. Students will also learn basic keyboarding skills for electronic typesetting systems, type specifications and measurements.

CAT 128 **Electronic Page Layout and Assembly, 2 credits.**
An introduction to electronic page layout using QuarkXPress software. Students will learn the basics of importing, combining, and manipulating text and graphic elements for composite page layout and production. Students will be able to produce simple single-page, spread-page, and continuous-page digital documents suitable for desktop output or electronic pre-press file submission. **PREREQUISITE:** CAT 110

CAT 130 **Principles of Design, 4 credits.**
This course introduces the student to abstract art, basic design and commercial layout. The student acquires knowledge in symmetrical and asymmetrical balance, line direction, value and color in design, texture in collage, mobile art, and introduction to airbrush design.

CAT 131 **Advertising Design I, 3 credits.**
This course deals with design assignments related to the commercial art field and introduces the student to advanced mechanical layout and camera-ready art. Students will develop magazine and newspaper ads, poster design, brochure design and layout, a direct mail piece and a package design. **PREREQUISITE:** CAT 131

CAT 140 **Basic Photography, 4 credits.**
The study of black and white photography, including film processing and darkroom printing. This course includes theme shooting, composition, spot toning, introduction to hand painting, and storyboard development. **REQUIRED:** 35mm camera

CAT 141 **Advertising Design II, 5 credits.**
This course deals with advanced design assignments associated with the graphic arts. Students are required to create multiple piece advertising campaigns using mixed media techniques which incorporate airbrush illustration renderings, photo advertising layouts, carbon dust line drawings, typography design and abstract art imagery. The art work is scanned into a computer layout software program to be completed. Students produce brochures, a package dummy, and self promotional pieces. **PREREQUISITE:** CAT 131

CAT 142 **Color Theory and Design, 2 credits.**
An introduction to color values and mixing, color wheel and charts, color theory and the pantone system. This course also includes light and color techniques used in advertising photography and the use of color for simulating printing inks.

CAT 210 **Advertising Design III, 4 credits.**
The student is directed to create, design, photograph and produce a corporate image campaign. Students will be asked to use all prior training in the manual and computer design courses to complete this task. **PREREQUISITES:** CAT 141

CAT 211 **Portfolio, 5 credits.**
This course allows the advanced students to use all of their ability and previous commercial art training to design and produce a professional and marketable portfolio for final presentation. Students are asked to produce a self-promotional piece to accompany a resume and cover letter.

CAT 214 **3D Graphics, 4 credits.**
This course is designed to tap the imagination of the student in a three dimensional problem solving environment. The student will be introduced to 3D design through the use of 3D Studio. The student will begin with a basic introduction of the concepts of 3D design and then apply those concepts to a design project. Students will accomplish the design projects through project teams. Students progression will be evaluated through periodic critiques, teams ability to meet deadlines, research and solve problems, and individual project journals. **PREREQUISITE:** CAT 111 and 123

CAT 215 **Current Topics, 2 credits.**
This course is a survey of current trends in the graphic design industry. This optional course will help students develop specializations. Possible topics include: comic art, caricatures, typogaphy, perspective drawing, free-lance marketing, three dimensional imaging, medical illustration, computer animation (Advanced 3D), and Image Transfer.

CAT 216 **Basic Studio, 4 credits.**
An introduction to studio lighting techniques and posing. This course includes training with photofloods, tungsten light, electronic flash systems, daylight balanced light, hotshoe and strobe lighting. The basic single-portrait poses, modeling poses, and wedding group poses are included in this course. **REQUIRED:** 35mm camera and supplies. **PREREQUISITE:** CAT 140

CAT 217 **Advertising Studio, 4 credits.**
The study of tabletop advertising photography, fine art still-life photography, imaging with color and soft lighting with electronic flash unit. Some environmental product shooting. (Students may use 4 x 5 or 8 x 10 format, but must provide camera and sheet developing, printing and polaroids.) **REQUIRED:** 35mm camera. **OPTIONAL:** 6 x 6 cm camera. **PREREQUISITE:** CAT 140

CAT 218 **Black and White Photography, 4 credits.**
A course offered for anyone who would like more darkroom experience. This course involves shooting on location, black and white film processing, printing techniques which include "masking", super imposing and solarization. **PREREQUISITE:** CAT 140

CAT 221 **Photo Airbrush I, 4 credits.**
An introduction to the airbrush, including techniques and exercises. Photographic "block-out," copying, and photo restoration for black and white photography. **REQUIRED:** 35mm camera, double-action airbrush.
CAT 222 PHOTO AIRBRUSH II, 4 CREDITS.
A study of photographic retouching and manipulation. Using both manual and computer techniques, students learn to "dupe" 35mm slides and retouch transparencies on the Adams Retouching Machine. Photographs are scanned into the Adobe Photoshop software program for retouching. PREREQUISITE: CAT 110

CAT 223 PHOTO AIRBRUSH III, 4 CREDITS.
An advanced study of photo airbrush for those who wish to make it a career. The study of inks and dyes related to this field is included. New wave hand tinting is taught. PREREQUISITE: CAT 140

CAT 225 PHOTOJOURNALISM, 4 CREDITS.
Visual communications through photographic images. Students are asked to capture the most revealing moment, anticipate a news reader's interest, and be a trained observer of current events. This course consists of photography, black and white darkroom lab, writing caption lines, story outlines and writing a complete news story. REQUIRED: 35mm camera PREREQUISITE: CAT 140

CAT 226 PHOTO MARKETING, 4 CREDITS.
This marketing course includes where to market photographs, how to freelance, shoot stock photography, self-promotion, tax tips, required policies, and bookkeeping techniques. Field photography, writing queries and office organizational skills are emphasized. REQUIRED: 35mm camera and transparency film. PREREQUISITE: CAT 140

CAT 260 PUBLICATION LAB, 4 CREDITS.
Portfolio evaluation for entry-level employment requirements. Teacher and industry critiques are held upon request. Self-promotion publicity is done by student. PREREQUISITE: CAT 140

CAT 275 STUDIO (FASHION), 4 CREDITS.
This course uses advanced lighting techniques, an electronic flash system, a spot meter, and a medium format camera. Students design, style and shoot magazine ad assignments using student models. REQUIRED: 35mm camera, 6 x 6 cm, 6 x 7 cm, or 6 x 4.5 cm camera format. PREREQUISITE: CAT 140

CAT 276 ADVANCED STUDIO, 4 CREDITS.
A study of advanced lighting techniques, the 4 x 5 camera, and strobe lighting. Prerequisites: Students must have completed Studio I, II, and III; completed transferable advanced studio classes at an accredited college; or be a photographer active in the commercial advertising field. PREREQUISITE: CAT 140, CAT 216, CAT 217, CAT 275

The Associate in Applied Technology degree is an eighteen month program designed to prepare graduates for gainful employment in the field of business computer science. Major topics include program logic, application development using batch and on-line structured techniques, and the use of personal computers. Extensive laboratory training with an equivalent system used by many businesses and industries in the area is a plus feature for the technical graduate entering the computer science field.

PROGRAMS OF STUDY and COURSE DESCRIPTIONS
DATA ENTRY Program

Certificate Program

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<td>DPT 130</td>
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Required General Education Courses:

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<tr>
<td>VTE 101</td>
<td>Technical Communications Skills</td>
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</table>

Total Credit Hours: 34

Course Descriptions

DPT 091 Computers for Beginners, 5 credits.
This course is designed for the first time computer user. Material is presented at a beginner's pace with an emphasis on hands-on applications. This course is designed for personal enhancement and is not creditable toward an academic award.

DPT 110 PC DOS, 5 credits.
This course is designed for students to become proficient in using the disk operating system for the IBM PS/2 and personal computer. The course provides an opportunity for students to gain hands-on experience with MS-DOS using basic and advanced commands.

DPT 111 Computer Fundamentals, 5 credits.
This course is a non-technical introduction to computers that covers the history and development of computers, microcomputer applications, how data is processed into information, file organization and data communications. It reviews computer equipment and includes use of a microcomputer to execute software packages.

DPT 113 Computer Fundamentals - Part I, 2.5 credits.
This course is the first part of Computer Fundamentals (DPT 111). The course is divided to accommodate students enrolled in the Automotive Service Technology Associate Degree programs.

DPT 114 Computer Fundamentals - Part II, 2.5 credits.
A continuation of DPT 113.

DPT 120 Data Entry I, 12 credits.
This course is designed to provide the technical knowledge necessary to operate Data Entry equipment. The course also provides the student an opportunity to practice the skills necessary to become a Data Entry operator.

DPT 122 Business Application Software, 5 credits.
This course is designed to provide the technical knowledge necessary to understand the three major software packages—spreadsheet, database and word processing. The course also provides hands-on experience in operation of the three major software packages and provides the technical knowledge necessary to operate the PC using these packages. PREREQUISITES: Permission of the Instructor

DPT 123 Networking Technologies, 5 credits.
This course teaches the basic concepts and prerequisites of networking and provides the foundation for network administration and certification.

DPT 130 Data Entry II, 12 credits.
The purpose of this course is to provide the technical knowledge necessary to operate Data Entry equipment. The course also provides the student an opportunity to practice the skills necessary to become a Data Entry operator. This course is a continuation of Data Entry I (DPT 120). PREREQUISITE: DPT 120

DPT 131 COBOL Programming I, 5 credits.
This course is designed to provide the technical knowledge necessary to perform basic input/output operations using structured ANSI COBOL. The course also provides the student an opportunity to practice the skills necessary in understanding: (1) card reading and printing operations; (2) page headings, page overflow, page numbering operations; (3) arithmetic operations and decision making statements; (4) switches and control break logic; and (5) switches, two control breaks and final totals. PREREQUISITES: DPT 111, DPT 122 or Permission of the Instructor

DPT 132 Programming in C, 5 credits.
A complete course for learning to program in C that includes compiling, linking and executing C programs. The programs are developed and processed using PC editors, compilers and linkage editor programs. All program development is performed using a personal computer platform.

DPT 133 Networking Administration, 5 credits.
This course teaches the basics of network management using administrative tools to improve information access, system performance and data security.

DPT 141 COBOL Programming II, 5 credits.
This course is designed to provide the technical knowledge necessary to perform table creation, accessing and processing, in structured ANSI COBOL. The course also provides the student an opportunity to generate and evaluate core dumps to (1) understand how computer stores data internally and (2) read data as it is stored internally. PREREQUISITES: DPT 131 or Permission of the Instructor

DPT 142 Business Spreadsheets, 5 credits.
This course is designed to provide the student a complete educational environment for learning PC-based spreadsheets and teach the fundamentals of worksheets, graphics, and databases.

DPT 153 Network Installation and Service, 6 credits.
This course covers installation, configuration, and optimization of network servers, as well as the service and support of networks.

DPT 210 Database Concepts, 5 credits.
This is a comprehensive course using a relational database that offers full database management features and permits the creation of specific applications through the use of its programming capabilities.

DPT 213 Network Design and Implementation, 5 credits.
This course teaches how to design and create an implementation plan to include a design strategy and implementation schedule with templates.

DPT 220 Visual Basic, 5 credits.
This course is to help you build your own special-purpose Windows applications. With Visual Basics, professional-looking applications using the graphical user interface of Windows can be created by persons who have no previous training or experience in computer programming.

DPT 221 COBOL Programming III, 5 credits.
Batch structured COBOL programming using magnetic tape, entry and key sequenced VSAM files. PREREQUISITES: DPT 141 or Permission of the Instructor

DPT 224 Advanced Network Administration, 5 credits.
This course teaches advanced administration skills such as performance tuning for the network and server and designing NetWare Directory Service (NDS) tree structures. The course also teaches how to oversee a complex networking environment including NDS partitioning and replication, time synchronization strategies and internetworking.
Dental Assisting is a four quarter program which provides students with the educational background and the clinical skills and experience necessary to become proficient in the delivery of dental health care. In addition to learning clinical procedures, students are taught business and dental laboratory procedures required in the practice of dentistry.

The first quarter of study provides students with the necessary background knowledge in dental science prior to patient treatment. During the second quarter, students are provided pre-clinical and lab instruction required for patient treatment. During the third quarter of study, students apply the knowledge and techniques they have acquired as they work with dental students at the University of Alabama School of Dentistry at UAB. Through practical application, students learn four-handed chairside techniques, methods of sterilization and disinfection, operation and maintenance of dental equipment, dental instruments, and the manipulation and application of dental materials used in clinical dentistry. During the third quarter of study, students are also provided with the necessary background knowledge in dental radiography. During the final quarter of study, students participate in clinical rotations through the specialty clinics at the University of Alabama School of Dentistry, the Jefferson County Department of Public Health, and in private dental offices.

The Dental Assisting program is accredited by the Commission on Dental Accreditation of The American Dental Association, the Council on Occupational Education and the State Board of Dental Examiners. Graduates are eligible to write the certification examination administered by the Dental Assisting National Board.

### DENTAL ASSISTING

#### Diploma Program

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<tr>
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<td>DAT 114</td>
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<td>DAT 120</td>
<td>Pre-Clinical Procedures</td>
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<td>DAT 121</td>
<td>Dental Specialties</td>
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**Required General Education Courses:**

- VTE 101 Technical Communication 5 5 5
- VTM 101 Technical Mathematics 5 5 5
- SPC 100 Fundamentals of Speech 1 1 1
- PSH 100 Business and Industrial Psychology 1 1 1

**TOTAL CREDIT HOURS** 58.5

### Course Descriptions

**DAT 110 Introduction to Dental Assisting, 1 credit.**

This course is designed to familiarize the student with the profession of dentistry, the professional organizations in dentistry, and the ethics and jurisprudence that govern the profession of dentistry.

