Title 9-Education-Mississippi Community College Board

Part 5- Revised Mississippi Curriculum Frameworks for Career–Technical Programs

Date: October 21, 2011

To: Board Members

From: Dr. Shawn Mackey, Director CTE

Re: 2011 Curricula Revisions

As part of the annual curriculum revision and development process in Career & Technical Education, postsecondary curriculum writing and revision teams (consisting of college faculty, deans and directors, business and industry representatives, and curriculum specialists from Mississippi State University's Research and Curriculum Unit) updated and developed the listed postsecondary curricula. All curricula were posted online for validation by college faculty, deans and directors, after which the final validated curricula were posted online at:

http://www.rcu.msstate.edu/Curriculum/CurriculumDownload.aspx

Approval to begin the Administrative Procedures Act process: to revise *The Mississippi Postsecondary Curriculum Frameworks*

The following Postsecondary CTE Curriculum Frameworks are recommended for approval:

Postsecondary Programs

1. Agricultural Technician Technology
2. Automation and Control Technology
3. Automotive Technology
4. Brick Block and Stone Masonry
5. Civil Engineering Technology
6. Collision Repair Technology
7. Commercial Residential Maintenance
8. Commercial Truck Driving
9. Conservation Law Enforcement Technology
10. Cosmetology Science Cluster
11. Dental Assisting Technology
12. Dental Hygiene Technology

13. Diagnostic Medical Sonography Technology
14. Diesel Equipment Technology
15. Electronics and Related Engineering Technology
16. Forestry Technology
17. Instrumentation Technology
18. Media Technology
19. Medical Laboratory Technology
20. Millwright Technology
21. Occupational Therapy Assistant
22. Small Engine and Equipment Repair Technology
23. Utility Line Worker Technology

Each curriculum framework follows the format established for postsecondary career and technical programs. Draft curricula for each program were revised and reviewed with input from local district personnel and business/industry collaborators. Postsecondary curricula will be approved for implementation immediately following final adoption and must be implemented by January, 2013.

The *Executive Summary-Postsecondary Curricula Frameworks* contains the following elements for each revised postsecondary curricula:

- Program Description
- Suggested Course Sequence
- Listing of Courses
  >Course Name
  >Course Abbreviation
  >Classification
  >Description (including recommended number of lecture and lab contact hours)
  >Pre/Corequisites
- 2011 Curriculum Revisions by Program (with major changes noted)

All curricula frameworks are designed to provide local programs with a foundation that can be used to develop localized instructional management plans and course syllabi. Contents of each framework are not designed to limit the content of a course, but to provide a minimum baseline of instruction, which all programs must meet.

Teachers, administrators, and instructional management personnel are encouraged to expand and enhance the statewide frameworks to better meet the needs of their students.

We request Board approval to submit these final validated curricula for public review and comment through the process required by the Administrative Procedures Act. A summary of the revised programs and a list of articulated courses are attached.

REVISED MISSISSIPPI CURRICULUM FRAMEWORKS FOR CAREER–TECHNICAL PROGRAMS

POSTSECONDARY EXECUTIVE SUMMARY

2011

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REVISED POSTSECONDARY CURRICULUM FRAMEWORKS
2011 EDITION
EXECUTIVE SUMMARY
FOREWORD

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Career–technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local career–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and career skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide career and technical educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Referenced throughout the courses of the curriculum are the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. Another important aspect of learning and working in the 21st century involves technology skills. The International Society for Technology in Education, developer of the National Educational Technology Standards (NETS), was a strategic partner in the Partnership for 21st Century Skills.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses that focus on the development of occupational competencies. The MS-CPAS2 blueprints are based upon the suggested course sequences to allow for year 1 and year 2 assessments for all exit options. Please refer to the blueprint online. Each career–technical course in this sequence has been written using a common format, which includes the following components:

- Course Name – A common name that will be used by all community and junior colleges in reporting students

- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students

- Classification – Courses may be classified as the following:
    - Career–technical core – A required career–technical course for all students

  - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs
  - Career–technical elective – An elective career–technical course
  - Related academic course – An academic course that provides academic skills and knowledge directly related to the program area
  - Academic core – An academic course that is required as part of the requirements for an associate's degree

- Description – A short narrative that includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course

- Corequisites – A listing of courses that may be taken while enrolled in the course

- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and the suggested student objectives that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
  - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
  - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
  - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
  - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
  - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas

- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15-semester-credit-hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
    - 3 semester credit hours (sch) Math/Science Elective
    - 3 semester credit hours Written Communications Elective
    - 3 semester credit hours Oral Communications Elective
    - 3 semester credit hours Humanities/Fine Arts Elective
    - 3 semester credit hours Social/Behavioral Science Elective

  It is recommended that courses in the academic core be spaced out over the entire length of the program, so that students complete some academic and career–technical courses each semester. Each community or junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- Career–technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new competencies and suggested objectives
- Revising or extending the suggested objectives for individual competencies
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

In addition, the curriculum framework as a whole may be customized by doing the following:

- Resequencing courses within the suggested course sequence reflecting the new assessment format
- Developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (with MCCB approval)
- Utilizing the career technical elective options in many of the curricula to customize programs

COMMUNITY/JUNIOR COLLEGE CAREER–TECHNICAL PROGRAMS 2011 REVISION

Postsecondary Agricultural Technician Technology
Postsecondary Automation and Control Technology
Postsecondary Automotive Technology
Postsecondary Brick Block and Stone Masonry
Postsecondary Civil Engineering Technology
Postsecondary Collision Repair Technology
Postsecondary Commercial Residential Maintenance
Postsecondary Commercial Truck Driving
Postsecondary Conservation Law Enforcement Technology
Postsecondary Cosmetology Science Cluster
Postsecondary Dental Assisting Technology
Postsecondary Dental Hygiene Technology
Postsecondary Diagnostic Medical Sonography Technology
Postsecondary Diesel Equipment Technology
Postsecondary Electronics and Related Engineering Technology
Postsecondary Forestry Technology
Postsecondary Instrumentation Technology
Postsecondary Media Technology
Postsecondary Medical Laboratory Technology
Postsecondary Millwright Technology
Postsecondary Occupational Therapy Assistant
Postsecondary Small Engine and Equipment Repair Technology
Postsecondary Utility Line Worker Technology

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PROGRAM DESCRIPTIONS AND SUGGESTED COURSE SEQUENCES

AGRICULTURAL TECHNICIAN TECHNOLOGY

Agricultural Technician Technology is an instructional program that prepares individuals to select, operate, maintain, service, and use agricultural/industrial power units, machinery, and equipment. Included is instruction in engine design, use, maintenance, and repair techniques. The program covers internal combustion engines service and overhaul, electrical systems, hydraulic systems, power trains, air conditioning, grain harvesting equipment, spray equipment, row crop planting systems, cotton harvesting equipment, hay harvesting equipment, compact engines equipment, servicing, cutting and welding, and service repair center management and operations.

Graduates of the first-year program shall be issued a Certificate of Agricultural Technician, and those who complete the second year shall be awarded an Associate of Applied Science Degree in Agricultural Technician Technology. Graduates of this program are employed by agricultural equipment dealers, industrial, rental, and retail concerns and agricultural businesses.

Industry standards referenced are adapted from the Ag Tech program as published by Deere and Company, Moline, IL. Ag Tech is a nationally recognized training program for farm power and machinery technicians.

Suggested Course Sequence*
Agricultural Technician Technology
Career Certificate

3 sch	Agricultural Mechanics Fundamentals (AMT 1123)	3 sch	Advanced Engines (AMT 1423)
3 sch	Basic Engines (AMT 1413)	3 sch	Advanced Electrical/Electronics Systems (AMT 1223)
3 sch	Basic Electrical/Electronics Systems (AMT 1213)	1 sch	Principles of Air Conditioning (AMT 1511)
3 sch	Basic Power Trains (AMT 1313)	3 sch	Basic Hydraulic Systems (AMT 1613)
3 sch	Compact Engines and Equipment (AMT 2813)	6 sch	Electives
3 sch	Electives	16 sch	
18 sch			

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

ELECTIVES

Any other instructor approved elective
Agricultural Records (AGT 1613)
Applied Soils-Conservation and Use (AGT 1714)
Cotton Harvesting Equipment (AMT 231[1-3])
Fundamentals of Microcomputer Applications (CPT 1113)
Grain Harvesting equipment (AMT 211[1-3])
Hay Harvesting Equipment (AMT 241[1-3])
Principles of Agricultural Management (AGT 1413)
Principles of Agricultural Marketing (AGT 1513)
Row Crop Planting Systems (AMT 2712)
Special Problem in Agricultural Technician Technology [(AMT 291(1-3)]
Spray Equipment (AMT 2513)
Supervised Work Experience in Agricultural Technician Technology [AMT 292(1-6)]
Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Suggested Course Sequence*
Agricultural Technician Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Agricultural Mechanics Fundamentals (AMT 1123)	3 sch	Advanced Engines (AMT 1423)
3 sch	Basic Engines (AMT 1413)	3 sch	Advanced Electrical/Electronic Systems (AMT 1223)
3 sch	Basic Electrical/Electronics Systems (AMT 1213)	3 sch	Basic Hydraulic Systems (AMT 1613)
3 sch	Basic Power Trains (AMT 1313)	3 sch	Advanced Power Trains (AMT 1323)
3 sch	Computer Elective+	3 sch	Math/Science Elective
3 sch	Written Communications Elective	3 sch	Elective
18 sch		18 sch	

SECOND YEAR

3 sch	Harvesting Equipment Elective+	3 sch	Row Crop Planting Systems (AMT 2712)
3 sch	Compact Engines and Equipment (AMT 2813)	3 sch	Advanced Hydraulic Systems (AMT 2623)
1 sch	Principles of Air Conditioning (AMT 1511)	3 sch	Social/Behavioral Science Elective
3 sch	Humanities/Fine Arts Elective	3 sch	AMT Elective
3 sch	Oral Communications Elective	3 sch	Elective
3 sch	Elective	15 sch	
16 sch			

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

ELECTIVES

Any other instructor approved elective
Agricultural Records (AGT 1613)
Applied Soils-Conservation and Use (AGT 1714)
Computer Electives (Choose 1)

- CPT 1113 Fundamentals of Microcomputer Applications,
- CSC 1113 Introduction to Computer Concepts
- ATE 1113 Science and Technology

Fundamentals of Microcomputer Applications (CPT 1113)
Harvesting Equipment Electives

- Cotton Harvesting Equipment (AMT 231[1-3])
- Grain Harvesting Equipment (AMT 211[1-3])
- Hay Harvesting Equipment (AMT 241[1-3])

Introduction to Spatial Information Systems (AGT 1163)
Principles of Agricultural Management (AGT 1413)
Principles of Agricultural Marketing (AGT 1513)
Service Repair Center Management and Operations (AMT 2823)
Special Problem in Agricultural Technician Technology [(AMT 291(1-3)]
Spray Equipment (AMT 2513)
Supervised Work Experience in Agricultural Technician Technology [AMT 292(1-6)]
Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

AUTOMATION AND CONTROL

Automation and Control Technology is an instructional program that provides the student with technical knowledge and skills necessary for gaining employment as an automated manufacturing systems technician in maintenance diagnostics, engineering, or production in an automated manufacturing environment. The focus of this program is on electricity/electronics, fluid power, motors and controllers, programmable controls, interfacing techniques, instrumentation, and automated processes.