**DAT 111 Anatomy and Physiology, 5 credits.**

This course combines the study of dental terminology, dental anatomy, and structure of the head and neck with a basic understanding of body structure and function. Characteristics of individual teeth, embryological, histological, and morphological correlations provide a foundation essential to an understanding of dental health.

**DAT 114 Basic Science, 5 credits.**

This course is designed to provide the student with basic knowledge in microbiology and infection control, preventive dentistry and nutrition, medical and dental emergencies, dental therapeutics, and oral pathology.

**DAT 120 Pre-Clinical Procedures, 5 credits.**

This course is designed to provide the student with the basic knowledge and skills necessary to assist the dentist during oral examinations, diagnoses, and treatment procedures in clinical dentistry. PREREQUISITES: DAT 110, DAT 111, DAT 114

**DAT 121 Dental Specialties, 1 credit.**

This course is designed to provide the student with the basic knowledge and skills necessary to function effectively and efficiently while assisting in the following dental specialties: Children's Dentistry, Orthodontics, Endodontics, Periodontics, Oral and Maxillofacial Surgery, and Dental Public Health. PREREQUISITES: DAT 110, DAT 111, DAT 114

**DAT 122 Dental Materials, 5 credits.**

This course is designed to provide the student with the knowledge and skills necessary to safely manipulate and apply the materials used in the general practice of dentistry. PREREQUISITE: DAT 110, DAT 111, DAT 114

**DAT 123 Business Administration for the Dental Assistant, 1 credit.**

This course is designed to prepare the student, through simulation, to assume responsibility for many of the routine business and operational details of a dental practice. PREREQUISITES: DAT 110, DAT 111, and DAT 114 or permission of instructor.

**DAT 130 Dental Radiography, 4 credits.**

This course provides the student with a basic knowledge of dental radiography including: radiation safety; components of the x-ray machine, x-ray physics; biological effects of ionizing radiation; exposing, processing and mounting radiographs; and proper correction of exposing and processing errors. PREREQUISITES: DAT 110, DAT 111, DAT 114, DAT 120, DAT 121, DAT 122 and DAT 123

**DAT 141 Dental Assisting Seminar, 2 credits.**

This course is designed to enhance the student's learning experience through enrichment seminars and class discussion. Students are encouraged to discuss clinical experiences from clinical rotations. PREREQUISITE: DAT 110, DAT 111, DAT 114, DAT 120, DAT 121, DAT 122, DAT 123, DAT 130 and DAT 170

**DAT 170 Clinical Experience I, 7 credits.**

This course is designed to provide the student with practical experience as a dental assistant. Participation will include 200 hours of clinical rotations through the University of Alabama School of Dentistry at UAB in the areas of restorative dentistry, fixed and removable prosthodontics, and emergency procedures. Students will also perform all legally allowable expanded
functions during this rotation. PREREQUISITES: DAT 110, DAT 111, DAT 114, DAT 120, DAT 121 DAT 122 and DAT 123

DAT 180 CLINICAL EXPERIENCE II, 10 CREDITS.
This course is designed to provide practical clinical experience during clinical rotations through the specialty clinics at the UAB School of Dentistry, the Jefferson County Department of Public Health, and through private dental offices. This experience enables the student to assist in all aspects of the practice of dentistry. PREREQUISITES: DAT 110, DAT 111, DAT 114, DAT 120, DAT 121, DAT 122, DAT 123, DAT 130 and DAT 170

DIESEL MECHANICS (DEM)

The Diesel Mechanics program is designed to train mechanics who have the knowledge and basic skills necessary to repair on-the-road equipment. The student receives the theory of the diesel engine and various components and immediately applies this knowledge in laboratory assignments with truck and other diesel and gasoline-powered equipment used for the transportation of freight and people. Instruction includes the disassembly, repair, and assembly of engines (gasoline and diesel), final drives, clutches, hydraulic and pneumatic systems, and other components. Students usually complete the Diploma program in six quarters.

The Co-op Diploma permits students to earn college credit for related work experience. Students will work a minimum of 20 hours each quarter in field if they select this option. The work experience will supplement the on-campus labs for each course.

DIESEL MECHANICS
Diploma Program

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<thead>
<tr>
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<th>THEORY</th>
<th>LAB</th>
<th>CR. HR</th>
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<tr>
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<td>DEM 112</td>
<td>Clutches and Manual Transmissions</td>
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<td>DEM 120</td>
<td>Mechanical Systems</td>
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<td>Electrical Systems</td>
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<td>DEM 123</td>
<td>Air Conditioning Systems</td>
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<td>DEM 130</td>
<td>Steering Systems and Alignment</td>
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<td>DEM 131</td>
<td>Air and Hydraulic Brakes</td>
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Required General Education Courses:

VTE 101 Technical Communication Skills 5 5 5
VTM 101 Technical Mathematics 5 5 5

TOTAL CREDIT HOURS 77

DIESEL MECHANICS
Co-op Diploma

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<td>DEM 143</td>
<td>Electrical Systems</td>
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<td>DEM 144</td>
<td>Mechanical Systems</td>
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<td>DEM 145</td>
<td>Air Conditioning Systems</td>
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<td>DEM 192</td>
<td>Co-op Work Experience</td>
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<td>DEM 194</td>
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<td>Brakes</td>
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<td>DEM 214</td>
<td>Steering Systems and Alignment</td>
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<td>DEM 292</td>
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Required General Education Courses:

VTE 101 Technical Communication Skills 5 5 5
VTM 101 Technical Mathematics 5 5 5

TOTAL CREDIT HOURS 75

Course Descriptions

DEM 110 INTRODUCTION TO DIESEL MECHANICS, 1 CREDIT.
This course is designed to provide an introduction to the trucking industry and to dealer service techniques. Students will review the history of the diesel engine and its effects on trucking and heavy equipment. Students will learn safety practices and procedures, use of shop manuals, and will become familiar with vehicles identification techniques and light duty service procedures. Special emphasis will be placed on work habits, appearance, and motivation.

DEM 111 POWER TRAINS, 6 CREDITS.
A study of the transmission of power from the engine with emphasis on drive shafts, universal joints, rear axles, differentials, bearings, and seals.

DEM 133 POWER TRAINS, 5 CREDITS.
Co-op Diploma Option

DEM 112 CLUTCHES AND MANUAL TRANSMISSIONS, 6 CREDITS.
The course includes an in-depth study of types and construction of clutches and transmissions with emphasis on troubleshooting and service procedures.

PROGRAMS OF STUDY and COURSE DESCRIPTIONS 41
DEM 142 Clutches and Manual Transmissions, 5 credits.
Co-op Diploma Option

DEM 120 Mechanical Systems, 6 credits.
This course is a study of mechanical fuel pumps, oil pumps, water pumps, turbocharger, hydraulic pumps, and emission pumps. The student will learn the use of electrical testing equipment used to diagnose malfunctions and general conditions of the various mechanical systems.

DEM 144 Mechanical Systems, 5 credits.
Co-op Diploma Option

DEM 121 Electrical Systems, 6 credits.
A study of the fundamentals of electricity and magnetism, and basic circuitry and electrical charging systems as they relate to diesel mechanics. The student learns to use testing equipment to determine malfunctions of alternators, starters, and generators and the procedures necessary to correct the malfunctions.

DEM 143 Electrical Systems, 5 credits.
Co-op Diploma Option

DEM 123 Air Conditioning Systems, 6 credits.
The student learns the different types of compressors, condensers, evaporators, and lines used on diesel equipment and how to troubleshoot and repair.

DEM 145 Air Conditioning Systems, 5 credits.
Co-op Diploma Option

DEM 130 Steering Systems and Alignment, 6 credits.
Steering Systems and Alignment is a study of suspension design, front suspension components, steering suspension geometry, and construction of tires. The students will learn and practice the skills necessary to diagnose, service, and properly align front suspension, and balance tires.

DEM 214 Steering Systems and Alignment, 5 credits.
Co-op Diploma Option

DEM 131 Air and Hydraulic Brakes, 6 credits.
A study of the operation of hydraulic and pneumatic braking systems, and the procedures of troubleshooting and servicing components.

DEM 140 Diesel Engine Overhaul, 12 credits.
The student learns to disassemble various types of industrial engines, diagnose defective parts and make necessary replacements to return the engine to efficient operation.

DEM 244 Diesel Engine Overhaul, 10 credits.
Co-op Diploma Option

DEM 192 First Year, 1st Quarter, Co-op, 2 credits.
Infield work experience to supplement DEM 133 and 142.

DEM 194 First Year, 2nd Quarter, Co-op, 2 credits.
Infield work experience to supplement DEM 143, 144 and 145.

DEM 195 First Year, 3rd Quarter, Co-op, 2 credits.
Infield work experience to supplement DEM 213 and 214.

DEM 198 First Year, 4th Quarter, Co-op, 2 credits.
Infield work experience to supplement DEM 244.

DEM 211 Diesel Performance, 12 credits.
The student becomes familiar with mechanical and electrical testing equipment used to diagnose malfunctions of the ignition system and to determine the general condition of industrial engines. The student learns the function of the injection fuel system and how to maintain the system for efficient operation.

DEM 245 Diesel Performance, 10 credits.
Co-op Diploma Option

DEM 213 Brakes, 5 credits.
The student will receive a comprehensive study on the operation of the hydraulic and pneumatic braking systems, knowledge of the master cylinder, brake cylinders, and line distributions. Complete diagnosis of the brake system and the proper methods of repair is included.

DEM 292 Second Year, 5th Quarter, Co-op, 2 credits.
Infield work experience to supplement DEM 245.

DRAFTING AND DESIGN TECHNOLOGY (DDT)

The skilled drafting and design technician is an essential link between the engineer and the shop where the final product is manufactured. As a member of a technical team, the drafting technician will do detail and layout drafting, design, and development. They may advance to positions in checking, estimating, advanced design, and supervision. The Associate in Applied Technology Degree program is designed to qualify the graduate for performance of these duties and for advancement on the job when associated with the appropriate experience. Students usually complete the Associate Degree program in seven quarters.

DRAFTING AND DESIGN TECHNOLOGY
Associate in Applied Technology

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<tr>
<th>COURSE</th>
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Required General Education Courses:

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Continued
MAH111  Plane Trigonometry  5  0  5
PHC 203  General Physics I  5  0  5
PSH 270  Business & Industrial Psychology  5  0  5
SPE 106  Fundamentals of Speech Communication  5  0  5

TOTAL CREDIT HOURS 111

Optional Related Courses:
DDT 107  Current Topics in Drafting  1  3  2
DDT 205  CADD V  3  6  5
DDT 206  CADD VI (MicroStation)  3  6  5

DRAFTING AND DESIGN TECHNOLOGY
Certificate Program

COURSE  TITLE  THEORY  LAB  CR. HR.
DDT 111  Technical Drawing I  3  9  6
DDT 121  Technical Drawing II  3  9  6
DDT 131  Technical Drawing III  3  9  6
DDT 200  Introduction to CADD  5  0  5
DDT 201  CADD I  3  6  5
DDT 202  CADD II  3  6  5
DDT 203  CADD III  3  6  5
DDT 211  Advanced Drafting I  3  9  6

TOTAL CREDIT HOURS 44

Course Descriptions

DDT 107  Current Topics in Drafting, 2 credits.
This course is a survey of current trends in the drafting and design industry. This optional course will help students develop specializations. Possible topics include: Release 13 Update, Intro to Advanced 3D Modeling, Basic AutoCAD (Release 13), Basic 3D Studio and Advanced 3D Studio.

DDT 110  Related Technical Drawing, 4 credits.
Introductory drafting techniques and procedures are presented to include lettering, line work, instrument use, and geometric construction techniques as elementary basics. Multiview orthographic projection concepts are also addressed. A drafting project relevant to the student's area of specialization will be completed. This course is designed for students not majoring in Drafting and Design.

DDT 111  Technical Drawing I, 6 credits.
The material addressed includes free hand lettering, care and use of drafting instruments, materials and equipment; geometric construction with applications; orthographic projection with extensive multiview drawing applications emphasizing the rules and exceptions established in the American National Standard Drafting Specification (ANSI Y-14). A variety of problems are done for practice in the theory and conventions.

DDT 114  Technical Drawing I - Part I, 3 credits.
This course is the first half of Technical Drawing I (DDT 111). The course is divided to accommodate evening students.

DDT 115  Technical Drawing I - Part II, 3 credits.
The second half of DDT 114. PREREQUISITE:  DDT 114

DDT 121  Technical Drawing II, 6 credits.
An in-depth study of the principles and applications of sectional view techniques to include full, half, broken out, revolved, aligned and off-set sections. Drawing requiring the application of several types of sections will be completed by the student. Auxiliary view techniques will be examined to include development of primary and secondary auxiliary views with solutions of dihedral angle applications. Basic descriptive geometry concepts as required in design applications will be addressed in practical applications. PREREQUISITE: DDT 111 or placement

DDT 122  Technical Drawing II - Part I, 3 credits.
This course is the first half of Technical Drawing II (DDT 121). The course is divided to accommodate evening students. PREREQUISITE: DDT 115

DDT 123  Technical Drawing II - Part II, 3 credits.
The second half DDT 122. PREREQUISITE: DDT 115

DDT 131  Technical Drawing III, 6 credits.
Dimensioning techniques, principles, and special considerations are examined with analysis and interpretation required to complete selected projects. Limit dimensioning and tolerance concepts are addressed to include application of the American National Standards Institute (ANSI) Tables of Fits. Implications and specifications as pertaining to threads, fasteners, and springs with typical application projects are completed by the student. PREREQUISITE: DDT 111 or placement

DDT 132  Industrial Materials & Processes, 5 credits.
This course sets forth the principles and methodology of materials selection and application, explains the types of properties used to evaluate materials, and describes broadly the basic nature and structure of all materials. The emphasis is directed to solids since liquids and gases are principally considered chemicals.

DDT 133  Technical Drawing III - Part I, 3 credits.
This course is the first half of Technical Drawing III (DDT 131). The course is divided to accommodate evening students. PREREQUISITE: DDT 115

DDT 134  Technical Drawing III - Part II, 3 credits.
The second half of DDT 133. PREREQUISITE: DDT 133

DDT 141  Blueprint Reading I, 3 credits.
This course offers instruction in the principles of reading and interpreting basic machine trades blueprints. Students will study the different types of blueprints, the alphabet of lines, shop sketching, orthographic views, and dimensioning and tolerance techniques. Students will be required to read basic mechanical blueprints.

DDT 142  Blueprint Reading II, 3 credits.
This is an extension of DDT 141. This course offers instruction in advanced blueprint reading. Students will study advanced dimensioning techniques, notes and symbols, and screw threads as they apply on mechanical blueprints. Students will be required to read advanced mechanical blueprints. PREREQUISITE: DDT 141

DDT 200  Introduction to CADD, 5 credits.
An introduction to the many functions and applications of the Computer Integrated Manufacturing (CIM) environment with specific emphasis in Computer Aided Design Drafting (CADD). Terms, hardware, software and applications are introduced. Basic DOS, MS Windows, AutoCAD, setup, drafting aids, and drawing file operations are addressed in order to establish a foundation for the graphics constructions of CADD I. PREREQUISITE: DDT 111 or placement

DDT 201  CADD I (Basic AutoCAD), 5 credits.
The purpose of this course is to provide an understanding of the features, limitations, and considerations associated with the operation of a microcomputer-based computer aided design or drafting (CADD) system. Utilizing AutoCAD Release 13 software, the student shall examine CAD drawing fundamentals, display control, graphic entity construction along with basic and advanced editing of two-dimensional drawings. PREREQUISITE: DDT 200 or placement
DDT 202 CADD II (Advanced AutoCAD), 5 credits.
This course deals with Advanced AutoCAD topics which will support the strengthening of CAD operations. The student shall explore a continuation of the drafting oriented elements of CADD as well as advanced dimensioning techniques, operations with blocks and symbols, and attributes. PREREQUISITE: DDT 201 or placement.

DDT 203 CADD III (AutoCAD Customization), 5 credits.
This course is intended for the advanced AutoCAD user. The course introduces students to AutoCAD's various customization techniques to include toolbar creation, script files, slide and slide library, menu customization with custom command macros. The student will be assigned various projects to support the different customization techniques. PREREQUISITE: DDT 201 or placement

DDT 204 CADD IV (Advanced Modeling), 5 credits.
The purpose of this course is to provide an opportunity for the study of 3D Design modeling. The student will utilize the fundamental 3D capabilities of AutoCAD software, and AutoCAD Designer. 3D wire-frame, Surface, and Solids modeling, along with the development of 2D detail drawings from the 3D solid model shall be the primary objectives. The format for this course will include traditional class presentations reinforced with an array of additional resources such as tutorials, reference manuals, audio-visual tapes, separately purchased reference books, and other supplementary materials. PREREQUISITES: DDT 201, DDT 121, DDT 131 or placement

DDT 205 CADD V, 5 credits.
This course provides an introductory understanding of the features, limitations, and considerations associated with the operation of a microcomputer-based Computer Aided Design or drafting (CAD) system. Utilizing CAD software, the student examines CAD drafting and design fundamentals, display control, graphic entity construction and editing, and dimensioning of two-dimensional drawings.

DDT 206 CADD VI (MicroStation), 5 credits.
The purpose of this course is to provide an understanding of the features, limitations, and considerations associated with the operation of a microcomputer-based computer aided design or drafting (CAD) system. Utilizing MicroStation Version 5 software, the student shall examine CAD drafting fundamentals, display control, graphic entity construction and editing, and dimensioning of two-dimensional drawings. The instructional approach shall be independent study format utilizing ten, two-hour lectures on VHS format tape. The self-paced approach shall be applied progressing sequentially through the reference text. PREREQUISITES: DDT 202, DDT 121, DDT 131 or placement

DDT 211 Advanced Drafting I (Machine), 6 credits.
Machine drafting is the largest specialty area of drafting in the United States in terms of the scope of the field and also the number of job opportunities available. The study addresses the following area: (1) Geometric dimensioning and tolerance; (2) Documentation systems and techniques as pertaining to (a) engineering controls, (b) drawing organization and content, (c) single part drawing types, and (d) assembly drawing types; (3) Assembly drawing with parts list and appropriate general notes along with detail drawings of design items of the assembly; (4) The applications and use of the 0-1 inch micrometer, vernier caliper, thread pitch gauge, radius gauge, depth gauge, and the 6-inch machinists' scale; (5) The design layout of an assembly with a bearing application along with form, fit and function considerations of the mating parts. Use of Machinist's Handbook, Mechanical Engineer's Handbook, and various vendor catalogs will be introduced; (6) Complete documentation to support manufacturing needs from a provided assembly sample taking all information from the sample using measurement, analysis, and research procedures. PREREQUISITES: DDT 121 and DDT 131

DDT 212 Introduction to CIM, 5 credits.
This course provides an introduction to the concepts associated with the integration of the separate and joint objectives of CAD and CAM. The techniques involved with 3-D part definition as a CAD (AutoCAD) model and the further translation of this part description to the CAM software through DXF means will be addressed. SmartCAM software will be utilized as a stand alone package for development of the CNC Process Model with emphasis on advanced modeling techniques. PREREQUISITE: DDT 202 or placement

DDT 213 Advanced Drafting I - Part I, 3 credits.
This course is the first half of Advanced Drafting I (DDT 211). This course is divided to accommodate evening students. PREREQUISITE: DDT 122, 123, 133 & 134

DDT 214 Advanced Drafting I - Part II, 3 credits.
The second half of DDT 213. PREREQUISITE: DDT 122, 123, 133 & 134

DDT 221 Advanced Drafting II (Electrical), 6 credits.
Drafting and design techniques are introduced dealing with production of electronic equipment for consumer, commercial, and military applications. The various specialized drawings of electrical/electronics drafting are emphasized specifically schematic diagrams, connection or wiring diagrams (four unique types), industrial electrical diagrams, ladder schematics, flow-block diagrams, and documentation types and techniques related to printed circuitry. PREREQUISITES: DDT 110, DDT 111 or placement

DDT 231 Advanced Drafting III (Structural), 6 credits.
This introductory course in structural drafting familiarizes the student with the standard structural steel shapes along with the use of the American Institute of Steel Construction (AISC) Manual and the AISC Structural Steel Detailing Manual. Structural steel documentation which will be addressed include framing plans, steel sections, connection and fabrication details. Practical application drawings will be completed for each of the topics listed. PREREQUISITES: DDT 121 and DDT 131

DDT 241 Advanced Drafting IV (Welding/Piping), 6 credits.
Utilizing Audio/Visual resources and a detail study/project course guide, the elements of Welding Applications/Symbology will be addressed along with an introductory study of basic piping fundamentals as related to a refinery or petro-chemical plant environment. Drawing types examined will be both the single-line diagram and double-line plan views of piping systems to include dimensioning, callouts, and specifications. The isometric drawing characteristics will be addressed using both the single and double-line techniques with basic piping data integrated into the assigned projects. Instructional approach shall be independent study format. PREREQUISITES: DDT 121, DDT 131 or concurrent.

44 PROGRAMS OF STUDY and COURSE DESCRIPTIONS
ELECTRONICS (ILT)

Bessemer State Technical College offers an Associate Degree program for the student preparing for a career as an electronics technician. The curriculum is designed to provide specific training in basic electronic theory, electrical and electronic circuits, instrumentation and test equipment, transformers, direct and alternating current machinery, SCR controls, programable logic controls, electronic communications, digital electronics, microprocessor basics and applications, and servicing microcomputers.

In addition to the Associate Degree, the college offers certificate programs in Electronics and Industrial Maintenance.

### ELECTRONICS Certificate Program

**COURSE TITLE** | **THEORY** | **LAB** | **CR. HR.**
---|---|---|---
ILT 110 Introduction to Electronics | 4 | 3 | 5
ILT 112 Working in Electronics | 3 | 0 | 3
ILT 120 Principles of Electronics I | 3 | 0 | 3
ILT 121 Principles of Electronics I Lab | 0 | 6 | 2
ILT 122 Principles of Electronics II | 4 | 0 | 4
ILT 123 Principles of Electronics II Lab | 0 | 6 | 2
ILT 126 Semiconductors I | 4 | 0 | 4
ILT 127 Semiconductors I Lab | 0 | 3 | 1
ILT 128 Semiconductors II | 4 | 0 | 4
ILT 129 Semiconductors II Lab | 0 | 3 | 1
ILT 140 Digital Electronics | 4 | 0 | 4
ILT 141 Digital Electronics Lab | 0 | 3 | 1
ILT 150 Microcomputer Technology | 4 | 0 | 4
ILT 151 Microcomputer Technology Lab | 0 | 3 | 1
ILT 160 Electronic Communications | 4 | 0 | 4
ILT 161 Electronic Communications Lab | 0 | 3 | 1
ILT 170 Industrial Electronics | 4 | 0 | 4
ILT 171 Industrial Electronics Lab | 0 | 3 | 1

**Required General Education Courses:**

- COM101 English Composition I
- MAH108 Elementary Algebra
- MAH111 Plane Trigonometry

**Total Credit Hours:** 64

### ELECTRICAL WIRING Certificate Program

**COURSE TITLE** | **THEORY** | **LAB** | **CR. HR.**
---|---|---|---
ILT 110 Introduction to Electronics | 4 | 3 | 5
ILT 133 Residential Wiring | 5 | 2 | 6
ILT 134 Commercial Wiring | 5 | 2 | 6
ILT 135 Industrial Wiring | 5 | 2 | 6
ILT 136 Electrical Code | 5 | 2 | 6

**Required General Education Courses:**

- COM101 English Composition I
- MAH108 Elementary Algebra

**Optional Related Courses:**

- ILLT 136 Electrical Code

**Total Credit Hours:** 33

### Course Descriptions

**ILT 110 Introduction to Electronics, 5 Credits.**

This course is designed to provide the students with the knowledge necessary for the understanding of the basic concepts of electricity and to provide the opportunity to practice the skills necessary for advanced concepts.

**ILT 112 Working in Electronics, 3 Credits.**

This course is a study of electronics at work. Coverage is given to the vast diversity of careers in electronics. Also covered are the requirements necessary to become an electronic technician. In addition, the course will introduce the student to software used in electronics for circuit simulations, circuit building, prototyping, and safety issues.

**ILT 120 Principles of Electronics I, 3 Credits.**

This course is a study of direct current and its measurements; use of DC test equipment; basic laws and theorems used in electronics, and analysis of resistive DC circuits connected in series, parallel, and series-parallel configurations. Electromagnetics and some basic AC concepts will also be introduced. PREREQUISITES: ILLT 110, MAH108 (CEU's 2.5) Lab required.
ILT 121 Principles of Electronics Lab, 2 credits.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 120. (CEU's 5.0)

ILT 122 Principles of Electronics II, 4 credits.
This course is a study of alternating current and its measurements; sinewave function and analysis; resistive, inductive, and capacitive circuits; vectors and phase relationships; power factor; reactance, resonance and impedance; filters; single-phase transformers, basic operation of AC test equipment; three phase circuits. PREREQUISITES: ILT 120, ILT 121, MAH 111 (CEU's 3.3) Lab required.

ILT 123 Principles of Electronics Lab II, 2 credits.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 122. (CEU's 5.0)

ILT 126 Semiconductors I, 4 credits.
This course is a study in the area of: Atomic structure with emphasis on covalent bonding; semiconductor device construction and characteristics; general and special purpose diodes; regulated and unregulated DC power supplies; NPN and PNP bipolar transistors; semiconductors data sheet interpretation; common emitter; common base and common collector amplifiers; circuit biasing and calculations; and semiconductor circuit troubleshooting. PREREQUISITES: ILT 122, ILT 123 (CEU's 3.3) Lab required.

ILT 127 Semiconductors Lab I, 1 credit.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 126. (CEU's 2.5)

ILT 128 Semiconductors II, 4 credits.
This course is a continuation of Semiconductors I. It provides the opportunity to use solid state devices in complete electronic circuits; the technical knowledge necessary to understand and construct electronics circuits; the necessary methods and procedures for conducting and evaluating laboratory experiments on circuits using test equipment; and the use of computers to simulate electronic circuits. PREREQUISITES: ILT 126, ILT 127 (CEU's 3.3) Lab required.

ILT 129 Semiconductors Lab II, 1 credit.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 128. (CEU's 2.5)

ILT 133 Residential Wiring, 6 credits.
Lecture and practice lab experience in the basic skills required of a residential maintenance electrician based on the National Electrical Code. Includes blueprint reading, load calculation, water heaters, heating systems, smoke detectors, service entrance, remote control lighting circuits, circuit design and layout of typical residential circuits. Job safety, basic materials and tools are emphasized.

ILT 134 Commercial Wiring, 6 credits.
This course addresses all aspects of commercial-type electrical work. Includes conduit bending, circuit design, controls, rigging, pulling of cables, and switch gear design. Generation principles and transformers are emphasized.