This curriculum is designed as a two-year technical program. The Associate of Applied Science Degree in Automation and Control Technology will be awarded at the culmination of a minimum of 64 semester hours of satisfactory study. Graduates of the program will be qualified to seek employment as entry level electronics, instrumentation, robotics, automation, and maintenance technicians. Students who graduate from the program will also better prepared to continue their education in advanced engineering related fields.

Industry standards referenced are from the International Technology and Engineering Educators Association (ITEEA) STL Content Standards.

Suggested Course Sequence*
Automation and Control Technology
Associate of Applied Science Degree

FIRST YEAR

2 sch	Introduction to Automation and Controls (MFT 1112)	3 sch	AC Circuits (EET 1123)
4 sch	DC Circuits (EET 1114)	4 sch	Solid State Devices and Circuits (EET 1334)
3 sch	Math/Science Elective**	3 sch	Motor Control Systems (ELT 1413)
3 sch	Computer Related Elective	4 sch	Fluid Power (INT 1214)
3 sch	Technical Elective	3 sch	Written Communications Elective
15 sch		17 sch	

SECOND YEAR

4 sch	Digital Electronics (EET 1214)	3 sch	Electrical Wiring for Automation and Control Technology (MFT 1123)***
3 sch	Programmable Logic Controllers (ELT 2613)	3 sch	Oral Communications Elective
4 sch	Control Systems I (INT 2114)	3 sch	Humanities/Fine Arts Elective
3 sch	Social/Behavioral Science Elective	6 sch	Technical Electives
3 sch	Technical Elective		
17 sch		15 sch	

* Students who lack entry-level skills in math, English, science, etc. will be provided related studies.

** Mathematics course must be College Algebra (MAT 1313) or higher.

*** Commercial and Industrial Wiring (ELT 1123) may be substituted for this course.

APPROVED ELECTIVES

3 sch	Fundamentals of Drafting (DDT 1113)
3 sch	Principles of CAD (DDT 1313)
2 sch	Fundamentals of Electronics (EET 1192)
4 sch	Microprocessors (EET 1324)
3 sch	Computer Fundamentals for Electricity/Electronics (EET 1613)
3 sch	Fundamentals of Fiber Optics (EET 2423)
4 sch	Linear Integrated Circuits (EET 2334)
4 sch	Interfacing Techniques (EET 2514)
3 sch	Commercial and Industrial Wiring (ELT 1123)

3 sch Electrical Power (ELT 1213)
4 sch Solid State Motor Controls (ELT 2424)
3 sch Advanced Programmable Logic Controllers (ELT 2623)
3 sch Manufacturing Skills (IMM 1933)
3 sch Fundamentals of Instrumentation (INT 1113)
4 sch Control Systems II (INT 2124)
4 sch Calibration and Measurement Principles (INT 2214)
3 sch Automated Motion Control (MFT 2013)
3 sch Materials Requirement Planning (MFT 2113)
3 sch Statistical Process Control (MFT 2313)
3 sch Computer Integrated Manufacturing (MFT 2413)
3 sch Data Acquisition and Communications (MFT 2513)
4 sch Flexible Manufacturing Systems (MFT 2614)
1-3 sch Special Project in Automation and Control Technology [MFT 291(1-3)]
1-6 sch Supervised Work Experience in Automation and Control Technology [MFT 292(1-6)]
3 sch Fundamentals of Robotics (ROT 1113)
3 sch Industrial Hydraulics (ROT 1213)
3 sch Industrial Pneumatics (ROT 1223)
3 sch Industrial Robotics (ROT 1313)
3 sch Automated Manufacturing Controls (ROT 2413)
3 sch Servo Control Systems (ROT 2423)
3 sch Mechanical Systems (ROT 2613)
1-6 sch Work Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

AUTOMOTIVE TECHNOLOGY

Postsecondary Automotive Technology is an instructional program that prepares individuals to engage in the servicing and maintenance of all types of automobiles. Instruction includes the diagnosis of malfunctions of all eight areas of ASE/NATEF certification (Engine Repair, Electrical and Electronic Systems, Engine Performance, Brakes, Steering and Suspension Systems, Manual Drivetrains and Axles, Automatic Transmissions and Transaxles, Heating and Air Conditioning).

Program Requirements

Postsecondary Automotive Technology is an articulated career-technical program designed to provide advanced and technical skills to its students. Baseline competencies, taken from the secondary Automotive Service Technician curriculum framework, serve as a foundation for the competencies and suggested objectives taught in the courses of the program. Students who do not possess these competencies will be allowed to acquire them during the program. Students who can document mastery of the baseline competencies will receive advanced instruction on these topics. Automotive Technology may be taught as either a certificate program or as a technical program.

The curriculum for Postsecondary Automotive Technology is based upon the task list published in ASE Certification for Automobile Training Programs, National Automotive Technicians Education Foundation, Inc. (NATEF). This task list serves as a national standard for certification of automobile technician training programs and is regularly reviewed and validated by technicians and engineers in the automotive industry. The task list is based upon the following assumptions, which also apply to the model curriculum:

1. In all areas, appropriate theory, safety, and support instruction is required for performing each task. It is assumed that this instruction has included identification and use of appropriate tools and testing and measuring equipment required to accomplish certain tasks. It is also assumed that the student has received necessary training to locate and use current reference and training materials from accepted industry publications (in most cases, published by the vehicle manufacturer), which present manufacturers' recommended or required specifications and procedures for performing various tasks.

2. All diagnostic and repair tasks described in this document are to be accomplished in accordance with manufacturer's recommended procedures and specifications.

3. The individual training program being evaluated for certification should have written and detailed performance standards for each task taught in the curriculum. Learning progress of students should be monitored and evaluated against these performance standards. A system should be in place which informs all students of their individual progress through all phases of the training program.

4. It is recognized that individual courses of study will differ across automobile technician training programs. The development of appropriate learning delivery systems and tests which monitor student progress will be the responsibility of the individual training program.
   (Adapted from ASE certification for automobile training programs. National Institute for Automotive Service Excellence, Reston, VA. 199.)

For additional information on ASE Certification, contact the following:

National Automotive Technicians Education Foundation
13505 Dulles Technology Drive
Herndon, VA 22071-3415
(702) 713-010

Industry standards are based on the *Standards and Guidelines for Automotive Programs.*

Suggested Course Sequence*

Automotive Technology
Career Certificate

1 sch	Introduction, Safety, and Employability Skills (ATV 1811)
4 sch	Brakes (ATV 1214)
4 sch	Basic Electrical/Electronic Systems (ATV 1124)
4 sch	Engine Performance I (ATV 1424)
5 sch	Engine Repair (ATV 1715)
18 sch	

4 sch	Engine Performance II (ATV 2434)
4 sch	Advanced Electrical/Electronic Systems (ATV 1134)
4 sch	Steering and Suspension Systems (ATV 2334)
3 sch	Elective(s)
15 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

APPROVED ELECTIVES

Other electives that are instructor approved
Special Problem I in Automotive Technology [(ATV/ATT 291(1-6)]
Special Problem II in Automotive Technology [(ATV/ATT 293(1-6)]
Supervised Work Experience in Automotive Technology [ATV/ATT 292(1-6)]
Work-Based Learning [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Suggested Course Sequence*
Automotive Technology
Technical Certificate

FIRST YEAR

1 sch	Introduction, Safety, and Employability Skills (ATV 1811)
4 sch	Brakes (ATV 1214)
4 sch	Basic Electrical/Electronic Systems (ATV 1124)
4 sch	Engine Performance I (ATV 1424)
5 sch	Engine Repair (ATV 1715)
18 sch	

4 sch	Engine Performance II (ATV 2434)
4 sch	Advanced Electrical/Electronic Systems (ATV 1134)
4 sch	Steering and Suspension Systems (ATV 2334)
3 sch	Elective
15 sch	

SECOND YEAR

4 sch	Heating and Air Conditioning (ATV 2614)
5 sch	Automatic Transmissions/Transaxles (ATV 2325)
3 sch	Elective(s)
12 sch	

4 sch	Engine Performance III (ATV 2444)
4 sch	Manual Drive Trains/Transaxles (ATV/ATT 1314)
6 sch	Elective(s)
14 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

APPROVED ELECTIVES

Other electives that are instructor approved
Special Problem I in Automotive Technology [(ATV/ATT 291(1-6)]
Special Problem II in Automotive Technology [(ATV/ATT 293(1-6)]
Supervised Work Experience in Automotive Technology [ATV/ATT 292(1-6)]
Work-Based Learning [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Suggested Course Sequence*
Automotive Technology
Associate of Applied Science Degree

FIRST YEAR

1 sch	Introduction, Safety, and Employability Skills (ATT 1811)	3 sch	Math/Science Elective
4 sch	Brakes (ATT 1214)	3 sch	Written Communications Elective
4 sch	Basic Electrical/Electronic Systems (ATT 1124)	4 sch	Advanced Electrical/Electronic Systems (ATT 1134)
5 sch	Engine Repair (ATT 1715)	4 sch	Steering and Suspension Systems (ATT 2334)
4 sch	Engine Performance I (ATT 1424)	4 sch	Engine Performance II (ATT 2434)
18 sch		18 sch	

SECOND YEAR

3 sch	Humanities/Fine Arts Elective	3 sch	Oral Communications Elective
4 sch	Heating and Air Conditioning (ATT 2614)	3 sch	Social/Behavioral Science Elective
5 sch	Automatic Transmissions/Transaxles (ATT 2325)	4 sch	Engine Performance III (ATT 2444)
3 sch	Elective	4 sch	Manual Drive Trains/Transaxles (ATT 1314)
15 sch		14 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

APPROVED ELECTIVES

Other electives that are instructor approved
Special Problem I in Automotive Technology [(ATV/ATT 291(1-6)]
Special Problem II in Automotive Technology [(ATV/ATT 293(1-6)]
Supervised Work Experience in Automotive Technology [ATV/ATT 292(1-6)]
Work-Based Learning [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

BRICK BLOCK AND STONE MASONRY

Brick, Block, and Stone Masonry is an instructional program that prepares individuals to lay brick, block, and/or stone. Included is instruction in laying out and/or spacing bonds; determining vertical and horizontal alignment of courses using gauges, plumb-bobs, and levels; and cutting, notching, and shaping blocks, bricks, and stone to construct or repair walls, partitions, arches, and fireplaces.

Industry standards referenced are from the *Best Practices for Contren Learning Series*, National Center for Construction Education and Research.