ILT 135 Industrial Wiring, 6 credits.
Extensive experience in practical problems faced by a maintenance electrician. Lab exercises in electrical troubleshooting and renovation are emphasized, along with the recognition of safety hazards.

ILT 136 Electrical Code, 6 credits.
A thorough, in-depth study of The National Electrical Code. Preparation for Journeyman or Master's Test given by city or county inspection services. Workbook, tests, and explanations cover in detail the National Electrical Code. PREREQUISITE: 1 1/2-2 years minimum of in-field experience or equivalent electrical knowledge.

ILT 140 Digital Electronics, 4 credits.
This course is a study of digital and logic circuits with an emphasis on number systems, Boolean algebra, basic gates, registers, counters, multiplexers, and decoders. Laboratory experiments and computer simulation will be used to supplement classroom instruction. PREREQUISITE: ILT 126, ILT 127 (CEU's 3.3) Lab required.

ILT 141 Digital Electronics Lab, 1 credit.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 140. (CEU's 2.5)

ILT 150 Microcomputer Technology, 4 credits.
This course is a study of computer terminology, numbering systems, diagnostic software, microcomputers and peripherals. (CEU's 3.3) Lab required.

ILT 151 Microcomputer Technology Lab, 1 credit.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 150. (CEU's 2.5)

ILT 160 Electronic Communications, 4 credits.
This course is a study of the topics of modern communication systems, including amplitude modulation, frequency modulation, and transmitters and receivers. PREREQUISITE: ILT 140, ILT 141 (CEU's 3.3) Lab required.

ILT 161 Electronic Communications Lab, 1 credit.
Laboratory experiments and computer simulation used to supplement classroom instruction for ILT 160. (CEU's 2.5)

ILT 170 Industrial Electronics, 4 credits.
This course is a study of the basic components and concepts in modern industrial control systems, including PLC's, DC and AC motors, control circuits, and servo and stepper motors. PREREQUISITE: ILT 122, ILT 123 (CEU's 3.3) Lab required.

ILT 171 Industrial Electronics Lab, 1 credit.
Laboratory exercises and computer simulations used to supplement classroom instruction for ILT 170. (CEU's 2.5)

ILT 191 and 193 Co-op Work Experience, 1 credit.
In field work experience to supplement course work.

ILT 192 Co-op Work Experience, 2 credits.
In field work experience to supplement course work.

ILT 250 Microprocessors, 5 credits.
This course will be an in-depth extension of the Microcomputer Technology. It includes a study of microprocessor pin out and timing, memory devices (volatile and nonvolatile), address decoders, input output devices, special purpose support devices, D-to-A and A-to-D converters, parallel and serial data transfer, microcomputer troubleshooting and repair techniques. PREREQUISITE: ILT 140, ILT 141, ILT 150, ILT 151 (CEU's 5.8)

ILT 260 Computer Networking, 5 credits.
This course is the study in the area of computer network terminology, protocols, topologies, servers types, media types, and operating systems. Laboratory experiments will deal with network hardware and software installation using Windows 95. PREREQUISITES: ILT 151 (CEU's 7.5)
EMT 100 CPR, 1 credit.
This course is designed to provide CPR training for health care workers in accordance with the American Heart Association’s “Course C: Basic Life Support for Health Care Providers.” Students must pass both a written and performance test to meet the course completion requirements.

EMT 104 Emergency Procedures, 2 credits.
This course is designed for allied health students and provides theory and practical application in the use of specific emergency equipment when confronted by an emergency situation in the different allied health disciplines. The course includes oxygen administration, use of airway adjuncts, medication administration techniques, equipment for mechanical breathing, and suctioning techniques.

EMT 140 Preparatory/Trauma Management for the Basic EMT, 4 credits.
This course consists of four hours of theory and one hour of laboratory per week. The course provides the student with theory, demonstration, and experimental laboratory in the following areas contained in the National Standard Training Curriculum (NSTC) for the Basic EMT: Anatomy, physiology, and patient assessment; bleeding and shock; soft tissue injuries; principles of musculoskeletal care and fractures; injuries to the head, face, eye, neck, spine, chest, abdomen, and genitalia; and assessment and management of burns. COREQUISITES: EMT 141 and EMT 142. PREREQUISITES: Admission to the program.

EMT 141 Medical Emergencies for the Basic EMT, 4 credits.
This course consists of four hours of theory and one hour of laboratory per week. The course provides the student with theory, demonstration and experiential laboratory in the following areas contained in the National Standard Training Curriculum (NSTC) for the Basic EMT: Airway obstruction and respiratory arrest; cardiac arrest; use of airway adjuncts; medical emergencies; emergency childbirth; environmental emergencies; and psychological aspects of emergency care. COREQUISITES: EMT 140 and EMT 142. PREREQUISITES: Admission to the program.

EMT 142 Pre-hospital Environment for Basic EMT, 4 credits.
This course consists of two hours of theory, two hours of laboratory and three hours of clinical per week. The course provides the student with theory, demonstration and experiential laboratory in the following areas contained in the National Standard Training Curriculum (NSTC) for the Basic EMT: Introduction to emergency medical care training; roles and responsibilities; legal aspects; lifting and moving patients; principles of extrication; ambulance operations; disaster operations; and hazardous materials. The course also provides for clinical practice in the Emergency Department and/or Prehospital Emergency Medical Service (EMS) units. COREQUISITES: EMT 140 and EMT 141. PREREQUISITES: Admission to the program.

EMT 180 Pre-Hospital Environment for the Intermediate EMT, 4 credits.
This course consists of four hours of theory and one hour of laboratory per week. The course provides the student theory, demonstration, and experiential laboratory in the following areas contained in the National Standard Training Curriculum for the Intermediate EMT: Roles and responsibilities of the Intermediate EMT; the EMS System, medical/legal considerations; EMS communications, introduction to medical terminology; and general patient assessment and initial management. This course is one of six courses (EMT 180, 181, 182, 183, 185 and 189) required for successful completion of Intermediate EMT in Alabama. PREREQUISITES: EMT 140, EMT 141, and EMT 142 within the last 24 months, current Alabama license as a Basic EMT and placement testing; or successful completion of a NSTC course for the Basic EMT within the last 24 months and placement testing.

EMT 181 Preparatory Management for the Intermediate EMT, 4 credits.
This course consists of four hours of theory and one hour of laboratory per week. The course provides the student theory, demonstration, and experiential laboratory in the following areas contained in the National Standard Training Curriculum for the Intermediate EMT. The respiratory system,
airway and ventilation control, and assessment and management of shock. This course exceeds the NSTC standards as required by Alabama law to comply with the scope of practice for the Intermediate EMT. This course is one of six courses (EMT 180, 181, 182, 183, 185, 189) required for successful completion of Intermediate EMT in Alabama. PREREQUISITES: EMT 140, EMT 141, EMT 142 within the last 24 months; or hold current Alabama license as a Basic EMT and placement testing; or successful completion of a NSTC course for the Basic EMT within the last 24 months and placement testing.

EMT 182 Cardiovascular Electrophysiology and Management, 4 credits.

This course consists of four hours of theory and one hour of laboratory per week. The course provides the student with theory in anatomy and physiology of the myocardium to include the electrical conduction system as well as the interpretation of lead II electrocardiograms. The course includes demonstration and experiential laboratory for techniques and management of dysrhythmias. This course exceeds the National Standard Training Curriculum as required by Alabama law to comply with the scope of practice for the Intermediate EMT. This course is one of six courses (EMT 180, 181, 182, 183, 185, 189) required for successful completion of Intermediate EMT in Alabama. PREREQUISITES: EMT 140, EMT 141, EMT 142 within the last 24 months; or hold current Alabama license as a Basic EMT and placement testing; or successful completion of a NSTC course for the Basic EMT within the last 24 months and placement testing.

EMT 183 Didactic/Skills Competencies for the Intermediate EMT, 2 credits.

This course consists of one hour of theory and two hours of laboratory per week. The course provides the student with instructional review and experiential laboratory for ongoing evaluation of the student’s performance to validate knowledge of didactic and practical skills material contained in the National Standard Training Curriculum for the Intermediate EMT. This course is one of six courses (EMT 180, 181, 182, 183, 185, 189) required for successful completion of Intermediate EMT in Alabama. PREREQUISITES: Admission to the Intermediate EMT level of training or instructor approval.

EMT 185 Critical Care Clinical and Case Review, 3 credits.

This course consists of one hour of theory and six hours of clinical per week. The course provides the student with opportunities to participate in clinical case discussion and clinical experience in the critical care areas of the hospital. Specific skills objectives are accomplished by the student relating directly to previous didactic work. In addition to clinical experience accomplished, each student will be required to perform patient care research and complete written assignments. This course is one of six courses (EMT 180, 181, 182, 183, 185, 189) required for successful completion of Intermediate EMT in Alabama. PREREQUISITES: Admission to the Intermediate EMT level of training.

EMT 189 Advanced Life Support Field Clinical and Case Review, 5 credits.

This course consists of one hour of theory and twelve hours of clinical per week. This course provides the student with opportunities to participate in review and discussion of emergency medical records. In addition, the student will gain introductory field experience with Advanced Life Support Pre-hospital EMS units. Specific skills objectives are accomplished by the student relating directly to previous didactic work. In addition to the field clinical experience accomplished, each student will be required to perform patient care research and complete written assignments. This course is one of six courses (EMT 180, 181, 182, 183, 185, 189) required for successful completion on Intermediate EMT in Alabama. PREREQUISITES: Admission to the Intermediate EMT level of training.
COM 102 English Composition II, 5 credits.
Includes instruction and frequent practice in developing essays with emphasis on both the composing process and final product. The writing assignments are based primarily on a critical analysis of literature. COM 102 also includes instruction in and practice of research skills. PREREQUISITE: Successful completion of COM 101.

COM 151 English Composition - Part I, 2.5 credits.
This course is the first part of English Composition 1 (COM 101). The course is divided to accommodate students enrolled in the Automotive Service Technology associate degree programs. RECOMMENDATION: Appropriate ACT ASSET score or successful completion of VTE 090 or SSS 082 or COM 091.

COM 152 English Composition - Part II, 2.5 credits.
This course completes the second half of COM 101. PREREQUISITE: Successful completion of COM 151.

GRAPHICS AND PRINTING COMMUNICATIONS (GPC)

Bessemer State Technical College offers a Diploma program for persons interested in entering the field of printing and publishing. The program is designed to acquaint the student with the major phases of producing quality printed material and to provide the student the opportunity to specialize in a particular occupational area in offset printing.

The student learns the theory of offset printing through individual and classroom instruction and applies this newly gained knowledge in a working print shop. Students usually complete the Diploma program in six quarters.

GRAPHICS AND PRINTING

Certificate Program

Course Descriptions

GPC 110 Introduction to Graphic Arts
GPC 122 Composition and Paste-up
GPC 124 Graphic Imaging
GPC 126 Typesetting Fundamentals
GPC 128 Electronic Page
GPC 130 Electronic Page Production
CAT 110 Introduction to Computer Graphics
CAT 120 Computer Graphics

Choose 10 credit hours from the following:

GPC 124 Graphic Imaging
GPC 136 Estimating
GPC 140 Electronic Pre-Press I
GPC 144 Electronic Pre-Press II
GPC 150 Printing and Press I
CAT 110 Introduction to Computer Graphics
CAT 131 Advertising Design I
CAT 215 Current Topics

Total Credit Hours 74

Required General Education Courses:

VTE 101 Technical Communication Skills
VTM 101 Technical Mathematics

Total Credit Hours 31

Recommended General Education Courses:

VTE 101 Technical Communication Skills
VTM 101 Technical Mathematics

Course Descriptions

GPC 110 Introduction to Graphic Arts, 1 credit.
This course presents an introduction and overview of the Graphic Arts and Printing industry. After a brief history of the profession, students will explore a variety of topics including terminology, current trends in industry, emerging technology, and employment options. Guest lecturers from area businesses and industries and field trips to graphics and printing facilities will be included.

GPC 122 Composition and Paste-up, 4 credits.
This course introduces the student to the basic concepts and skills of image assembly necessary to produce comprehensive page layouts for production. Students gain experience with the tools, equipment, materials, production methods, and techniques used in producing comprehensives and mechanicals, including hand lettering, ruling, paste-up, key lines and blocks, alignment and registration, mounting image and type elements, strip-ins, and overlays are included.

GPC 124 Graphic Imaging, 4 credits.
This course is designed to introduce students to the function and operation of graphic arts camera equipment and digital scanners in producing quality line and halftone images suitable for printing. The course includes basic
camera operations, standard darkroom procedures for developing lithographic film, use and operation of automatic film processors, diffusion transfer material production, duplicating and contacting film materials, and basic scanner operation and image manipulation techniques.

**GPC 126 Typesetting Fundamentals, 3 credits.**
This course is a study of type and text production. Students learn the development of the typographic form—from historic pictography representation and hand rendering to modern type styles and high-resolution electronic image setting. Students will also learn basic keyboarding skills for electronic typesetting systems, type specifications and measurements, identification of basic typefaces and type styles, text proofing, mark-up and correction, and typesetting systems for print production.