Suggested Course Sequence*
Brick, Block and Stone Masonry
Career Certificate

5 sch	Brick and Block Laying (BBV 1115)	5 sch	Advanced Block Laying (BBV 1425)
5 sch	Masonry Construction (BBV 1215)	5 sch	Advanced Bricklaying (BBV 1525)
3 sch	Masonry Math, Estimating, and Blueprint Reading (BBV 1223)	6 sch	Career–Technical Electives ***
3 sch	Tools, Equipment, and Safety (BBV 1313)		
16 sch		16 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

CAREER–TECHNICAL ELECTIVES ***

Chimney and Fireplace Construction (BBV 1623)
Arch Construction (BBV 1723)
Steps, Patios, and Brick Floors (BBV 1823)
Special Problem in Brick, Block, and Stone Masonry [BBV 191(1-3)]
Supervised Work Experience in Brick, Block, and Stone Masonry [BBV 192(1-6)]
Work-Based Learning I, II, III, IV, V and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Other electives approved by instructor

Suggested Course Sequence*
Brick, Block and Stone Masonry
Technical Certificate

FIRST YEAR

3 sch	Tools, Equipment, and Safety (BBV 1313)	5 sch	Advanced Bricklaying (BBV 1525)
5 sch	Brick and Block Laying (BBV 1115)	5 sch	Advanced Block Laying (BBV 1425)
5 sch	Masonry Construction (BBV 1215)	3 sch	Masonry Math, Estimating, and Blueprint Reading (BBV 1223)
3 sch	Blueprint Reading (CAV 1133)	3 sch	Career–Technical Electives †
16 sch		16 sch	

SECOND YEAR

3 sch	Chimney and Fireplace Construction (BBV 1623)	6 sch	Foundations (CAV 1116)
3 sch	Arch Construction (BBV 1723)	3 sch	Steps, Patios, and Brick Floors (BBV 1823)
3 sch	Construction Materials (DDT 1213)	3 sch	Cost Estimating (DDT 2243)
4 sch	Fundamentals of Drafting (DDT 1114)	4 sch	Career–Technical Electives †
3 sch	Career-Technical Elective†	16 sch	
16 sch			

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

† CAREER–TECHNICAL ELECTIVES

3 sch	Construction Materials (DDT 1213)
3 sch	Elementary Surveying (DDT 1413)
3 sch	Welding (CRM 1713)
4 sch	Plumbing (CRM 1414)
4 sch	Electrical (CRM 1514)
4 sch	Carpentry (CRM 1214)
5 sch	Heating, Ventilating, and Air Conditioning (HVAC) (CRM 1615)
3 sch	Fundamentals of Microcomputer Applications (CPT 1113) (or any other suitable computer science course approved by the instructor)
3 sch	Forming Applications (CAV 1123)
3 sch	Electronic Spreadsheet (BOT 1813)
3 sch	Records Management (BOT 1413)
3 sch	Business Accounting (BOT 1433)

	OR Principles of Accounting I (ACC 1213)
3 sch	Keyboard Skillbuilding (BOT 1123)
1-3 sch	Special Problem in Brick, Block, and Stone Masonry [BBV 191(1-3)]
1-6 sch	Supervised Work Experience in Brick, Block, and Stone Masonry [BBV 192(1-6)]
1-3 sch	Work Based Learning VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Other electives approved by instructor

Suggested Course Sequence*
Brick, Block and Stone Masonry
Associate of Applied Science Degree

FIRST YEAR

3 sch	Tools, Equipment, and Safety (BBV 1313)
5 sch	Brick and Block Laying (BBV 1115)
5 sch	Masonry Construction (BBV 1215)
3 sch	Blueprint Reading (CAV 1133)
16 sch	

3 sch	Masonry Math, Estimating, and Blueprint Reading (BBV 1223)
5 sch	Advanced Bricklaying (BBV 1525)
5 sch	Advanced Block Laying (BBV 1425)
3 sch	Oral Communications Elective
3 sch	Career–Technical Electives †
19 sch	

SECOND YEAR

3 sch	Written Communications Elective
3 sch	Humanities/Fine Arts Elective
3 sch	Chimney and Fireplace Construction (BBV 1623)
3 sch	Arch Construction (BBV 1723)
6 sch	Foundations (CAV 1116)
18 sch	

3 sch	Social/Behavioral Science Elective
4 sch	Fundamentals of Drafting (DDT 1114)
3 sch	Steps, Patios, and Brick Floors (BBV 1823)
3 sch	Career–Technical Electives †
3 sch	Math/Science Elective
16 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

† CAREER–TECHNICAL ELECTIVES

3 sch	Construction Materials (DDT 1213)
3 sch	Elementary Surveying (DDT 1413)
3 sch	Cost Estimating (DDT 2243)
3 sch	Blueprint Reading (CAV 1133)
3 sch	Welding (CRM 1713)
4 sch	Plumbing (CRM 1414)
4 sch	Electrical (CRM 1514)
4 sch	Carpentry (CRM 1214)
5 sch	Heating, Ventilating, and Air Conditioning (HVAC) (CRM 1615)
3 sch	Fundamentals of Microcomputer Applications (CPT 1113) (or any other suitable computer science course approved by the instructor)

3 sch Forming Applications (CAV 1123)
3 sch Electronic Spreadsheet (BOT 1813)
3 sch Records Management (BOT 1413)
3 sch Business Accounting (BOT 1433)
OR Principles of Accounting I (ACC 1213)
3 sch Keyboard Skillbuilding (BOT 1123)
1-3 sch Special Problem in Brick, Block, and Stone Masonry [BBV 191(1-3)]
1-6 sch Supervised Work Experience in Brick, Block, and Stone Masonry [BBV 192(1-6)]
1-3 sch Work Based Learning VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Other electives approved by instructor

CIVIL ENGINEERING TECHNOLOGY

This program prepares a person for entry level positions in the civil engineering field. The curriculum includes surveying, principles of road construction, and general construction practices.

The graduate is prepared to work with the civil engineer and surveyor in the performance of general engineering practices which may include design; drawing and interpreting working drawings; determining equipment, materials, and labor required to complete a project; and performing various tests required for construction. Up-to-date equipment usage is stressed, including use of the surveying computer and electronic distance measuring devices.

A minimum of 64 semester credit hours is required to receive an Associate of Applied Science in Civil Engineering Technology. Students who complete a minimum of 32 semester credit hours in the program may be eligible to receive a career certificate in Civil Engineering Technology.

Industry standards referenced are from the American Design Drafting Association, American Society for Testing and Materials, Manual of Surveying Instructions from the Bureau of Land Management, Construction Specifications Institute, and Mississippi Department of Environmental Quality.

Suggested Course Sequence*
Civil Engineering Technology
Career Certificate

3 sch	Fundamentals of Drafting (DDT 1113)	3 sch	Elective
3 sch	Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413)	4 sch	Route Surveying (CIT 1114)
3 sch	Road Design and Construction Methods and Materials (CIT 1213)	3 sch	Road Construction Plans and Specifications (CIT 1223)
3 sch	Principles of CAD (DDT 1313)	3 sch	Elective
3 sch	Elective		
15 sch		13 sch	

Suggested Course Sequence*
Civil Engineering Technology
Technical Certificate

3 sch Fundamentals of Drafting (DDT 1113)
3 sch Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413)
3 sch Road Design and Construction Methods and Materials (CIT 1213)
3 sch Principles of CAD (DDT 1313)
3 sch Elective

15 sch

3 sch Elective
4 sch Route Surveying (CIT 1114)
3 sch Road Construction Plans and Specifications (CIT 1223)
3 sch Elective

13 sch

4 sch Land Surveying (CIT 2434)
3 sch Elective
3 sch Legal Principles of Surveying (CIT 2113) or Legal Principles of Surveying (DDT 2433)
3 sch Elective

13 sch

3 sch Elective
4 sch GPS Surveying (CIT 2444) or GPS Surveying (DDT 2463)
3 sch Mapping and Topography (CIT 2423) or Mapping and Topography (DDT 2423)
3 sch Elective

13 sch

Suggested Course Sequence*
Civil Engineering Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Fundamentals of Drafting (DDT 1113)
3 sch	Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413)
3 sch	Road Design and Construction Methods and Materials (CIT 1213)
3 sch	Principles of CAD (DDT 1313)
3 sch	Elective
15 sch	

3 sch	Elective
4 sch	Route Surveying (CIT 1114)
3 sch	Road Construction Plans and Specifications (CIT 1223)
3 sch	Math/Science Elective
3 sch	Written Communication Elective
16 sch	

SECOND YEAR

4 sch	Land Surveying (CIT 2434)
3 sch	Technical Elective
3 sch	Legal Principles of Surveying (CIT 2113) or Legal Principles of Surveying (DDT 2433)
3 sch	Social/Behavioral Science Elective
3 sch	Oral Communications Elective
16 sch	

3 sch	Technical Elective
4 sch	GPS Surveying (CIT 2444) or GPS Surveying (DDT 2463)
3 sch	Mapping and Topography (CIT 2423) or Mapping and Topography (DDT 2423)
3 sch	Technical Elective
3 sch	Humanities/Fine Arts Elective
16 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

APPROVED ELECTIVES

3 sch	Computational Methods for Drafting (DDT 1123)
3 sch	Descriptive Geometry (DDT 1153)
3 sch	Construction Materials (DDT 1213)
3 sch	Intermediate CAD (DDT 1323)
3 sch	Cost Estimating (DDT 2243)
3 sch	Advanced CAD (DDT 2343)
3 sch	Structural Drafting I (DDT 2213)
3 sch	Statics and Strength of Materials (DDT 2253)
3 sch	Construction Cost Estimation (CON 2123)
4 sch	Advanced Surveying Practices (CIT 2124)
3 sch	Advanced Surveying Practices (DDT 2443)
3 sch	Soil Mechanics (CIT 2313)
3 sch	Concrete and Hot-Mix Asphalt Testing (CIT 2413)
3 sch	Fundamentals of Geographical Information Systems (GIS) (CIT 2453)
3 sch	Fundamentals of Geographical Information Systems (GIT 2123)
3 sch	Water and Water Distribution (CIT 2513)
1-3 sch	Special Project [CIT 291(1-3)]
1-6 sch	Supervised Work Experience in Civil Engineering Technology [CIT 292(1-6)]
1-6 sch	Work-Based Learning [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]
3 sch	Professional Development (BOT 1213)
3 sch	Real Property I (LET 2453)

Note: Any other technical or academic course as approved by the instructor

COLLISION REPAIR TECHNOLOGY

Collision Repair Technology is an instructional program designed to prepare students for entry-level into the collision repair and refinishing trade. Upon completion of this program, the students will be prepared for beginning positions as body, frame, and refinish technicians. Students will be provided theory and practical repair and refinish work beginning with basic applications and progressing on to heavy collision repairs requiring major body and frame alignment and panel replacement. The instruction includes all phases necessary to teach collision repair including glass replacement, welding, replacement of hardware and trim items, cosmetic repairs, and structural repairs.

Industry standards referenced are from the *2009 ASE/NATEF Collision Repair & Refinish Standards (Painting and Refinishing, Non-Structural and Structural Analysis and Damage Repair, Mechanical & Electrical Components)*.

Suggested Course Sequence*
Collision Repair Technology
Career Certificate

A One-Year Career Certificate of Collision Repair may be awarded to a student who successfully completes the first year or 28 semester credit hours of required courses.

3 sch	Collision Welding and Cutting (ABT 1213)	3 sch	Structural Analysis and Damage Repair II (ABT 1153)
3 sch	Structural Analysis and Damage Repair I (ABT 1143)	3 sch	Non-Structural Analysis and Damage Repair II (ABT 1233)
3 sch	Non-Structural Analysis and Damage Repair I (ABT 1223)	3 sch	Mechanical and Electrical Components II (ABT 1453)
3 sch	Mechanical and Electrical Components I (ABT 1443)	3 sch	Refinishing II (ABT 1323)
4 sch	Refinishing I (ABT 1314)		
16 sch		12 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

Suggested Course Sequence*
Collision Repair Technology
Technical Certificate

FIRST YEAR

3 sch	Collision Welding and Cutting (ABT 1213)	3 sch	Structural Analysis and Damage Repair II (ABT 1153)
3 sch	Structural Analysis and Damage Repair I (ABT 1143)	3 sch	Non-Structural Analysis and Damage Repair II (ABT 1233)
3 sch	Non-Structural Analysis and Damage Repair I (ABT 1223)	3 sch	Mechanical and Electrical Components II (ABT 1453)
3 sch	Mechanical and Electrical Components I (ABT 1443)	3 sch	Refinishing II (ABT 1323)
4 sch	Refinishing I (ABT 1314)		
16 sch		12 sch	

SECOND YEAR

3 sch	Structural Analysis and Damage Repair III (ABT 2163)	3 sch	Structural Analysis and Damage Repair IV (ABT 2173)
3 sch	Non-Structural Analysis and Damage Repair III (ABT 2243)	3 sch	Non-Structural Analysis and Damage Repair IV (ABT 2253)
3 sch	Refinishing III (ABT 2333)	3 sch	Refinishing IV (ABT 2343)
3 sch	Elective	3 sch	Elective
12 sch		12 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

APPROVED ELECTIVES†

Other Instructor Approved Elective(s)
Fundamentals of Microcomputer Applications (CPT 1113)
Science and Technology (ATE 1113)
Special Problem in Collision Repair Technology (ABT 291[1-3])
Supervised Work Experience in Collision Repair Technology (ABT 292[1-6])
Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Suggested Course Sequence*
Collision Repair Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Collision Welding and Cutting (ABT 1213)	3 sch	Structural Analysis and Damage Repair II (ABT 1153)
3 sch	Structural Analysis and Damage Repair I (ABT 1143)	3 sch	Non-Structural Analysis and Damage Repair II (ABT 1233)
3 sch	Non-Structural Analysis and Damage Repair I (ABT 1223)	3 sch	Mechanical and Electrical Components II (ABT 1453)
3 sch	Mechanical and Electrical Components I (ABT 1443)	3 sch	Refinishing II (ABT 1323)
4 sch	Refinishing I (ABT 1314)	3 sch	Math/Science Elective
3 sch	Written Communications Elective	_____	
_____		15 sch	
19 sch			

SECOND YEAR

3 sch	Structural Analysis and Damage Repair III (ABT 2163)	3 sch	Structural Analysis and Damage Repair IV (ABT 2173)
3 sch	Non-Structural Analysis and Damage Repair III (ABT 2243)	3 sch	Non-Structural Analysis and Damage Repair IV (ABT 2253)
3 sch	Refinishing III (ABT 2333)	3 sch	Refinishing IV (ABT 2343)
3 sch	Elective	3 sch	Elective
3 sch	Social/Behavioral Science Elective	3 sch	Oral Communications Elective
_____		3 sch	Humanities/Fine Arts Elective
15 sch		_____	
		18 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** Baseline competencies are taken from the high school Collision Repair Technician program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

APPROVED ELECTIVES†

Other instructor approved electives
Fundamentals of Microcomputer Applications (CPT 1113)
Science and Technology (ATE 1113)
Special Problem in Collision Repair Technology (ABT 291[1-3])

Supervised Work Experience in Collision Repair Technology (ABT 292[1-6])
Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

COMMERCIAL RESIDENTIAL MAINTENANCE

The Commercial/Residential Maintenance program is designed to prepare individuals for employment opportunities in commercial and residential building general maintenance and repairs. Content of the program includes federal, state, and local codes; and basic maintenance of heating and cooling systems, ice machines, refrigerators, electrical, plumbing, welding, irrigation, pools, spas, and building components.

Industry standards referenced are from the *Best Practices for Contren Learning Series*, National Center for Construction Education and Research.

PROGRAM REQUIREMENTS

The curriculum for Commercial/Residential Maintenance is based upon data as collected from curricula guides, various codes, input from the business and industry, and a writing team. The listing of tasks within these documents served as baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction include use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications which present manufacturers' recommended or required specifications and procedures for doing the various tasks.
2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system should be in place that informs all students of their progress throughout the program.
3. It is recognized that individual courses will differ across the technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.
4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of the business.

Suggested Course Sequence*
Commercial/Residential Maintenance Technology
Career Certificate

3 sch Fundamentals of Maintenance Services (CRM 1113)
2 sch Maintenance Regulations (CRM 1122)
4 sch Mathematics and Blueprint Interpretation (CRM 1134)
4 sch Carpentry (CRM 1214)
3 sch Masonry (CRM 1313)
2-3 sch Career–Technical Elective**

18-19 sch

4 sch Plumbing (CRM 1414)
4 sch Electrical (CRM 1514)
6 sch Heating, Ventilating, and Air Conditioning (HVAC) (CRM 1616)
4 sch Career–Technical Electives**

18 sch

CAREER–TECHNICAL ELECTIVES**

2 sch Surface Finishes (CRM 1222)
2 sch Pool and Spa Maintenance (CRM 1422)
2 sch Landscape Irrigation (CRM 1432)
3 sch Welding (CRM 1713)
1-3 sch Special Project in Commercial/Residential Maintenance [CRM 291(1-3)]
1-6 sch Supervised Work Experience in Commercial/Residential Maintenance [CRM 292(1-6)]
1-3 sch Work-Based Learning I, II, III, IV, V and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

Note: Any other technical or academic course as approved by the instructor

Suggested Course Sequence*
Commercial Residential Maintenance
Technical Certificate

FIRST YEAR

3 sch	Fundamentals of Maintenance Services (CRM 1113)
2 sch	Maintenance Regulations (CRM 1122)
4 sch	Mathematics and Blueprint Interpretation (CRM 1134)
4 sch	Carpentry (CRM 1214)
3 sch	Masonry (CRM 1313)
2 sch	Career–Technical Elective†
18 sch	

4 sch	Plumbing (CRM 1414)
4 sch	Electrical (CRM 1514)
6 sch	Heating, Ventilating, and Air Conditioning (HVAC) (CRM 1616)
4 sch	Career–Technical Electives†
18 sch	

SECOND YEAR

3 sch	Construction Materials (DDT 1213)
4 sch	Fundamentals of Drafting (DDT 1114)
6 sch	Career–Technical Electives†
13 sch	

3 sch	Principles of Multi-family & Light Commercial Construction (CAV 2113)
3 sch	Cost Estimating (DDT 2243)
6 sch	Career–Technical Electives†
12 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** Baseline competencies are taken from the secondary Construction: Carpentry program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

†CAREER–TECHNICAL ELECTIVES

3 sch	Science and Technology (ATE 1113)
3 sch	Fundamentals of Microcomputer Applications (CPT 1113) (or any other suitable computer science course approved by the instructor)
3 sch	Forming Applications (CAV 1123)
3 sch	Advanced Cabinet Making (CAV 2133)

3 sch	Advanced Interior Finishing (CAV 2313)
1-3 sch	Special Problem in Residential Carpentry Technology [CAV 291(1-3)]
1-6 sch	Supervised Work Experience in Residential Carpentry Technology [CAV 292(1-6)]
1-3 sch	Work Based Learning [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Note: Any other technical or academic course as approved by the instructor

Suggested Course Sequence*
Commercial Residential Maintenance
Associate of Applied Science Degree

FIRST YEAR

3 sch Fundamentals of Maintenance Services (CRM 1113)
2 sch Maintenance Regulations (CRM 1122)
4 sch Mathematics and Blueprint Interpretation (CRM 1134)
4 sch Carpentry (CRM 1214)
3 sch Math/Science Elective

16 sch

3 sch Masonry (CRM 1313)
4 sch Plumbing (CRM 1414)
4 sch Electrical (CRM 1514)
6 sch Heating, Ventilating, and Air Conditioning (HVAC) (CRM 1616)

17 sch

SECOND YEAR

3 sch Written Communications Elective
3 sch Oral Communications Elective
3 sch Construction Materials (DDT 1213)
4 sch Fundamentals of Drafting (DDT 1114)
3 sch Career–Technical Electives†

16 sch

3 sch Humanities/Fine Arts Elective
3 sch Social/Behavioral Science Elective
3 sch Computer Elective††
3 sch Cost Estimating (DDT 2243)
2-3 sch Career–Technical Electives†

14-15 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** Baseline competencies are taken from the secondary Construction: Carpentry program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

†CAREER–TECHNICAL ELECTIVES

3 sch Science and Technology (ATE 1113)
3 sch Fundamentals of Microcomputer Applications (CPT 1113) (or any other suitable computer science course approved by the instructor)
3 sch Forming Applications (CAV 1123)
3 sch Advanced Cabinet Making (CAV 2133)
3 sch Advanced Interior Finishing (CAV 2313)
1-3 sch Special Problem in Residential Carpentry Technology [CAV 291(1-3)]

1-6 sch Supervised Work Experience in Residential Carpentry Technology [CAV 292(1 6)]
1-3 sch Work Based Learning [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

Note: Any other technical or academic course as approved by the instructor.

††COMPUTER ELECTIVES
(As approved by the instructor)

3 sch Fundamentals of Microcomputer Applications (CPT 1113) (or any other suitable computer science course approved by the instructor)
3 sch Electronic Spreadsheet (BOT 1813)
3 sch Records Management (BOT 1413)
3 sch Document Formatting and Production (BOT 1113)
3 sch Business Accounting (BOT 1433)
OR Principles of Accounting I (ACC 1213)
3 sch Keyboard Skillbuilding (BOT 1123)

Note: Any other technical or academic course as approved by the instructor

COMMERCIAL TRUCK DRIVING

This instructional program prepares individuals to drive trucks and other commercial vehicles. It includes instruction in operating diesel powered vehicles, loading and unloading cargo, reporting delays or accidents on the road, verifying loads against shipping records, and keeping necessary records.

Postsecondary Commercial Truck Driving is a certificate program designed to provide advanced skills to its students. The program consists of one level of instruction which must be obtained at the community/junior college level.

Industry standards referenced are from the *Mississippi Professional Driver's Manual for Class A, B, & C Commercial Driver's License*, Department of Public Safety, State of Mississippi.

PROGRAM REQUIREMENTS

ENROLLMENT SHOULD BE LIMITED TO A NUMBER OF FOUR STUDENTS PER INSTRUCTOR WHICH WILL PROVIDE FOR PERSONAL SUPERVISION, TRAINING, AND SAFETY. THE CLASS SIZES ARE SMALL TO ENCOURAGE INDIVIDUAL ATTENTION.

CHECK LOCAL INSURANCE REGULATIONS AND SEAT BEAT LAWS CONCERNING THE NUMBER OF OCCUPANTS IN THE VEHICLE.

A certificate in Commercial Truck Driving will be awarded at the culmination of a minimum of eight semester credit hours of satisfactory study.