**GPC 128 Electronic Page Layout and Assembly, 2 credits.**
An introduction to electronic page layout using QuarkXpress software. Students will learn the basics of importing, combining, and manipulating text and graphic elements for composite page layout and production. Topics include: basic single- and multi-page construction; importation and placement of text and graphics; tools, menus, and palette functions; live text editing and copyfitting; working with XPress tags; formatting paragraphs; applying and manipulating color elements; basic style sheet and library creation; and file creation and maintenance. PREREQUISITE: CAT 110

**GPC 130 Electronic Page Production, 4 credits.**
This course is designed to expand the student's knowledge and technical expertise in electronic page production for magazines, newspapers, books, catalogues, and other high volume, multi-page production environments. Topics covered include: advanced page layout and composition; creation and maintenance of style calls, style sheets, house styles and style manuals; formatting, editing and maintaining kerning, tracking, hyphenation and justification, typographic, color, and trapping tables; creating and maintaining macros, effective production and work flow management, as well as other production-oriented issues. Students will also be able to prepare, troubleshoot and correct page files for desktop output, high resolution image setting, and electronic pre-press file submission. PREREQUISITE: GPC 128

**GPC 136 Estimating, 4 credits.**
This course is designed to provide students with a thorough understanding of the costs and dynamics of running a profitable graphics and printing business. Utilizing computer software, students will learn how to estimate jobs, produce competitive bids, create, track, and maintain customer accounts and work orders, track and control inventory, produce and analyze reports, and predict realistic profit and loss. Students will be able to research, identify, develop, and analyze specifications in order to estimate the cost of producing a variety of projects.

**GPC 140 Electronic Pre-Press I, 4 credits.**
This course is an in-depth study of electronic production techniques for printing and pre-press applications. Students will learn how to prepare files in compliance with industry standards; troubleshoot, correct, and preflight files; strip digital files for pre-press; correct line art and grayscale images; trap color images; troubleshoot and resolve technical pre-press problems associated with software applications, fonts and font management, cross-platform conversions, digital imaging, and page layout and imposition. PREREQUISITES: CAT 120 and GPC 128

**GPC 144 Electronic Pre-Press II, 4 credits.**
This course covers advanced file preparation, color correction and trapping for 4-color process printing applications; advanced troubleshooting and problem-solving techniques for print shop, pre-press, and service bureau environments; and emerging technologies such as Direct to Press and Print on Demand. PREREQUISITE: GPC 140

**GPC 150 and 152 Printing and Press I and II, 6 credits each.**
A study of the jobs, printing processes, and operation of the equipment used in the offset print shop. Students will learn stripping, platemaking, paper properties, inks and inking systems, air and water regulation, and offset presswork and troubleshooting. The course is designed to provide the student with hands-on experience combined with progressive responsibility in presswork, finishing, scheduling, safety, and management.

**GPC 192, 194 and 196 Co-op Work Experience, 2 credits each.**
This final program component provides the student with work experience in the graphics and printing industry prior to graduation. Students may work up to 20 hours a week at an approved co-op work site, and are under the supervision of a student work coordinator. The student is expected to participate in work assignments that will reinforce and parallel the courses completed in the program, and will also be required to meet on a regular basis with the instructor for consultation and evaluation. (This course may be repeated for credit with the approval of the instructor.)

**GPC 215 Current Topics, 2 credits.**
# HORTICULTURE

**Associate in Applied Technology Certificate Program**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>THEORY</th>
<th>LAB</th>
<th>CR. HR.</th>
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<tr>
<td>OHT 111</td>
<td>Horticulture Soils &amp; Fertilizers</td>
<td>5</td>
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<td>OHT 112</td>
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<td>OHT 115</td>
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<td>OHT 116</td>
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<td>OHT 117</td>
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<td>OHT 124</td>
<td>Landscape Plants in Design</td>
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<tr>
<td>OHT 131</td>
<td>Ornamental and Turf Pest Control</td>
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<td>OHT 210</td>
<td>The Business of Horticulture</td>
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<td>OHT 220</td>
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<td>OHT 222</td>
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<td>OHT 115</td>
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<td>OHT 118</td>
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<td>OHT 119</td>
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<td>OHT 121</td>
<td>Plant Propagation</td>
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<td>OHT 122</td>
<td>Turf Management</td>
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<td>OHT 141</td>
<td>Landscape Design</td>
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<tr>
<td>OHT 142</td>
<td>Nursery Management</td>
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<tr>
<td>OHT 143</td>
<td>Landscape Design &amp; Drawing</td>
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<td>OHT 211</td>
<td>Greenhouse Production</td>
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**Required General Education Courses:**

- DPT 122 Business Application Software 5 0 5
- COM101 English Composition I 5 0 5
- HMN100 Humanities Forum 3 0 3
- MAH100 College Mathematics 5 0 5
- MAH102 Business Mathematics 5 0 5
- PSH 270 Business and Industrial Psychology 5 0 5
- SPC 106 Fundamentals of Speech Communications 5 0 5

**TOTAL CREDIT HOURS** 96

# GOLF COURSE MANAGEMENT

**Certificate Program**

<table>
<thead>
<tr>
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<th>THEORY</th>
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<td>OHT 133</td>
<td>Golf Course Soils &amp; Fertilizers</td>
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<td>OHT 134</td>
<td>Golf Course Turf Management</td>
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<td>OHT 145</td>
<td>Golf Course Pest Control</td>
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<td>OHT 212</td>
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<td>OHT 220*</td>
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<td>OHT 251**</td>
<td>Supervised Practical Experience</td>
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**Required General Education Courses:**

- COM101 English Composition I 5 0 5

**TOTAL CREDIT HOURS** 31

# LANDSCAPE DESIGN

**Certificate Program**

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<td>OHT 115</td>
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<td>OHT 124</td>
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**Required General Education Course:**

- COM101 English Composition I 5 0 5

**TOTAL CREDIT HOURS** 31

# TURF MANAGEMENT

**Certificate Program**

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<tr>
<th>COURSE</th>
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<th>THEORY</th>
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<td>OHT 220**</td>
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</table>

**Required General Education Course:**

- COM101 English Composition I 5 0 5

**TOTAL CREDIT HOURS** 31
### Course Descriptions

#### OHT 111  Horticulture Soils and Fertilizers, 5 credits.
The course is designed to be an introduction of soil types and basic soil chemistry. In addition, fertilizers to amend those soils will be discussed.

#### OHT 112  Horticulture Science, 5 credits.
This course is intended to give the student a working knowledge of botany, genetics, plant nomenclature, and history.

#### OHT 115  Plant Material Identification and Use, 1 credit.
The course is an on-going practical study of plant material identification and use.

#### OHT 116-119  Seasonal Applications, 1 credit.
Supervised, practical lab work that corresponds to work done in the Horticulture industry season by season. Students are required to complete the seasonal rotation or challenge a practical competency exam. Contact instructor for exam content.

#### OHT 121  Plant Propagation, 5 credits.
This course is designed to study various techniques used in the propagation of plants grown by commercial nurserymen using seeds, cuttings, and grafts.

#### OHT 122  Turf Management, 5 credits.
The study of all major southern lawn grasses and their maintenance. Turf machinery, fertilizers, and uses of lawn grasses are covered to a great extent. Emphasis will also be placed on practical lab skills as demonstrated in class.

#### OHT 123  Turf Machinery and Maintenance, 2 credits.
A detailed look at machinery used on a golf course, including greens mowers, cultivation equipment and small power equipment. Maintenance and cost effectiveness are thoroughly explained.

#### OHT 124  Landscaping Plants in Design, 5 credits.
A thorough study of the most commonly used plant materials and where they can be implanted in a modern landscape design.

#### OHT 131  Ornamental and Turf Pest Control, 5 credits.
The study of the different insect, disease, and weed pests of ornamental plants. Emphasis is placed on identification and control. Information is presented through lecture and practical demonstrations.

#### OHT 133  Golf Course Soils and Fertilizers, 3 credits.
An in-depth look at soils, native and man-made, their care and amendment with commercial fertilizers.

#### OHT 134  Golf Course Turf Management, 3 credits.
This course emphasizes turf management of tees, greens and fairways. Special attention is placed on variety selection, seasonal considerations and renovation.

#### OHT 141  Landscape Design, 5 credits.
A course designed to provide the student with the technical information necessary to obtain and hold a job related to landscape design. Emphasis is placed on modern landscape design for residential and commercial landscapes.

#### OHT 142  Nursery Management, 5 credits.
A course designed to provide the student with the technical information needed to obtain and hold employment in the nursery production industry.

#### OHT 143  Landscape Design & Drawing, 1 credit.
Students will be trained in the practical use of drafting equipment, layout of drawings and the basics of landscape design theory.

#### OHT 145  Golf Course Pest Control, 3 credits.
This course covers the common insects, disease and weed pests found on a golf course, their prevention and control. Emphasis is placed on application and environmental safety.

#### OHT 210  The Business of Horticulture, 3 credits.
This course is an introduction to managing a horticultural business. Topics include, but are not limited to: Pricing work, the law, insurance and license requirements, employee and customer management, etc.

#### OHT 211  Greenhouse Production, 5 credits.
A course designed to increase the student's abilities to work in or manage a commercial greenhouse.

#### OHT 212  Landscape Maintenance, 5 credits.
A course designed to improve student knowledge of landscape maintenance concepts and thereby increase the student's abilities as a groundskeeper.

#### OHT 220  Current Topics in Horticulture, 1 credit.
Individual study in an area of interest to the student and approved by the instructor.

#### OHT 221  Advanced Studies, 2 credits.
Individual study in an area of interest to the student and approved by the instructor.

#### OHT 222  Current Topics in Horticulture, 2 credits.
Survey of current trends in the horticulture industry through the use of slides, videos, and trade journals. Students will prepare presentations on several topics for class.

#### OHT 251  Supervised Practical Experiences, 5 credits.
Practical application of theory learned in the classroom through laboratory assignments scheduled according to seasonal growing conditions.
HUMANITIES (HMN)

HMN 100 HUMANITIES FORUM, 1 CREDIT.
In this course, credit is given for participation in lectures, concerts, and other events that have relevance to the study of the humanities. The course may be repeated for credit each quarter that the student is enrolled in college.

INDUSTRIAL MAINTENANCE TECHNICIAN (INT)

INTERNSHIP MAINTENANCE TECHNICIAN Certificate Program

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ILT 120</td>
<td>Principles of Electronics I</td>
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<tr>
<td>ILT 121</td>
<td>Principles of Electronics I Lab</td>
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<td>ILT 122</td>
<td>Principles of Electronics II</td>
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<td>ILT 123</td>
<td>Principles of Electronics II Lab</td>
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<td>Industrial Electronics</td>
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<td>ILT 171</td>
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<td>INT 110</td>
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<td>Basic Pneumatics</td>
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<td>INT 112</td>
<td>Basic Mechanics</td>
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<td>INT 120</td>
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<td>INT 122</td>
<td>Industrial Mechanics</td>
</tr>
<tr>
<td>INT 123</td>
<td>Mechanical Power Transmission</td>
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<tr>
<td>WDT 111</td>
<td>Basic Shielded Metal Arc Welding-Pt I</td>
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</table>

Required General Education Course:
MAH 108 Elementary Algebra

TOTAL CREDIT HOURS 40.5

Optional Related Courses:

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<tr>
<td>INT 111</td>
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<td>INT 120</td>
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<td>INT 121</td>
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</tr>
<tr>
<td>INT 130</td>
<td>Proportional Controls</td>
</tr>
<tr>
<td>INT 131</td>
<td>Proportional Circuits</td>
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<tr>
<td>WDT 117</td>
<td>Blueprint Reading for Welders</td>
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<tr>
<td>WDT 112</td>
<td>Basic Shielded Metal Arc Welding-Pt II</td>
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LICENCED PRACTICAL NURSING (LPN)

The Licensed Practical Nursing Program is designed to prepare students to give basic nursing care to stable, non-acute patients, independent of immediate guidance, and to unstable, acute patients under the direct supervision of a registered nurse, and/or physician.

The nursing faculty are eager to help you continue learning and applying the knowledge necessary for a nursing career. The teaching-learning process is viewed as a two-way process between faculty and student. The faculty members regard their chief responsibility as facilitating your learning by offering guidance in classroom and clinical activities. You are referred to the philosophy and objectives for the nursing program to aid you in understanding the rationale for actions involving the teaching-learning process.

The program is approved by the Alabama Board of Nursing and graduates are eligible to make application to write the licensing exam to become an LPN.

The program can be completed in five (5) quarters.

PROGRAMS OF STUDY and COURSE DESCRIPTIONS 53
LICENSED PRACTICAL NURSING
Diploma Program

<table>
<thead>
<tr>
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<td>LPN 121</td>
<td>Fundamentals of Nursing</td>
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<td>LPN 122</td>
<td>Basic Nutrition</td>
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<tr>
<td>LPN 123</td>
<td>Basic Pharmacology</td>
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<td>LPN 160</td>
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<td>LEVEL III</td>
<td>Adult Health I</td>
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<td>LPN 131</td>
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<td>LPN 170</td>
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<td>LEVEL IV</td>
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</table>

**TOTAL CREDIT HOURS** 76

**Course Descriptions**

**LPN 110 Orientation to College/LPN, 1 credit.**
This course is designed to assist students in their transition into the college and nursing. Classes will enable student to review current college publications and policies, develop survival strategies to include study skills, test-taking tips, time/stress management, problem-solving and wellness habits. The course also assists the student in developing knowledge of the operations and functions of microcomputers, current use of computer technology in health care delivery, and the use of CAI (Computer-Assisted Instruction) to enhance their ability to apply the nursing process to simulated clinical situations.

**LPN 111 Anatomy and Physiology, 4 credits.**
This course introduces the student to scientific principles of normal body structure and function. Scientific principles learned in this course provides assessment, differentiating between normal and abnormal, developing critical thinking, and application of nursing process in future nursing courses. Students are provided opportunities to demonstrate, utilize and synthesize knowledge through laboratory experiences.