This curriculum is based upon data as collected from curricula guides, input from the business, requirements of the Commercial Driver's License (CDL), and a revision team.
Students will be expected to obtain a Commercial Driver's License and to pass the DOT Commercial Driver Written Examination in order to complete the course. The listing of tasks within these documents served as baseline data for the development of this curriculum.

The program requires a minimum of eight semester credit hours of instruction over a minimum of an eight-week period. Each student is expected to log a minimum of 20 contact hours of driving time under various loads, roads, and driving conditions.

The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction include the use of appropriate equipment needed to accomplish certain tasks. It is also assumed that each student will receive instruction to locate and use current reference materials from publications which present manufacturers' recommended or required specifications and procedures for doing the various tasks.
2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated

against these stated standards. A system should be in place which informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across the technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.
4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of the business.

Suggested Course Sequence*
Commercial Truck Driving

FIRST YEAR

4-6 sch Commercial Truck Driving I (DTV 1114-6)
4-6 sch Commercial Truck Driving II (DTV 1124-6)

_____
8-12 sch

* Students who lack entry level skills in English, math, science, etc. will be provided related studies.

Suggested Course Sequence*
Commercial Truck Driving Internship Option

FIRST YEAR

4-6 sch Commercial Truck Driving I (DTV 1114-6)
4-6 sch Commercial Truck Driving II (DTV 1124-6)
7 sch Commercial Truck Driving Internship (DTV 1137)

_____
15-19 sch

* Students who lack entry level skills in English, math, science, etc. will be provided related studies.

The Internship Option may be offered at the discretion of the individual Community College.

CONSERVATION LAW ENFORCEMENT TECHNOLOGY

Program Description: Conservation Law Enforcement Technology is a two-year program of study that prepares the graduate for entry-level employment as a Conservation Law Enforcement Officer (game warden) in the state of Mississippi. The program blends technical courses in forestry and academic courses in criminal justice with other academic courses, including the core. The Associate of Applied Science degree is earned upon successful completion of the program.

After successfully completing the program, the student will be awarded an Associate of Applied Science Degree from the community/junior college.

Industry standards are based on the National Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards.

Campus Locations: Grenada – 662.227.2336

Suggested Course Sequence
Conservation Law Enforcement Technology
Associate of Applied Science Degree

FIRST YEAR
Completed at Holmes Community College – Grenada Campus

Course outlines used in the first year Conservation Law Option are found in the Mississippi Curriculum Framework for Postsecondary Forestry Technology program. Revisions in the forestry courses are made by instructors within the postsecondary forestry curriculum.

3 sch Written Communications Elective
4 sch Science Elective
4 sch Applied Dendrology (FOT 1714)
3 sch Introduction to Criminal Justice (CRJ 1313)
4 sch Forest Surveying and Spatial Applications (FOT 2124)

18 sch

4 sch Forest Protection (FOT 1314)
4 sch Silviculture I (FOT 2614)
3 sch Criminology (CRJ 1383)
3 sch Math/Science Elective
3 sch Sociology/Behavioral Science Elective

17 sch

SECOND YEAR
Completed at Holmes Community College – Grenada Campus

Course outlines used in the second year Conservation Law Option are found in the Mississippi Curriculum Framework for Postsecondary Forestry Technology program. Revisions in the forestry courses are made by instructors within the postsecondary forestry curriculum.

3 sch Survey/Micro Apps (CPT 1323)
4 sch Apps of GIS/GPS in Forestry (FOT 2214)
3 sch Oral Communications Elective
3 sch Special Problem in Conservation Law (FOT 291(1-3)) or
3 sch Work-Based Learning (WBL 1913)

13 sch

4 sch Applied Soil Conservation and Use (AGT 1714)
3 sch Juvenile Justice (CRJ 2513)
4 sch Forest Measurements (FOT 1114)
3 sch Criminal Investigation (CRJ 2333)
3 sch Humanities/Fine Arts Elective

17 sch

ELECTIVES

Any Instructor approved elective
4 sch Principles of Biology I (BIO 1114)
4 sch Botany (BIO 1314)
4 sch Silviculture II (FOT 2624)

COSMETOLOGY SCIENCE CLUSTER

This instructional program prepares individuals to care for hair, nails, and skin with emphasis on hygiene, sanitation, customer relations, and salon management. Satisfactory completion of the courses qualifies students for the Mississippi State Board of Cosmetology certification examination.

PROGRAM REQUIREMENTS

The curriculum is designed to comply with the standards of the Mississippi State Board of Cosmetology and the requirement for 1500 contact hours for students. Students are required to receive 230 hours of theory (a minimum of six hours per week throughout the entire period of instruction, conducted in a separate classroom by a licensed instructor), 1200 hours of supervised skill preparation and clinic work, and 70 hours assigned at the instructor's discretion as needs of individual students dictate. Successful completion of the program entitles students to a Cosmetology Certificate and qualifies them for licensing examinations as cosmetologists, estheticians, manicurists, or wig specialists conducted by the Mississippi State Board of Cosmetology. A total of 46 semester credit hours (sch) is included in the Cosmetology program.

The curriculum for Cosmetology is based upon data as collected from curricula guides, state board documents, input from business, and a revision team. The listing of tasks within the laws, rules, and regulations of the Mississippi State Board of Cosmetology serves as the baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction has included use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications which present manufacturers' recommended or required specifications and procedures for doing the various tasks.

2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system should be in place which informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of business.

Suggested Course Sequence*
Cosmetology Option
Career Certificate

FIRST YEAR

2 sch	Cosmetology Orientation (COV 1122)	5 sch	Cosmetology Sciences II (COV 1255)
5 sch	Cosmetology Sciences I (COV 1245)	6 sch	Hair Care II (COV 1436)
6 sch	Hair Care I (COV 1426)	2 sch	Skin Care II (COV 1632)
2 sch	Skin Care I (COV 1622)	2 sch	Nail Care II (COV 1532)
2 sch	Nail Care I (COV 1522)	2 sch	Salon Business I (COV 1722)
17 sch		17 sch	

SUMMER TERM

3 sch	Cosmetology Sciences III (COV 1263)
3 sch	Hair Care III (COV 1443)
2 sch	Skin Care III (COV 1642)
2 sch	Nail Care III (COV 1542)
2 sch	Salon Business II (COV 1732)
12 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

NOTE: The ratio of lab hours to lecture hours for Cosmetology is 3 to 1. This program requires a minimum of 850 minutes per semester hour.

Nail Technician Option

This instructional program prepares individuals to care for nails with emphasis on hygiene, sanitation, customer relations, and salon management. Satisfactory completion of the courses qualifies students for the Mississippi State Board of Cosmetology, Manicure/Nail Technician certification examination.

PROGRAM REQUIREMENTS

The curriculum is designed to comply with the standards of the Mississippi State Board of Cosmetology and the requirement for 350 contact hours for students. Students are required to receive 85 hours of theory and 265 hours of supervised skill preparation and clinic work. Successful completion of the program entitles students to receive a Nail Technician Certificate and qualifies them for licensing examinations conducted by the Mississippi State Board of Cosmetology. A total of 13 semester credit hours is included in the Nail Technician Option.

The curriculum for Nail Technician is based upon data as collected from curricula guides, state board documents, input from business, and a revision team. The listing of tasks within the laws, rules, and regulations of the Mississippi State Board of Cosmetology serves as the baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction has included use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications that present manufacturers' recommended or required specifications and procedures for doing the various tasks.

2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system should be in place that informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of business.

Suggested Course Sequence*
Nail Technician Option
Career Certificate

2 sch Cosmetology Orientation (COV 1122)
5 sch Cosmetology Sciences I (COV 1245)
2 sch Skin Care I (COV 1622)
2 sch Nail Care I (COV 1522)
2 sch Salon Business I (COV 1722)

_____
13 sch

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

NOTE: The ratio of lab hours to lecture hours for the Nail Technician Option is 3 to 1.

Cosmetology Teacher Training Option

This instructional program prepares individuals to teach others to care for hair, nails, and skin with emphasis on hygiene, sanitation, customer relations, and salon management. Satisfactory completion of the courses qualifies students for the Mississippi State Board of Cosmetology instructor licensing examination.

PROGRAM REQUIREMENTS

It is recommended that students complete 12 semester hours of college level education as approved by the Mississippi State Board of Cosmetology before enrolling in the Cosmetology Teacher Training Option. These hours must be completed before a student will be allowed to take the cosmetology instructor licensing examination. More information concerning these hours can be obtained from the Mississippi State Board of Cosmetology.

The curriculum is designed for students who have at least two years active practical experience as a licensed cosmetologist and currently hold a valid Mississippi cosmetology license. Student instructors who do not have two years active experience must have 2000 hours plus the 12 semester hours. The curriculum complies with the standards of the Mississippi State Board of Cosmetology and the requirement for 750 contact hours for students. Students are required to receive 12 hours of theory; 68 hours of skill preparation and clinic work; 164 hours concerning the professional teacher's skills and preparation techniques; 99 hours concerning student motivation and learning skills; 332 hours of methods, management, and material procedures and techniques; 65 hours of testing and evaluation skills; and 10 hours of cosmetology laws, rules, and regulations. Successful completion of the program entitles students to a Cosmetology Teacher Training certificate and, upon meeting the requirements of the Mississippi State Board of Cosmetology, qualifies them for licensing examinations as cosmetology instructors.

*****Please follow the Mississippi State Board of Cosmetology rules and regulations.*****

The curriculum for Cosmetology Teacher Training Option is based upon data as collected from curricula guides, state board documents, input from business, and a revision team. The listing of tasks within the laws, rules, and regulations of the Mississippi State Board of Cosmetology serves as the baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction has included use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications that present manufacturers' recommended or required specifications and procedures for doing the various tasks.

2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and

evaluated against these stated standards. A system should be in place that informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of business.

Suggested Course Sequence*
Cosmetology Teacher Training Option
Career Certificate

FIRST YEAR

6 sch	Cosmetology Teacher Training I (COV 2816)	6 sch	Cosmetology Teacher Training III (COV 2836)
6 sch	Cosmetology Teacher Training II (COV 2826)	6 sch	Cosmetology Teacher Training IV (COV 2846)
12 sch		12 sch	

2000 HOUR OPTION

6 sch	Cosmetology Teacher Training I (COV 2816)	6 sch	Cosmetology Teacher Training III (COV 2836)
6 sch	Cosmetology Teacher Training II (COV 2826)	6 sch	Cosmetology Teacher Training IV (COV 2846)
4 sch	Cosmetology Internship I (COV 2914)	4 sch	Cosmetology Internship II (COV 2924)
16 sch		16 sch	

It is recommended that students complete 12 semester hours of college level education as approved by the Mississippi State Board of Cosmetology before enrolling in the Cosmetology Teacher Training Option. These hours must be completed before a student will be allowed to take the cosmetology instructor licensing examination. More information concerning these hours can be obtained from the Mississippi State Board of Cosmetology. This curriculum is designed for students who have at least two years of active practical experience as a licensed cosmetologist and currently hold a valid Mississippi cosmetology license. The 2000 hour option is designed for students who hold a valid Mississippi cosmetology license.

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

NOTE: The ratio of lab hours to lecture hours for the Cosmetology Teacher Training Option is 3 to 1.

Cosmetology Option

This instructional program prepares individuals to care for hair, nails, and skin with emphasis on hygiene, sanitation, customer relations, and salon management. Satisfactory completion of the courses qualifies students for the Mississippi State Board of Cosmetology certification examination.

PROGRAM REQUIREMENTS

The curriculum is designed to comply with the standards of the Mississippi State Board of Cosmetology and the requirement for 1500 contact hours for students. Students are required to receive 230 hours of theory (a minimum of six hours per week throughout the entire period of instruction, conducted in a separate classroom by a licensed instructor), 1200 hours of supervised skill preparation and clinic work, and 70 hours assigned at the instructor's discretion as needs of individual students dictate. Successful completion of the program entitles students to a Cosmetology Certificate and qualifies them for licensing examinations as cosmetologists, estheticians, manicurists, or wig specialists conducted by the Mississippi State Board of Cosmetology. A total of 46 semester credit hours (sch) is included in the Cosmetology program.

The curriculum for Cosmetology is based upon data as collected from curricula guides, state board documents, input from business, and a revision team. The listing of tasks within the laws, rules, and regulations of the Mississippi State Board of Cosmetology serves as the baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction has included use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications which present manufacturers' recommended or required specifications and procedures for doing the various tasks.

2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system should be in place which informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of business.

Suggested Course Sequence*
Cosmetology Option
Career Certificate

FIRST YEAR

2 sch	Cosmetology Orientation (COV 1122)	5 sch	Cosmetology Sciences II (COV 1255)
5 sch	Cosmetology Sciences I (COV 1245)	6 sch	Hair Care II (COV 1436)
6 sch	Hair Care I (COV 1426)	2 sch	Skin Care II (COV 1632)
2 sch	Skin Care I (COV 1622)	2 sch	Nail Care II (COV 1532)
2 sch	Nail Care I (COV 1522)	2 sch	Salon Business I (COV 1722)
17 sch		17 sch	

SUMMER TERM

3 sch	Cosmetology Sciences III (COV 1263)
3 sch	Hair Care III (COV 1443)
2 sch	Skin Care III (COV 1642)
2 sch	Nail Care III (COV 1542)
2 sch	Salon Business II (COV 1732)
12 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

NOTE: The ratio of lab hours to lecture hours for Cosmetology is 3 to 1. This program requires a minimum of 850 minutes per semester hour.

Nail Technician Option

This instructional program prepares individuals to care for nails with emphasis on hygiene, sanitation, customer relations, and salon management. Satisfactory completion of the courses qualifies students for the Mississippi State Board of Cosmetology, Manicure/Nail Technician certification examination.

PROGRAM REQUIREMENTS

The curriculum is designed to comply with the standards of the Mississippi State Board of Cosmetology and the requirement for 350 contact hours for students. Students are required to receive 85 hours of theory and 265 hours of supervised skill preparation and clinic work. Successful completion of the program entitles students to receive a Nail Technician Certificate and qualifies them for licensing examinations conducted by the Mississippi State Board of Cosmetology. A total of 13 semester credit hours is included in the Nail Technician Option.

The curriculum for Nail Technician is based upon data as collected from curricula guides, state board documents, input from business, and a revision team. The listing of tasks within the laws, rules, and regulations of the Mississippi State Board of Cosmetology serves as the baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction has included use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications that present manufacturers' recommended or required specifications and procedures for doing the various tasks.

2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system should be in place that informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of business.

Suggested Course Sequence*
Nail Technician Option
Career Certificate

2 sch Cosmetology Orientation (COV 1122)
5 sch Cosmetology Sciences I (COV 1245)
2 sch Skin Care I (COV 1622)
2 sch Nail Care I (COV 1522)
2 sch Salon Business I (COV 1722)

_____
13 sch

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

NOTE: The ratio of lab hours to lecture hours for the Nail Technician Option is 3 to 1.

Cosmetology Teacher Training Option

This instructional program prepares individuals to teach others to care for hair, nails, and skin with emphasis on hygiene, sanitation, customer relations, and salon management. Satisfactory completion of the courses qualifies students for the Mississippi State Board of Cosmetology instructor licensing examination.

PROGRAM REQUIREMENTS

It is recommended that students complete 12 semester hours of college level education as approved by the Mississippi State Board of Cosmetology before enrolling in the Cosmetology Teacher Training Option. These hours must be completed before a student will be allowed to take the cosmetology instructor licensing examination. More information concerning these hours can be obtained from the Mississippi State Board of Cosmetology.

The curriculum is designed for students who have at least two years active practical experience as a licensed cosmetologist and currently hold a valid Mississippi cosmetology license. Student instructors who do not have two years active experience must have 2000 hours plus the 12 semester hours. The curriculum complies with the standards of the Mississippi State Board of Cosmetology and the requirement for 750 contact hours for students. Students are required to receive 12 hours of theory; 68 hours of skill preparation and clinic work; 164 hours concerning the professional teacher's skills and preparation techniques; 99 hours concerning student motivation and learning skills; 332 hours of methods, management, and material procedures and techniques; 65 hours of testing and evaluation skills; and 10 hours of cosmetology laws, rules, and regulations. Successful completion of the program entitles students to a Cosmetology Teacher Training certificate and, upon meeting the requirements of the Mississippi State Board of Cosmetology, qualifies them for licensing examinations as cosmetology instructors.

*****Please follow the Mississippi State Board of Cosmetology rules and regulations.*****

The curriculum for Cosmetology Teacher Training Option is based upon data as collected from curricula guides, state board documents, input from business, and a revision team. The listing of tasks within the laws, rules, and regulations of the Mississippi State Board of Cosmetology serves as the baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction has included use of the appropriate equipment needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from publications that present manufacturers' recommended or required specifications and procedures for doing the various tasks.

2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and

evaluated against these stated standards. A system should be in place that informs all students of their progress throughout the program.

3. It is recognized that individual courses will differ across technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of business.

Suggested Course Sequence*
Cosmetology Teacher Training Option
Career Certificate

FIRST YEAR

6 sch	Cosmetology Teacher Training I (COV 2816)	6 sch	Cosmetology Teacher Training III (COV 2836)
6 sch	Cosmetology Teacher Training II (COV 2826)	6 sch	Cosmetology Teacher Training IV (COV 2846)
12 sch		12 sch	

2000 HOUR OPTION

6 sch	Cosmetology Teacher Training I (COV 2816)	6 sch	Cosmetology Teacher Training III (COV 2836)
6 sch	Cosmetology Teacher Training II (COV 2826)	6 sch	Cosmetology Teacher Training IV (COV 2846)
4 sch	Cosmetology Internship I (COV 2914)	4 sch	Cosmetology Internship II (COV 2924)
16 sch		16 sch	

It is recommended that students complete 12 semester hours of college level education as approved by the Mississippi State Board of Cosmetology before enrolling in the Cosmetology Teacher Training Option. These hours must be completed before a student will be allowed to take the cosmetology instructor licensing examination. More information concerning these hours can be obtained from the Mississippi State Board of Cosmetology. This curriculum is designed for students who have at least two years of active practical experience as a licensed cosmetologist and currently hold a valid Mississippi cosmetology license. The 2000 hour option is designed for students who hold a valid Mississippi cosmetology license.

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

NOTE: The ratio of lab hours to lecture hours for the Cosmetology Teacher Training Option is 3 to 1.

DENTAL ASSISTING TECHNOLOGY

The Dental Assisting Technology curriculum is a one-year program of study designed to prepare the student for employment and advancement in the dental assisting field. The curriculum requires a minimum of 46 semester hours of courses with a certificate granted upon completion of the program. CPR - Health Care Provider is a requirement to be completed during the program. If the student desires, an Associate of Applied Science degree may be obtained by completing additional prescribed courses.

The program includes lecture hours, lab hours, and supervised clinical experiences. In the clinical experiences, the student will assist the dentist at chairside in private offices, clinics, and state facilities, as applicable.

Upon graduation from the program, the student may make application for a Radiology permit which is necessary for taking x-rays in a dental office. While in the program or following completion of the program, the student is eligible to sit for the Dental Assisting National Board Certification Exam.

Industry standards are based on the *Dental Assisting National Board Certified Dental Assistant Examination Topics*.

Suggested Course Sequence I (to begin in Fall Semester) *
Dental Assisting Technology

CAREER CERTIFICATE

3 sch	Public Speaking (SPT 1113)	3 sch	Dental Science II (DAT 1323)
1 sch	Dental Orientation (DAT 1111)	3 sch	Chairside Assisting II (DAT 1423)
4 sch	Dental Assisting Materials (DAT 1214)	2 sch	Dental Radiology II (DAT 1522)
3 sch	Dental Science I (DAT 1313)	2 sch	Dental Health Education (DAT 1612)
5 sch	Chairside Assisting I (DAT 1415)	4 sch	Practice Management (DAT 1714)
3 sch	Dental Radiology I (DAT 1513)	5 sch	Clinical Experience I (DAT 1815)
19 sch		19 sch	

SUMMER TERM

3 sch	Written Communications Elective
2 sch	Clinical Experience II (DAT 1822)
3 sch	Chairside Assisting III (DAT 1433)
8 sch	

TECHNICAL CERTIFICATE / DEGREE

After completion of the 12-month course of study, a student will receive a certificate. If a student wishes to receive the AAS degree, the remainder of the minimum academic courses may be taken, plus additional electives. The second year should include:

3 sch	Math/Science Elective
3 sch	Social/Behavioral Science Elective
3 sch	Humanities/Fine Arts Elective
3 sch	Fundamentals of Microcomputer Applications (CPT 1113)
8 sch	Approved Electives†
20 hours	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

†APPROVED ELECTIVES

English Composition I (ENG 1113)
English Composition II (ENG 1123)
Anatomy and Physiology I (BIO 1514)
Anatomy and Physiology II (BIO 1524)
General Biology I (BIO 1134)
General Biology II (BIO 1144)
Microbiology (BIO 2924)
General Chemistry I (CHE 1213)
General Chemistry Laboratory I (CHE 1211)
General Chemistry II (CHE 1223)
General Chemistry Laboratory II (CHE 1221)
Principles of Chemistry I (CHE 1314)
Principles of Chemistry II (CHE 1324)
General Psychology I (PSY 1513)
General Sociology I (SOC 2113)
Nutrition (HEC 1253)
College Algebra (MAT 1313)
Trigonometry (MAT 1323)
Survey of Physics I (PHY 1214 or 2414)
Introduction to Computer Concepts (CSC 1113)
Fundamentals of Microcomputer Applications (CPT 1113)
Music Appreciation (MUS 1113)
Philosophy
History
Foreign Language
Art

Suggested Course Sequence II (to begin in Spring Semester)*
Dental Assisting Technology

CAREER CERTIFICATE

SPRING TERM

3 sch Public Speaking (SPT 1113)
1 sch Dental Orientation (DAT 1111)
4 sch Dental Assisting Materials (DAT 1214)
3 sch Dental Science I (DAT 1313)
5 sch Chairside Assisting I (DAT 1415)
3 sch Dental Radiology I (DAT 1513)