**LPN 112 Computer Literacy for Health Programs, 0.5 credits.**
This course introduces the student to basic computer functions and operations. The knowledge obtained provides the foundation for utilizing computer-assisted instruction while a student and for understanding computer applications in the health care setting. Computer skills gained in this course will be utilized in subsequent courses to enhance student success. Students are provided opportunities to utilize knowledge and skills in a direct computer laboratory experience. This course is offered to students enrolled in allied health programs.

**LPN 120 Personal and Vocational Relationships I, 1 credit.**
This course introduces the nursing process as the foundation for enrollment of the LPN role in delivery of care to clients responding to actual and/or potential stressors. Throughout this course students build on previously presented scientific principles of humans as biopsychosocial beings at various points on the health/illness continuum. Communication skills, and the critical thinking process are integral components of this course and provide the foundation for decision making and decision making in future nursing courses. Legal/ethical concerns and issues related to the constantly changing health care delivery system are presented. Self-care is emphasized in relation to client care as well as promotion of student well-being and success. PREREQUISITE: Level I Nursing or permission of instructor or department chair.

**LPN 121 Fundamentals of Nursing, 5 credits.**
This course is designed to assist the student to acquire knowledge and skills to be utilized in a holistic view of clients/patients for the outcome of health promotion and maintenance. The theory will allow the student to begin to use the nursing process in meeting client/patient needs. Although the focus is on health maintenance, deviation from wellness may be used for demonstration and application purposes. Nursing Fundamentals provides an introductory forum for critical thinking. This course is organized into three specific areas: health assessment, health maintenance, and health restoration. PRE-REQUISITE: Level I Nursing. COREQUISITE: LPN 160

**LPN 122 Basic Nutrition, 2 credits.**
This course is designed to provide the basic knowledge of nutrition in the promotion of health. It provides the foundation for diet therapy incorporated with disease processes studied in subsequent LPN courses. PREREQUISITES: Level I Nursing or consent of the instructor or department chair.

**LPN 123 Basic Pharmacology, 4 credits.**
This course is an introductory course that focuses on role enactment for the student in understanding the client's need for drug therapy. Skill procedures are designed to assist the student in developing competencies in administering medications to clients. PREREQUISITES: Level I Nursing or consent of the instructor or department chair.

**LPN 130 Adult Health I, 7 credits.**
This course is designed to develop scientific principles and theoretical content introduced in Levels I and II. Through utilization of nursing process the student explores/expands the role of the LPN in assisting clients across the life span with adaptation to commonly recurring stressors. Further, this course serves as foundation for theoretical content and clinical experiences provided in Levels IV and V. Concepts integrated throughout theoretical content includes nursing process, life span, stress/adaptation, critical thinking, and communication theory. PREREQUISITES: Level II Nursing. COREQUISITE: LPN 170

**LPN 131 Mental Health Concepts, 2 credits.**
This course emphasizes use of nursing process in relation to various stressors which may affect the mental health of clients. The major focus is on use of self as a therapeutic tool in initiating effective nurse-client relationships. In addition, students are guided to identify responses to potential and existing stressors to mental health for clients and families. PREREQUISITE: Level II Nursing.

**LPN 140 Family Health Nursing, 9 credits.**
The theoretical content and clinical experiences offered in Family Health
Nursing enables the student to use critical thinking, problem-solving skills and the nursing process to assist maternal/newborn clients in promoting, attaining, and maintaining an optimal level of health and self-care. This course presents humans as biophysical, psychosocial, linguistic beings who possess adaptive mechanisms through which they strive toward developing and maintaining a functional family unit. Related maternal/newborn health care delivery systems and trends are an integral part of this course and provide the foundation for collaboration with clients, families, and health team members. PREREQUISITES: Level III Nursing. COREQUISITE: LPN 180

LPN 160 Fundamentals of Nursing - Class/Clinical Lab, 3 credits.
Class/clinical laboratory experiences are designed to provide opportunity for application of knowledge and skills related to basic care of the adult/client/patient, including the use of the nursing process and documentation. PREREQUISITE: Level II Nursing. COREQUISITE: LPN 121

LPN 170 Adult Health I - Clinical Lab, 6 credits.
This clinical laboratory experience is designed to provide opportunity for application of knowledge and skills related to care of the adult with medical/surgical conditions including medication administration, development of nursing care plans and documentation. PREREQUISITE: Level II Nursing. COREQUISITE: LPN 130

LPN 180 Family Health Clinical Lab, 6 credits.
This clinical course focuses on the application of knowledge and concepts related to family health. Clinical experiences are provided in a variety of health care and community settings that facilitate health promotion and maintenance as well as health restoration of maternal, newborn, pediatric, and reproductive clients and their families. PREREQUISITE: Level III Nursing. COREQUISITE: LPN 140

LPN 210 Personal and Vocational Relationships II, 1 credit.
Role transition is facilitated through didactic content focusing on concepts related to role development for the LPN; specific content in leadership, management principles, job-seeking skills, and change theory is addressed. Content also focuses on professionalism including continuing education, professional organizations, ethical/legal concerns, management of resources, and transition from the student role to practicing nurse. Students will explore the impact of current and anticipated health care reform on health care delivery systems and the role of various levels of nursing personnel. Emphasis is placed on the importance of funding for health care services in all settings and for all populations. PREREQUISITE: Level IV Nursing.

LPN 211 Adult Health II, 9 credits.
This course is designed to build on concepts previously attained and emphasizes the application of nursing process in care of clients experiencing more complex stressors. Students are prepared to perform as beginning practitioners in primary, secondary and tertiary health care settings. Client populations studied are representative of society at large and include those experiencing alterations in oxygenation (respiratory and cardiovascular), regulation (renal, neurological and endocrine), mobility (musculoskeletal), as well as ingestion, digestion and absorption of nutrients (gastrointestinal). Students will demonstrate use of change theory, management/leadership principles, and critical thinking both as health team members and as team leaders in the patient care setting. PREREQUISITE: Level III Nursing. COREQUISITE: LPN 250

LPN 250 Adult Health II Clinical Lab, 6 credits.
This clinical course focuses on application and exploration of previously acquired knowledge in the delivery of nursing care to clients experiencing common recurring stressors both simple and complex. Application of the nursing process is emphasized in relation to health promotion as well as alleviation or modification of client responses to stressors both acute and potential. Role development is facilitated by use of skills related to communication, collaboration, resource management and critical thinking. PREREQUISITE: Level III Nursing. COREQUISITE: LPN 211

The Machine Tool Technology program provides instruction in the operation of standard metal cutting machine tools and equipment, such as the milling machine, lathe, shaper, drill press, power saw and pedestal, cylindrical and surface grinders. Students learn the theory of operation of these various pieces of equipment and immediately apply what they have learned in shop assignments. These assignments are completed under conditions very similar to on-the-job situations.

To supplement shop experience, the curriculum includes related courses in blueprint reading, applied mathematics and communication skills. Upon completion of the Machine Tool program, the college offers an optional certificate program of computerized numerical control (CNC). Entering the CNC training requires completion of the Machine Tool program or a minimum of four years experience in machine shop work.

### MACHINE TOOL Technology Program

<table>
<thead>
<tr>
<th>COURSE</th>
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<th>THEORY</th>
<th>LAB</th>
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<td>MTT 113</td>
<td>Machine Shop Operations I Pt II</td>
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<td>MTT 122</td>
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<td>MTT 123</td>
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<td>MTT 132</td>
<td>Applied Machine Shop I Pt I</td>
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<td>MTT 133</td>
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<td>MTT 142</td>
<td>Applied Machine Shop II Pt I</td>
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<td>MTT 143</td>
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<td>MTT 144</td>
<td>Blueprint Reading for Machinists</td>
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**Required General Education Courses:**

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**TOTAL CREDIT HOURS** 46

### MACHINE TOOL Computerized Numerical Control Certificate Program

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<td>Intro to CNC Manufacturing</td>
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<td>MTT 233</td>
<td>CNC Lathe Manufacturing</td>
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<td>MTT 234</td>
<td>CNC Mill Manufacturing</td>
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<td>MTT 235</td>
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**Required General Education Courses:**

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<th>LAB</th>
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</table>

**TOTAL CREDIT HOURS** 26

**PROGRAMS OF STUDY and COURSE DESCRIPTIONS** 55
Course Descriptions

MTT 112 Machine Shop Operations I - Part I, 4 credits.
Following a brief history of the machinist trade, the student learns the variations and uses of the basic machines, the use and care of measuring instruments, layout tools and hand tools used in the machine shop.

MTT 113 Machine Shop Operations I - Part II, 4 credits.
A continuation of MTT 112.

MTT 122 Machine Shop Operations II - Part I, 4 credits.
An in-depth study of the construction and operation of the drill press, lathe, saw, and the tools and attachments used in operating these machines. The course also includes the design, layout, and set-up of projects produced by these machines, principles of tool design and grinding procedures with emphasis on threads and threading tools. Special set-ups and their uses are explained.

MTT 123 Machine Shop Operations II - Part II, 4 credits.
A continuation of MTT 122.

MTT 132 Applied Machine Shop I - Part I, 4 credits.
This course consists of information and calculations required to accurately compute, set up machines, and measure tapers, angles, and threads. The operation and safe use of the milling machine is covered.

MTT 133 Applied Machine Shop I - Part II, 4 credits.
A continuation of MTT 132.

MTT 142 Applied Machine Shop II - Part I, 4 credits.
The course consists of information and calculations required to set up a machine and to measure finished products on the lathe, shaper, and milling machine. The construction and use of the grinding machine are covered. The laboratory is used to demonstrate and experience the methods for best usage of each machine, i.e., precision boring, internal threading, cutting keyways, and cylindrical and surface grinding.

MTT 143 Applied Machine Shop II - Part II, 4 credits.
A continuation of MTT 142.

MTT 144 Blueprint Reading for Machinists, 4 credits.
This course offers instruction in the principles of reading and interpreting basic machine trades blueprints. Students will study the different types of blueprints, the alphabet of lines, shop sketching, orthographic views, and dimensioning and tolerance techniques. Students will be required to read basic mechanical blueprints.

MTT 232 Introduction to CNC Manufacturing, 4 credits.
The theory and operation of Computer Numerical Control Machine Tools and Processes as compared to conventional machining.

MTT 233 CNC Lathe Manufacturing, 4 credits.
Process Planning, CNC Manual Programming, Lathe FAPT Programming. Manually program and set up CNC lathe with proper tooling to produce designed parts to engineering specifications by utilizing the controls capabilities.

MTT 234 CNC Mill Manufacturing, 4 credits.
Process Planning, CNC Mill Manual Programming, Mill Operation and Logic Programming. Manually program and set up CNC mill with proper tooling to produce designed parts to engineering specifications by utilizing the controls capabilities.

MTT 235 Computer Aided Manufacturing, 4 credits.
Programming numerous CNC lathe and mill operations to engineering specifications utilizing the MDSI Computer Assisted Programming Station.

MATHEMATICS
(=SSS, VTM, MAH)

SSS 080 Basic Mathematics, 2 credits.
This course prepares eligible student for various major and related courses by strengthening essential mathematical competencies. Diagnostic testing is done to assess specific needs in mathematics. Students are provided with individual and group instruction which includes whole numbers, fractions, decimals and measurement and occasionally other basic topics according to the student's needs.

SSS 081 Basic Algebra, 2 credits.
This course prepares eligible students for various major and related courses by strengthening and developing the concepts and skills of arithmetic and elementary algebra. Students are provided with individualized and group instruction which includes signed numbers, exponents, evaluating literal expressions and solving equations and other basic algebraic topics.

VTM 090 Vo-Tech Basic Mathematics, 2.5 credits.
This course is designed to aid students in non-degree occupational programs who need assistance with basic mathematical skills. Students will receive institutional credit for this course; however, this course does not fulfill the mathematics requirement for certificates, diplomas, or degrees.

VTM 101 Technical Mathematics, 5 credits.
The course will focus on application of arithmetical and algebraic principles and computations needed to assure competence in selected occupations. PREREQUISITE: Appropriate ACT ASSET test score or successful completion of VTM 090 or SSS 080.

VTM 151 Technical Mathematics, Part I, 2.5 credits.
The course is designed to develop students' math proficiency with fractions, decimals, percents, and measurements. A study of the metric system is part of the measurement section, and calculators are used extensively. PREREQUISITE: Appropriate ACT ASSET test score or successful completion of VTM 090 or SSS 080.

VTM 152 Technical Mathematics, Part II, 2.5 credits.
The course is a continuation of topics started in VTM 151. Pre-algebra, basic algebra, plane and solid geometry are the additional topics included. PREREQUISITE: Successful completion of VTM 151.

MAH 100 College Mathematics, 5 credits.
This course covers a wide range of mathematical topics. To begin with, it offers a brief review of whole numbers, fractions, decimals and their operations. A brief study of statistics, metrics, and sets of numbers is included. A close look at introductory algebra concepts follows and, finally, topics that are often referred to as consumer math round out the course.
MAH 102 Business Mathematics, 5 credits.
This general education course includes such topics as fundamentals of arithmetic, statistical methods, simple and compound interest, trade and cash discounts, percent applications, markup, markdown, payroll and taxes. PREREQUISITE: Appropriate ACT ASSET test score of 40, or challenge of or successful completion of MAH 100

MAH 091 Developmental Algebra, 5 credits.
This developmental course in review of algebra is designed to help the student develop mathematical proficiency necessary for selected curriculum entrance. PREREQUISITE: Appropriate ACT ASSET test score or successful completion of SSS 081

MAH 108 Elementary Algebra, 5 credits.
This course is a review of the fundamental operations in arithmetic and algebra. The topics include the numbers of ordinary arithmetic and their properties, integers and rational numbers, solving equations; polynomials; polynomials and factoring; and an introduction to systems of equations and graphs. PREREQUISITE: Appropriate ACT ASSET test score or successful completion of MAH 091.