19 sch

SUMMER TERM

3 sch Written Communications Elective
2 sch Clinical Experience II (DAT 1822)
2 sch Dental Radiology II (DAT 1522)
3 sch Chairside Assisting II (DAT 1423)

10 sch

FALL TERM

3 sch Dental Science II (DAT 1323)
3 sch Chairside Assisting III (DAT 1433)
2 sch Dental Health Education (DAT 1612)
4 sch Practice Management (DAT 1714)
5 sch Clinical Experience I (DAT 1815)

17 sch

TECHNICAL CERTIFICATE

After completion of the 12-month course of study a student will receive a certificate. If a student wishes to receive the AAS degree, the remainder of the minimum academic courses may be taken, plus additional electives. The second year should include:

3 sch	Math/Science Elective
3 sch	Social/Behavioral Science Elective
3 sch	Humanities/Fine Arts Elective
3 sch	Fundamentals of Microcomputer Applications (CPT 1113)
8 sch	Approved Electives†
20 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

†APPROVED ELECTIVES

English Composition I (ENG 1113)
English Composition II (ENG 1123)
Anatomy and Physiology I (BIO 1514)
Anatomy and Physiology II (BIO 1524)
General Biology I (BIO 1134)
General Biology II (BIO 1144)
Microbiology (BIO 2924)
General Chemistry I (CHE 1213)
General Chemistry Laboratory I (CHE 1211)
General Chemistry II (CHE 1223)
General Chemistry Laboratory II (CHE 1221)
Principles of Chemistry I (CHE 1314)
Principles of Chemistry II (CHE 1324)
General Psychology I (PSY 1513)
General Sociology I (SOC 2113)
Nutrition (HEC 1253)
College Algebra (MAT 1313)
Trigonometry (MAT 1323)
Survey of Physics I (PHY 1214 or 2414)
Introduction to Computer Concepts (CSC 1113)
Fundamentals of Microcomputer Applications (CPT 1113)
Music Appreciation (MUS 1113)
Philosophy
History
Foreign Language
Art

DENTAL HYGIENE TECHNOLOGY

The Dental Hygiene Technology Program is a general education and clinical dental hygiene experience to prepare one for a career in the dental hygiene profession. All phases of dental hygiene education are covered and practiced by clinical experience. CPR-Health Care Provider is a prerequisite for the program. The curriculum requires a minimum of 85 semester hours of study. The program requires 50 hours of dental hygiene courses, 32-33 academic hours leading to an Associate Degree in Dental Hygiene, and an additional 3 hour elective. A graduate will be eligible to take the examination of the National Board of Dental Examiners as well as individual state board examinations for dental hygiene.

The Career-technical courses in the following list are required in the Dental Hygiene Technology curriculum:

5 semester credit hours (sch) Fundamentals of Dental Hygiene
4 sch Dental Radiology
5 sch Clinical Dental Hygiene I
2 sch Dental Anatomy
2 sch Head and Neck Anatomy
3 sch Dental Hygiene Materials
2 sch Oral Histology and Embryology
5 sch Clinical Dental Hygiene II
2 sch Periodontics
2 sch Dental Pharmacology
6 sch Clinical Dental Hygiene III
3 sch Community Dental Health
2 sch Dental Ethics/Law
1 sch Dental Hygiene Seminar I
1 sch Dental Hygiene Seminar II
1 sch Dental Hygiene Seminar III
1 sch Dental Hygiene Seminar IV
3 sch General/Oral Pathology

The following academic courses are required in the Dental Hygiene Technology curriculum:

4 sch Anatomy and Physiology I (BIO 2514)
4 sch Anatomy and Physiology II (BIO 2524)
3 sch Math/Science Elective
3 sch Written Communications Elective
3-4 sch Microbiology (BIO 2923 or 2924)
3 sch Social/Behavioral Science Elective*
3 sch Humanities/Fine Arts Elective
3 sch Oral Communications Elective
3 sch Principles of Nutrition or Nutrition (HEC 1233 or 1253)
3 sch General Psychology I (PSY 1513)

* Introduction to Sociology I (SOC 2113) is required by national standards.

An additional 3 hour elective should be selected from the following list:

English Composition II (ENG 1113)
Introduction to Chemistry (CHE 1113)
General Chemistry I (CHE 1213)
General Chemistry Laboratory I (CHE 1211)
Introduction to Computer Concepts (CSC 1113)
Fundamentals of Microcomputer Application (CPT 1113)

Industry standards are taken from the Commission on Dental Accreditation's Accreditation Standards for Dental Hygiene Education Programs (2011).

Suggested Course Sequence*
Dental Hygiene Technology
Associate of Applied Science Degree

FIRST YEAR

5 sch	Fundamentals of Dental Hygiene (DHT 1115)
2 sch	Dental Anatomy (DHT 1212)
4 sch	Dental Radiology (DHT 1314)
1 sch	Dental Hygiene Seminar I (DHT 1911)
4 sch	Anatomy and Physiology I (BIO 2514)
3 sch	Math/Science Elective
19 sch	

4 sch	Anatomy and Physiology II (BIO 2524)
5 sch	Clinical Dental Hygiene I (DHT 1415)
3-4 sch	Microbiology (BIO 2923 or 2924)
2 sch	Periodontics (DHT 1512)
1 sch	Dental Hygiene Seminar II (DHT 1921)
2 sch	Oral Histology and Embryology (DHT 1232)
2 sch	Head and Neck Anatomy (DHT 1222)
19-20 sch	

SUMMER TERM

3 sch	Written Communications Elective
3 sch	Social/Behavior Science Elective **
3 sch	General Psychology I (PSY 1513)
3 sch	Humanities/Fine Arts Elective
12 sch	

SECOND YEAR

5 sch	Clinical Dental Hygiene II (DHT 2425)
3 sch	Dental Hygiene Materials (DHT 2613)
3 sch	General/Oral Pathology (DHT 2233)
3 sch	Principles of Nutrition (FCS 1233) or Nutrition (FCS 1253)
2 sch	Dental Pharmacology (DHT 2712)
1 sch	Dental Hygiene Seminar III (DHT 2931)
17 sch	

6 sch	Clinical Dental Hygiene III (DHT 2436)
3 sch	Community Dental Health (DHT 2813)
2 sch	Dental Ethics/Law (DHT 2922)
3 sch	Oral Communications Elective
1 sch	Dental Hygiene Seminar IV (DHT 2941)
3 sch	Elective
18 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

** Introduction to Sociology I (SOC 2113) is required by national standards.

APPROVED ELECTIVES FOR DENTAL HYGIENE TECHNOLOGY:

English Composition II (ENG 1123)
Chemistry Survey (CHE 1113)
General Chemistry I (CHE 1213)
General Chemistry Laboratory I (CHE 1211)
Introduction to Computer Concepts (CSC 1113)
Fundamentals of Microcomputer Applications (CPT 1113)

DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY

Diagnostic Medical Sonography uses high frequency sound waves to produce images of organs, masses, fluid collections, and vascular structures within the human body. Sonography is user-dependent, requiring competent and highly skilled professionals to be a part of the integral health care system. Sonographers have extensive, direct patient contact, providing care to a variety of people from healthy to critically ill. The sonographer is responsible for obtaining pertinent patient history, performing the sonographic examination, providing for the needs and comfort of the patient during examination, and recording anatomy and pathology or other data for interpretation by the supervising physician to aid in diagnosis. Sonography is commonly used in the field of obstetrics and gynecology for purposes ranging from confirming and/or dating pregnancies to diagnosing disease processes of the female reproductive system. Sonographers must have knowledge of normal structure and functional anatomy of the human body and use independent judgment in recognizing the need to perform procedures according to sonographic findings.

Upon completion of the 2-year program of study, the student will be awarded the Associate of Applied Science degree.

Until a Diagnostic Medical Sonography program reaches accreditation approval from CAAHEP, the students must meet the following criteria in order to apply to sit for the *American Registry for Diagnostic Medical Sonographers*:

- Be a graduate from a 2-year allied health program that is patient care related that includes but is not limited to Diagnostic Medical Sonography, Radiologic Technology, Respiratory Therapy, Registered Nurse, Occupational Therapy, and Physical Therapy; and have 12 months of full-time clinical ultrasound/vascular experience.
- Hold a Bachelor’s degree and have 12 months of full-time clinical ultrasound/vascular experience.

Graduates from a CAAHEP accredited Diagnostic Medical Sonography Program may apply to take the ARDMS without further experience.

Industry standards referenced are from the *CAAHEP Standards and Guidelines for the Accreditation of Educational Programs in Diagnostic Medical Sonography* (2007).

Suggested Course Sequence*
Diagnostic Medical Sonography Technology**
Associate of Applied Science Degree

Prerequisites: 4 sch Anatomy and Physiology I (with lab) (BIO 1514)
4 sch Anatomy and Physiology II (with lab) (BIO 1524)

FIRST YEAR

4 sch	Survey of Physics I (PHY 1214)
3 sch	Math/Science Elective
3 sch	Written Communications Elective
4 sch	Introduction to Ultrasound (DMS 1114)
14 sch	

3 sch	Ultrasound Physics and Instrumentation I (DMS 1313)
3 sch	Fine Arts/Humanities Elective
3 sch	Social/Behavioral Science Elective
3 sch	Medical Terminology in Allied Health (TAH 1113)***
12 sch	

SECOND YEAR

3 sch	Oral Communications Elective
3 sch	Introduction to Computer Concepts (CSC 1113)
3 sch	Sectional Anatomy (DMS 1213)
4 sch	Clinical Experience I (DMS 1414)
13 sch	

3 sch	Abdominal Sonography (DMS 1513)
3 sch	Obstetrical and Gynecological Sonography (DMS 1523)
3 sch	Advanced Sonographic Procedures (DMS 1533)
6 sch	Clinical Experience II (DMS 1426)
3 sch	Ultrasound Physics and Instrumentation II (DMS 1323)
18 sch	

SUMMER SEMESTER

6 sch	Clinical Experience III (DMS 1436)
3 sch	Sonography Seminar (DMS 1613)
3 sch	Ultrasound Examination Critique (DMS 1623)
12 sch	

Applicants without a 2-year allied health patient care related degree must take basic patient care and medical-legal ethics courses.

* For students without a 2-year allied health degree. This sequence can only be used with a two-instructor program.

** Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

*** May be waived for completers of postsecondary allied health programs

Suggested Course Sequence
Diagnostic Medical Sonography Technology

Certificate Option

The certificate option is designed for students who are graduates of 2-year allied health patient care related programs and who have passed the corresponding certification exam. This includes associate degree nursing, radiologic technology, physical therapy assistant, respiratory therapy, occupational therapy assistant, or a Bachelor of Science degree that includes basic patient care and medical-legal ethics. Prerequisites include Anatomy and Physiology I & II, Survey of Physics I*, College Algebra, and Oral Communications or English Composition.