MAH 111 Plane Trigonometry, 5 credits.
This course covers properties of trigonometric functions and operations, radian measure, inverse functions, and solutions of triangles. PREREQUISITE: Successful completion of MAH 108

MAH 151 College Mathematics - PART I, 2.5 credits.
This course is the first half of College Mathematics (MAH 100). The course is divided to accommodate students enrolled in the Automotive Service Technology associate degree programs.

MAH 152 College Mathematics - PART II, 2.5 credits.
The second half of MAH 100. PREREQUISITE: Successful completion of MAH 151

MAH 153 Elementary Algebra - PART I, 2.5 credits.
This course is the first half of Elementary Algebra (MAH 108). The course is divided to accommodate students enrolled in the Automotive Service Technology associate degree programs. PREREQUISITE: Successful completion of MAH 151 and MAH 152

MAH 154 Elementary Algebra - PART II, 2.5 credits.
The second half of MAH 108. PREREQUISITE: Successful completion of MAH 153

The Nursing Assistant program is designed to fulfill the Omnibus Budget Reconciliation Act (OBRA) federal requirements for training of long-term care nursing assistants in preparation for certification (CNA) through competency evaluation. The curriculum has been approved by the Alabama Department of Public Health and conforms to the program standards established by the Alabama Department of Postsecondary Education. The program is offered during the day.

NURSING ASSISTANT (NAS) Certificate Program

<table>
<thead>
<tr>
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<th>THEORY</th>
<th>LAB</th>
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<tr>
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<td>NAS 151</td>
<td>Nursing Assistant Clinical</td>
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<td>10</td>
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<tr>
<td>VTM 101</td>
<td>Technical Mathematics</td>
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<tr>
<td>NAS 121</td>
<td>Home Health Nursing Assistant</td>
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<td>NAS 161</td>
<td>Home Health Clinical</td>
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TOTAL CREDIT HOURS 39

* CPR certification and medical requirements must be accomplished prior to NAS 151 Clinical Experience
** Clinical transportation is required

Course Descriptions

NAS 101 Nursing Assistant, 11 credits.
This course provides the theory and laboratory experiences necessary for the development of skills and competencies as a nursing assistant. Preparation for providing basic health and personal care for patients/residents in chronic and acute health care settings is included. Content necessary for a student to become eligible to write the long-term Nursing Assistant Certification examination (NACEP) is included and complies with federally mandated OBRA 87 guidelines. PREREQUISITE: None COREQUISITE: NAS 151

NAS 151 Nursing Assistant Clinical, 3 credits.
This course is designed to enable the nursing assistant to apply knowledge and skills attained in the co-requisite course (NAS 101) to the clinical requirements mandated by OBRA 87. PREREQUISITE: None COREQUISITE: NAS 101

NAS 121 Home Health Nursing Assistant, 11 credits.
This course provides the necessary theory and laboratory experiences for the development of skills and competencies as a Home Health Nursing Assistant. Successful completion of the course will enable the student to provide assistance with personal care and homemaking activities to clients within the home environment. The course is in compliance with federal requirements of the Health Care Financing Administration and OBRA 87. COREQUISITE: NAS 161 PREREQUISITE: NAS 101

NAS 161 Home Health Clinical, 4 credits.
This course is designed to enable the Home Health Nursing Assistant to apply knowledge and skills attained in the co-requisite course (NAS 121) to the clinical setting. The course is in compliance with the current requirements and OBRA 87. COREQUISITE: NAS 121 PREREQUISITE: NAS 101
The Office Administration program prepares the student for as many as 14 different occupations as defined in the Dictionary of Occupational Titles. A highlight of the program is the individualized offerings. Students can choose the program option that best suits their needs — associate degree or certificate (Office Assistant or Word Processing) — and then choose electives to customize their selection.

Another unique characteristic of the Office Administration program is the ability of the student to "challenge" basic courses and receive advanced credit when prior education (perhaps in a high school program) or experience is documented.

Students are trained in the basic office skills of typing, filing, telephone operations, 10-key calculator, shorthand, and employment preparation. Office Administration students also receive hands-on experience in today's electronic office, including word processing or desk-top publishing. It is also possible to combine majors with other business areas such as retail marketing, accounting, or data processing.

Students are encouraged to join and participate in the on-campus professional organizations: Collegiate Secretaries International and Phi Beta Lambda. Both organizations host events each quarter which promote student leadership and growth. Graduates of the Office Administration Associate Degree program are eligible to sit for the Certified Professional Secretaries (CPS) Exam, the hallmark of success in this profession.

**OFFICE ASSISTANT Certificate Program**

<table>
<thead>
<tr>
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<th>LAB</th>
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<tr>
<td>SET 114</td>
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<tr>
<td>SET 120</td>
<td>Intermediate Typing*</td>
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<td>SET 210</td>
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**Required General Education Courses:**

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**Total Credit Hours** 50

**WORD PROCESSING Certificate Program**

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**Total Credit Hours** 50

*Based upon the score received on the typing placement exam, additional typing courses may be required to increase typing proficiency. Increasing the number of courses will lengthen program completion time.

**Office Administration Electives**

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<td>SET 134</td>
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**Total Credit Hours** 50

**OFFICE ADMINISTRATION (SET)**

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**Required General Education Courses:**

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**Total Credit Hours** 50

58 PROGRAMS OF STUDY and COURSE DESCRIPTIONS
**Recommended Non-Office Administrative Electives***

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<td>ACT 111</td>
<td>Accounting I</td>
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<td>DPT 110</td>
<td>Computer Fundamentals</td>
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<td>DPT 122</td>
<td>Business Application Software</td>
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<td>DPT 142</td>
<td>Business Spread Sheets</td>
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<td>MAH 108</td>
<td>Elementary Algebra</td>
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<td>Intro to Retailing</td>
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<tr>
<td>REM 121</td>
<td>Applied Advertising</td>
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<tr>
<td>REM 122</td>
<td>Applied Business Law</td>
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<tr>
<td>REM 222</td>
<td>Applied Economics</td>
<td>5</td>
</tr>
<tr>
<td>REM 224</td>
<td>Entrepreneurship</td>
<td>5</td>
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</tbody>
</table>

*** Other courses as approved by Department Advisor.

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**Course Descriptions**

**SET 110 Beginning Typing, 5 credits.**
This course is designed to teach the proper alphabetic and numeric reaches of the keyboard using the touch method. Technique and accuracy are stressed with speed development emphasized after the keyboard has been mastered. Students also learn how to format business documents including letters, reports, memorandums, and tables.

**SET 111 Speedwriting I, 5 credits.**
This is an introductory course in a form of shorthand that will enable students to take notes quickly and accurately whether for business or personal use. Students read and transcribe their notes. This course also develops and improves the students' vocabulary, spelling, punctuation, grammar, and proofreading skills. **PREREQUISITE:** Concurrently enrolled in SET 110 or ability to touch type 35 wpm.

**SET 112 Office Machines, 5 credits.**
Students are taught the touch method of operating the electronic calculator. Students complete business applications including payroll records, bank reconciliation, inventory control, income statements, invoices, and sales discount records. Basic machine maintenance is also learned and practiced on a daily basis.

**SET 113 Business English, 5 credits.**
This course is designed to enhance communication skills among office administration majors. Areas covered include grammar, punctuation, capitalization, number and abbreviation styles, proofreading and editing.

**SET 114 Filing, 5 credits.**
The most recent filing rules and procedures adopted by the Association of Records Managers and Administrators (ARMA) are taught. Students learn to index, code, sort, and file alphabetically, geographically, numerically, and by subject. Magnetic storage media, micrographics media, and database management are an integral portion of this course in addition to the traditional filing systems.

**SET 120 Intermediate Typing, 5 credits.**
Students develop proficiency in producing mailable documents including reports, tables, letters, memos, and forms in both straight-copy and/or edited rough-draft copy. **PREREQUISITE:** SET 110 or demonstrated proficiency of 35 wpm and knowledge of typing formats.

**SET 121 Speedwriting II, 5 credits.**
This course is designed for students who have successfully completed SET 111 and who wish to build their speed and skill in note taking. Students will develop a broader shorthand vocabulary, speed in taking dictation and transcribing accurately, and competence in office-style dictation with emphasis on mailability. The completion of this course will prepare students for those jobs which require shorthand ability. **PREREQUISITES:** SET 111 and SET 110 (or typing speed of 35 wpm).

**SET 122 Beginning WordPerfect for Windows, 5 credits.**
Students produce mailable documents using WordPerfect. The basics of computer operations for a personal computer are taught along with word processing concepts. Students use the basics of text editing and formatting features such as headers and footers, footnotes, and outlines to produce mailable documents. **PREREQUISITES:** Typing speed of 35 wpm and knowledge of typing formats.

**SET 123 Business Communication, 5 credits.**
Students apply their grammar and punctuation knowledge to the composition of actual business documents. **PREREQUISITES:** Successful completion of COM 091, Basic Writing and COM 101 and SET 110.

**SET 124 Records and Database Management, 5 credits.**
Upon successful completion of SET 114, students begin advanced instruction in records management systems. By researching and examining various records systems, students learn how to design and equip a business office with a records system that most efficiently meets its needs. They also learn how to manage the clerical staff necessary to handle the system. Job opportunities and career paths in records management are also covered.

**SET 125 Beginning Microsoft Word, 5 credits.**
This course is designed to assist students in developing basic word processing skills. Students will use copying and moving, spell checking, paragraph and character formatting, page numbering, headers and footers, tabs, searching and replacing text, tables feature, and merging to produce mailable documents. **PREREQUISITES:** Demonstrated typing speed of 35 wpm or SET 110.

**SET 130 Advanced Typing, 5 credits.**
Students continue to build speed, accuracy, and format knowledge in this course. Emphasis is placed on the application of theoretical knowledge to produce mailable documents in actual business situations. **PREREQUISITES:** SET 120 or typing speed of 45 wpm.

**SET 131 Medical Office Procedures, 5 credits.**
Students learn the office procedures particular to a medical office—greeting patients, labeling and filing medical records, handling the telephone and composing letters to medical clients. Using a patient accounting software, students also learn to maintain financial records, bill patients, schedule appointments, complete various insurance forms and prepare medical records for electronic claims submission. **PREREQUISITES:** SET 120 or typing speed of 40 wpm.

**SET 132 Advanced WordPerfect for Windows, 5 credits.**
Students produce mailable business documents using advanced features of the latest version of WordPerfect. Students utilize features such as merge, sort, macros, and styles. Instruction in desktop publishing is also included. **PREREQUISITE:** SET 122.

**SET 133 Medical Terminology, 5 credits.**
Medical Terminology is designed to give students a working knowledge of basic medical terminology. Students will be given the various parts (word elements) that make up medical terms and learn how those word parts are put together to form medical terms. The course is divided into 14 sections with corresponding Lab Tapes and Study Tapes for each lesson. The first 10 sections are devoted to the body systems (cardiovascular, respiratory, etc.). Section 11 discusses numbers, amount and colors; Section 12 is devoted to the medical specialties; Section 13 covers basic dental terms that will

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**PROGRAMS OF STUDY and COURSE DESCRIPTIONS 59**
This course gives hands-on experience to each student using one of the most advanced telephone training systems available—Eduphone. Students will learn and apply concepts in developing presentations using overhead transparencies, electronic presentations using a personal computer and projection device, and making presentations using 35mm slides. Students will receive instruction in graphing, inserting tables, developing transitions, applying build effects, and running a computer slide show. PREREQUISITES: Demonstrated typing speed of 35 wpm or SET 110 AND demonstrated knowledge of Windows 3.x or higher.

SET 135 Advanced Microsoft Word, 5 credits.
This course is designed to assist students in developing advanced word processing skills. Students will use Wizards, templates, AutoText, styles, multiple windows, multiple-column formats, borders and shading, graphics, drop caps, WordArt, drawing tools, text frames, sidebars, pull quotes, outline feature, index feature, and table of contents builder to produce mailable documents. PREREQUISITES: SET 125

SET 136 Intensive Typing, 5 credits.
Each student's individual typing ability is analyzed, and an individualized typing program is prescribed to build speed and reduce errors. PREREQUISITES: SET 110 or ability to touch type.

SET 140 Desktop Publishing, 5 credits.
Desktop publishing is a combination of word processing, typesetting, printing and graphics. Students get hands-on experience producing desktop publishing documents including letterheads, newsletters, and forms. PREREQUISITE: Demonstrated ability to touch type; 35 wpm recommended.

SET 141 Medical Transcription, 5 credits.
Students will prepare clinical dictation documents related to the medical field. Students will use a machine transcriber and a word processing software to produce the documents. PREREQUISITES: SET 133 AND a demonstrated typing speed of 45 WPM or SET 120

SET 142 Telephone Etiquette and Communications Skills, 5 credits.
This course gives hands-on experience to each student using one of the most advanced telephone training systems available—Eduphone. Students learn not only how to answer business calls but also how to transfer calls, place calls, take messages, use directories, set up teleconferences, use cellular phones, handle electronic and voice mail. Students are also given extensive instruction in improving their speaking voice and developing a pleasant, professional enunciation.

PHYSICS (PHC)

PHC 120 Introduction to Physics, 5 credits.
This course provides an introduction to general physics for non-science majors. Topics in fundamentals of mechanics, properties of matter, heat and temperature sound, electricity and magnetism, optics and modern physics. Laboratory is required. PREREQUISITE: Successful completion of MAH 108

PHC 151 Introduction to Physics - Part I, 2.5 credits.
This course is the first half of Introduction to Physics (PHC 120). The course is divided to accommodate students enrolled in the Automotive Service Technology associate degree programs. PREREQUISITE: Successful completion of MAH 153-154

PHC 152 Introduction to Physics - Part II, 2.5 credits.
This course completes the second half of PHC 120. PREREQUISITE: Successful completion of PHC 151.

PHC 203 General Physics I, 5 credits.
This course is designed to cover general physics at a level that assumes previous exposure to college algebra and basic trigonometry. Specific topics include mechanics, properties of matter, sound, heat, electricity and magnetism, light, and modern physics. Laboratory is required. PREREQUISITE: Successful completion (Grade = 70 or consent of the instructor) of MAH 108 and MAH 111.
PSH 100 Business and Industrial Psychology, 1 Credit.
This course is a study of interpersonal relations in the working environment, interpersonal communications, and techniques for selection and supervision of personnel. This course is designed specifically for Dental Assisting students.

PSH 106 Career Exploration, 1 Credit.
The course is designed for students to explore potential career fields. It includes an assessment through testing of strengths and weaknesses, general information about career and job skills, value and decision making techniques, and a career research.

PSH 110 Personal Development, 3-5 Credits.
This is a structured group experience that emphasizes living through developing one's internal resources. Topics included are self-programmed control, relaxation training, and interpersonal skills. The course is designed to translate other life skills into successful college adjustment. Study skills, library skills, and life planning are discussed. This course may not transfer to some four year institutions.

PSH 251 Business and Industrial Psychology - Part I, 2.5 Credits.
This course is the first half of Business and Industrial Psychology (PSH 270). The course is divided to accommodate students enrolled in the Automotive Service Technology associate degree programs.

PSH 252 Business and Industrial Psychology - Part II, 2.5 Credits.
This course completes the second half of PSH 270.

PSH 270 Business and Industrial Psychology, 5 Credits.
This course is a study of interpersonal relations in the working environment, interpersonal communications, and techniques for selection and supervision of personnel. RECOMMENDATION: A student should have completed five (5) quarters of study before enrolling in this course.

RETAIL MERCHANDISING
Associate in Applied Technology

<table>
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<tr>
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Required General Education Courses:

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Total Credit Hours 113

RETAIL MERCHANDISING
Certificate Program

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Required General Education Courses:

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Total Credit Hours 40
Course Descriptions

REM 111 INTRODUCTION TO RETAILING, 5 CREDITS.
This course is designed to present an overview of the retail environment as it functions today, to acquaint the student with the terminology and procedures used in retailing, and to provide knowledge of the strategy and techniques used to achieve their profit goals.

REM 121 APPLIED ADVERTISING, 5 CREDITS.
This course is designed to provide a basic knowledge of the field of advertising as it applies to business today. The course also acquaints the student with the terminology, techniques, and tools used in advertising both from an advertiser’s to the media’s viewpoint and allows the student to look at advertising from the retailer’s standpoint of how to capture the most return from the advertising dollars spent.

REM 122 BUSINESS LAW I, 5 CREDITS.
This course is designed to familiarize the student with the legal environment in which business enterprise operates. The course also enables the student to apply this knowledge of law to his or her future profession.

REM 131 RETAIL SALESMASTERSHIP, 5 CREDITS.
This course is designed to develop basic persuasive abilities and to promote a positive attitude that is vital to the success in sales or any business related field. The course also acquaints the student with the proven methods used by successful salespeople today.

REM 132 SALES PROMOTION-MERCHANDISE DISPLAY, 5 CREDITS.
This course is designed to provide the student with the knowledge, skills, and understanding that will enable them to arrange a functionally effective display area. The course also facilitates an understanding of the principles of display that distinguishes a selling display from a nonproductive display.

REM 133 BUSINESS LAW II, 5 CREDITS.
This course is a continuation of Applied Business Law. The course is designed to familiarize student with the legal aspects of business enterprise and to enable students to apply this knowledge of law to their future professions. PREREQUISITE: REM 122

REM 141 CREDIT AND COLLECTION, 5 CREDITS.
This course is designed to provide the technical knowledge necessary to function effectively in the field of credit as it is used in business today. The course provides the student an opportunity to practice the skills necessary to conduct and administer credit and familiarizes the student with the forms, mechanics, and procedures of credit.

REM 142 SUPERVISORY MANAGEMENT, 5 CREDITS.
This course is designed to provide the student with an insight into the most effective ways to deal with employees they may be supervising. The course also relates the necessary supervisory skills to a retail manager’s day-to-day situation. Particular emphasis is placed on the human relations approach to accomplishing objectives.

REM 211 ELEMENTS OF SUPERVISION, 5 CREDITS.
This course is designed to prepare students to become effective employee-centered supervisors. The course also provides the student with an insight into the most effective ways to deal with employees they may be supervising.

REM 212 RETAIL BUYING, 5 CREDITS.
This course is designed to provide the technical knowledge necessary to function at entry-level buying capacity in a retail organization and acquaints the student with the procedures used in merchandising so that these may be used immediately upon entering the retail field. The course also familiarizes the student with the forms, terminology, and tools used in merchandising today and better enables student to buy for maximum sales and turnover.

REM 221 HUMAN RESOURCE MANAGEMENT, 5 CREDITS.
This course is designed to prepare the student to enter supervisory management and to have a better understanding of the art of dealing with people to accomplish desired objectives. The course emphasizes the importance of the communications process to efficient and productive management and acquaints the student with the human relations approach to management and the role it plays in effective management.

REM 222 APPLIED ECONOMICS, 5 CREDITS.
This course is designed to provide the student with a better understanding of our economic system and how it applies to them. The course also enables the student to make better decisions in the retail environment armed with a keener knowledge of what motivates consumers in our economy.

REM 223 THE RETAIL CONSUMER, 5 CREDITS.
This course is designed to prepare the students to enter the work force and better manage their personal finances and assets. It also enables the student to make wiser decisions and to be an alert and informed consumer.

REM 224 ENTREPRENEURSHIP, 5 CREDITS.
A course designed to provide the student with a knowledge of the basic principles, guidelines, practices, procedures and methods used in operating a small business and to acquaint the student with proven techniques used by successful small business owners today.

SPEECH (SPC)

SPC 100 FUNDAMENTALS OF SPEECH COMMUNICATION, 1 CREDIT.
This performance course includes the study of the principles of human communication: intrapersonal, interpersonal, and public. It surveys current communication theory and provides practical application. This course is specifically designed for Dental Assisting students.

SPC 105 FUNDAMENTALS OF SPEECH COMMUNICATION, 5 CREDITS.
This performance course includes the study of the principles of human communication: intrapersonal, interpersonal, and public. It surveys current communication theory and provides practical application. RECOMMENDATION: Successful completion of COM 101

SPC 151 FUNDAMENTALS OF SPEECH COMMUNICATION - PART I, 2.5 CREDITS.
This course is the first half of Fundamentals of Speech Communication (SPC 106). The course is divided to accommodate students enrolled in the Automotive Service Technology associate degree programs.

SPC 152 FUNDAMENTALS OF SPEECH COMMUNICATION - PART II, 2.5 CREDITS.
The second half of SPC 106. PREREQUISITE: Successful completion of SPC 151
The Welding program provides students the opportunity to acquire the necessary skills, knowledge, and experience for employment in welding occupations. Emphasis is on the technical aspects of welding. Instruction is offered in the welding of mild steel, stainless steel, and aluminum. Training is also conducted in torch burning, joint preparation, design, and layout.

**WELDING (WDT)**

**Diploma Program**

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<tr>
<th>COURSE</th>
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<td>WDT 113</td>
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<td>WDT 120</td>
<td>Gas Metal Arc Welding</td>
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<td>WDT 144</td>
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**Certificate Program**

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**Total Credit Hours: 30**

**Optional Related Course:**

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**Total Credit Hours: 67**

**Course Descriptions**

**WDT 110 Basic Shielded Metal Arc Welding, 7 credits.**
This course covers the safety procedures for arc welding, the testing procedures for fillet welds and the study of basic metallurgy.

**WDT 111 Basic Shielded Metal Arc Welding - Part I, 3.5 credits.**
This course is the first half of Basic Shielded Metal Arc Welding (WDT 110). The course is divided to accommodate evening students.

**WDT 112 Basic Shielded Metal Arc Welding - Part II, 3.5 credits.**
The second half of WDT 111.

**WDT 113 Advanced Shielded Metal Arc Welding, 7 credits.**
This course is designed to prepare the student to weld open root, single-V-groove joints using electrodes in the F3 and F4 groups, and to provide an opportunity to practice the skills necessary to become proficient in AWS Code welding and certification. PREREQUISITE: WDT 110

**WDT 114 Advanced Shielded Metal Arc Welding - Part I, 3.5 credits.**
This course is the first half of Advanced Shielded Metal Arc Welding (WDT 113). The course is divided to accommodate evening students.

**WDT 115 Advanced Shielded Metal Arc Welding - Part II, 3.5 credits.**
The second half of WDT 114.

**WDT 120 Gas Metal Arc Welding Processes, 7 credits.**
This course is designed to provide the technical knowledge and the opportunity to practice the skills necessary to understand the basic fundamentals of Gas Metal Arc Welding and Flux Cored Arc Welding and to become proficient in using the gas metal arc welder to produce quality and safe welds.

**WDT 121 Gas Metal Arc Welding Processes - Part I, 3.5 credits.**
This course is the first half of Gas Metal Arc Welding Processes (WDT 120). The course is divided to accommodate evening students.

**WDT 122 Gas Metal Arc Welding Processes - Part II, 3.5 credits.**
The second half of WDT 121.

**WDT 131 Gas Tungsten Arc Welding (Heliarc), Part I, 3.5 credits.**
This course provides the technical knowledge necessary to understand the fundamentals of Gas Tungsten Arc Welding of mild steel, aluminum and stainless.

**WDT 132 Gas Tungsten Arc Welding (Heliarc), Part II, 3.5 credits.**
This course is a continuation of WDT 131. PREREQUISITE: WDT 131

**WDT 140 Blueprint Reading for Welders, 2 credits.**
This course offers instruction in the principles of reading and interpreting industrial blueprints as applied to welding.

**WDT 141 Plate and Structural Layout and Fittings, 5 credits.**
This course is designed to provide the technical and practical knowledge necessary for a student to understand plate, structural, and pipe layout and fittings for different materials.
**WDT 142 Plate and Structural Layout and Fittings - Part 1, 2.5 Credits.**
This is the first half of Plate and Structural Layout and Fittings (WDT 141). The course is divided to accommodate evening students.

**WDT 143 Plate and Structural Layout and Fittings - Part 2, 2.5 Credits.**
The second half of WDT 142.

**WDT 144 Special Processes and Application, 5 Credits**
This course is designed to prepare the student to set-up and operate the automatic shape cutting machines using oxygen acetylene and the plasma arc process for ferrous and non-ferrous material. This course introduces the student to the fundamental skills of layout of templates and the use of carbon arc cutting.

**WDT 145 Aluminum Mig Arc Welding, 3 Credits**
This course is designed to prepare the student to weld with the aluminum mig extended reach wire feeder process in the all position welding. This course is also designed to prepare the student in fast production welding.

**WDT 210 Flux Core Arc Welding, 7 Credits.**
The purpose of this course is to provide the technical knowledge and the opportunity to practice skills necessary to understand the fundamentals of "Flux Core and Metal Core Welding" and to become proficient to make sound welds per AWS D1.1 code in the spray and globular transfer.

**WDT 211 Certification in SMAW, GMAW, FCAW and GTAW Processes, 7 Credits.**
This course prepares students to weld single-v-groove plates with backing and without backing using electrodes in the F3 and F4 groups in the 1G, 2G, 3G and 4G positions in the SMAW process. It also covers welding single-v-groove plates in the 1G, 2G, 3G and 4G positions in the GMAW process.
PREREQUISITES: WDT 113 and WDT 120

**WDT 212 Certification in SMAW and GMAW Processes - Part I, 3.5 Credits.**
This course is the first half of Certification in SMAW and GMAW (WDT 211). The course is divided to accommodate evening students.

**WDT 213 Certification in SMAW and GMAW Processes - Part II, 3.5 Credits.**
The second half of WDT 212.

**WDT 222 Pipe Welding, 7 Credits.**
The purpose of this course is to provide the technical knowledge and the opportunity to practice the skills necessary to pipe weld in the 1G, 2G, 5G and 6G positions using the F3 and F4 electrodes.

**WDT 223 Pipe Welding - Part I, 3.5 Credits.**
This course is the first half of Pipe Welding (WDT 222). The course is divided to accommodate evening students.

**WDT 224 Pipe Welding - Part II, 3.5 Credits.**
The second half of WDT 223.
PROGRAMS OF STUDY

ACCOUNTING
AIR CONDITIONING/REFRIGERATION
AUTOMOTIVE SERVICES
BUILDING CONSTRUCTION
BUILDING MAINTENANCE
COMMERCIAL ART/PHOTOGRAPHY
COMMERCIAL WIRING
COMPUTER SCIENCE
DATA ENTRY
DENTAL ASSISTING
DIESEL MECHANICS
DRAFTING AND DESIGN
ELECTRONICS
EMERGENCY MEDICAL TECHNICIAN
FORD ASSET
GENERAL MOTORS ASE
GRAPHICS AND PRINTING
HORTICULTURE
INDUSTRIAL MAINTENANCE
LICENSED PRACTICAL NURSING
MACHINE TOOL
NURSING ASSISTANT
OFFICE ADMINISTRATION
RETAIL MERCHANDISING
TOYOTA T-TEN
WELDING

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