FIRST YEAR

4 sch	Introduction to Ultrasound (DMS 1114)
3 sch	Sectional Anatomy (DMS 1213)
3 sch	Ultrasound Physics and Instrumentation I (DMS 1313)
4 sch	Clinical Experience I (DMS 1414)
14 sch	

3 sch	Abdominal Sonography (DMS 1513)
3 sch	Obstetrical and Gynecological Sonography (DMS 1523)
3 sch	Advanced Sonographic Procedures (DMS 1533)
6 sch	Clinical Experience II (DMS 1426)
3 sch	Ultrasound Physics and Instrumentation II (DMS 1323)
18 sch	

SUMMER SEMESTER

6 sch	Clinical Experience III (DMS 1436)
3 sch	Sonography Seminar (DMS 1613)
3 sch	Ultrasound Examination Critique (DMS 1623)
12 sch	

* May be met by radiographic physics or survey of physics courses

DIESEL EQUIPMENT TECHNOLOGY

The Diesel Equipment Technology Program is an instructional program that provides students with competencies required to maintain and repair a variety of industrial diesel equipment, including agricultural tractors, commercial trucks, and construction equipment. The program includes instruction in inspection, repair, and maintenance of engines, power trains, hydraulic systems, and other components.

Diesel Equipment Technology is an articulated certificate or technical program designed to provide advanced skills to its students. Baseline competencies, taken from the secondary Diesel Service Technology, serve as a foundation for the competencies and objectives taught in the courses of the program. Students who do not possess these competencies will be allowed to acquire them during the program. Students who can document mastery of these baseline competencies will not be required to repeat these competencies.

The curriculum utilized the Automotive Service Excellence (ASE) *2007 Medium/Heavy Truck standards*. These documents serve as national standards for certification of medium/heavy truck technician programs.

The tasks described in the document are based on a number of assumptions which also apply to the competencies and objectives in the Career Technical courses of this program. These assumptions include:

1. In all areas, appropriate theory, safety, and support instruction will be required in the performance of each objective including the identification and safe use of tools and testing and measuring equipment, and the use of reference materials and technical manuals.
2. All diagnostic and repair tasks are performed in accordance with manufacturer's recommended procedures and to manufacturer's specifications.

A one year certificate requires successful completion of a minimum of 34 semester credit hours (sch) of required courses.

The two year certificate requires successful completion of a minimum of 52 semester credit hours (sch) of required courses.

The technical program requires successful completion of a minimum of 64 semester credit hours (sch) with 15 semester credit hours of academic core courses included.

Articulation

Articulation credit from Secondary Automotive Service Technology or Secondary Diesel Service Technology to Postsecondary Diesel Equipment Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is Fundamentals of Equipment Mechanics (DET 1114) with the stipulation of passing the MS-CPAS2 according to Mississippi Community College Board (MCCB) guidelines.

Suggested Course Sequence*
Diesel Equipment Technology
Career Certificate

FIRST YEAR

4 sch	Fundamentals of Equipment Mechanics (DET 1114)	4 sch	Diesel Systems I (DET 1364)
3 sch	Hydraulic Brake Systems (DET 1213)	4 sch	Preventive Maintenance and Service (DET 1614)
3 sch	Electrical/Electronic Systems I (DET 1223)	3 sch	Advanced Brake Systems (Air) (DET 2623)
3 sch	Power Trains (DET 1713)	3 sch	Electrical/Electronic Systems II (DET 1263)
3 sch	Approved Elective	3 sch	Approved Elective
16 sch		17 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

APPROVED ELECTIVES

Hydraulics (DET 1513)
Steering and Suspension Systems (DET 2253)
Air Conditioning and Heating Systems (DET 2813)
Special Project in Diesel Equipment Technology (DET 291(1-3))
Supervised Work Experience in Diesel Equipment Technology (DET 292(1-3))
Welding for Diesel Equipment Technology (DET 2113)
Fluid Power Trains (DET 2523)
Work-Based Learning I, II, III, IV, V and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]
Or other instructor-approved electives

COMPUTER RELATED ELECTIVE

Fundamentals of Microcomputer Applications (CPT 1113)
Introduction to Computer Concepts (CSC 1113)
Any other computer related technical or academic course as approved by the instructor.
Or other instructor-approved electives

Suggested Course Sequence*
Diesel Equipment Technology
Technical Certificate

FIRST YEAR

4 sch	Fundamentals of Equipment Mechanics (DET 1114)	4 sch	Diesel Systems I (DET 1364)
3 sch	Hydraulic Brake Systems (DET 1213)	4 sch	Preventive Maintenance and Service (DET 1614)
3 sch	Electrical/Electronic Systems I (DET 1223)	3 sch	Advanced Brake Systems (Air) (DET 2623)
3 sch	Power Trains (DET 1713)	3 sch	Electrical/Electronic Systems II (DET 1263)
3 sch	Approved Elective	3 sch	Approved Elective
16 sch		17 sch	

SECOND YEAR

4 sch	Diesel Systems II (DET 2374)	3 sch	Steering and Suspension Systems (DET 2253)
3 sch	Air Conditioning and Heating Systems (DET 2813)	3 sch	Hydraulics (DET 1513)
3 sch	Electrical/Electronic Systems III (DET2273)	3 sch	Approved Elective
3 sch	Written Communications Elective	3 sch	Humanities/Fine Arts Elective
3 sch	Approved Elective	3 sch	Social/Behavioral Science Elective
16 sch		15 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

APPROVED ELECTIVES

Introduction to Computer or Computer course
3 sch Diesel Systems III (DET 2383)
1-3 sch Special Project in Diesel Equipment Technology [DET 291(1-3)]
1-3 sch Supervised Work Experience in Diesel Equipment Technology [DET 292(1-3)]
3 sch Welding for Diesel Equipment Technology (DET 2113)
3 sch Fluid Power Trains (DET 2523)
1-6 sch Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]
Or other instructor-approved elective(s)

COMPUTER RELATED ELECTIVE

Fundamentals of Microcomputer Applications (CPT 1113)
Introduction to Computer Concepts (CSC 1113)
Any other computer related technical or academic course as approved by the instructor.
Or other instructor-approved elective(s)

Suggested Course Sequence*
Diesel Equipment Technology
Associate of Applied Science Degree

FIRST YEAR

4 sch	Fundamentals of Equipment Mechanics (DET 1114)	4 sch	Diesel Systems I (DET 1364)
3 sch	Hydraulic Brake Systems (DET 1213)	4 sch	Preventive Maintenance and Service (DET 1614)
3 sch	Electrical/Electronic Systems I (DET 1223)	3 sch	Advanced Brake Systems (Air) (DET 2623)
3 sch	Power Trains (DET 1713)	3 sch	Electrical/Electronic Systems II (DET 1263)
3 sch	Math/Science Elective	3 sch	Oral Communications Elective
16 sch		17 sch	

SECOND YEAR

4 sch	Diesel Systems II (DET 2374)	3 sch	Steering and Suspension Systems (DET 2253)
3 sch	Air Conditioning and Heating Systems (DET 2813)	3 sch	Hydraulics (DET 1513)
3 sch	Electrical/Electronic Systems III (DET 2273)	3 sch	Approved Elective
3 sch	Written Communications Elective	3 sch	Humanities/Fine Arts Elective
3 sch	Approved Elective	3 sch	Social/Behavioral Science Elective
16 sch		15 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

APPROVED ELECTIVES

Introduction to Computer or Computer course
3 sch Diesel Systems III (DET 2383)
1-3 sch Special Project in Diesel Equipment Technology [DET 291(1-3)]
1-3 sch Supervised Work Experience in Diesel Equipment Technology [DET 292(1-3)
3 sch Welding for Diesel Equipment Technology (DET 2113)
3 sch Fluid Power Trains (DET 2523)
1-6 sch Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]
Or other instructor-approved elective(s)

COMPUTER RELATED ELECTIVE

Fundamentals of Microcomputer Applications (CPT 1113)
Introduction to Computer Concepts (CSC 1113)
Any other computer related technical or academic course as approved by the instructor.
Or other instructor-approved elective(s)

ELECTRONICS AND RELATED ENGINEERING TECHNOLOGY

Electronics and Related Engineering Technology
Communications Electronics Repair Technology

Communications Electronics Repair Technology is an instructional program that prepares individuals to assemble, install, operate, and maintain communications equipment and systems, including one- and two-way communications systems, home entertainment systems, and other communications equipment. Instruction is included in the use and repair of the actual equipment.

Communications Electronics Repair Technology is an articulated certificate/technical program designed to provide advanced and technical skills to its graduates. Entrance into the postsecondary program is based upon mastery of baseline competencies from the high school Electronics program.

This curriculum was developed with the use of the competencies and objectives as prepared by the Electronics Technicians Association, International (2004), as adopted by the National Coalition for Electronics Education (NCEE), 2003, Consumer Electronics Service Technician specialty-C.E.S.T.

The certificate program in Communications Electronics Repair Technology requires successful completion of a minimum of 34 semester credit hours of technical course work. Emphasis is placed on home entertainment system repair in the certificate program.

Articulation

Articulation credit from Secondary Basic Electronics to Postsecondary Electronics Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is DC Circuits (EET 1114), with the stipulation of passing the MS-CPAS2 according to MCCB guidelines.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Communications Electronics Repair Technology
Career Certificate

FIRST YEAR

4 sch	DC Circuits (EET 1114)
3 sch	AC Circuits (EET 1123)
3 sch	Technical Elective
4 sch	Digital Electronics (EET 1214)
4 sch	Solid State Devices and Circuits (EET 1334)
18 sch	

3 sch	Digital Television Systems (EET 2823)
3 sch	Video Systems Repair Lab (CET 2823)
4 sch	Electronic Communications (EET 2414)
3 sch	Diagnostics and Troubleshooting Lab (CET 2223)
3 sch	Video Recording Systems Lab (CET 2323)
16 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

3 sch	Satellite Systems (CET 1113)
3 sch	Math for Electronics (EET 1413)
3 sch	Physics in Electronics (EET 2433)
1–3 sch	Special Project [CET 291(1–3)]
1–6 sch	Supervised Work Experience [CET 292(1–6)]
1–3 sch	Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

Electronics and Related Engineering Technology
Electronics Technology

Electronics Technology is an instructional program that prepares individuals to support electrical engineers and other professionals in the design, development, and testing of electrical circuits, devices, and systems. The program includes instruction in model and prototype development and testing; systems analysis and integration, including design and development of corrective and preventive maintenance techniques; application of engineering data; and the preparation of reports and test results.

The purpose of the Electronics Technology curriculum is to provide instruction necessary for a student to become a competent electronic technician. A graduate of this curriculum will be eligible for entry-level employment into any of the options in electronics and will be capable of correlating the activities of scientific research, engineering, and production for a wide variety of occupational fields. A graduate of the Electronics Technology curriculum will possess the capability of working and communicating directly with engineers, scientists, and other technical personnel in his or her specialized area.

Program Requirements

Electronics Technology is an articulated technical program designed to provide its students with technical skills. Entry into the postsecondary program is based upon mastery of skills that are taught in the secondary Electronics programs. The technical program consists of essential skills that may be obtained in a secondary program or at the community/junior college and technical skills and academics that must be obtained at the community/junior college level.

The curriculum for Electronics Technology was developed with the use of the competencies and objectives as prepared by the Electronic Technicians Association, International (2004), as recommended by the National Coalition for Electronics Education (NCEE) and the ETA's Associate C.E.T. Exam Development Committee for Basic Electronics. The listing of competencies within this document served as baseline data for the revision of the curriculum. The competency list used in the curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each competency. It is essential that all instruction has included use of appropriate tools and testing and measuring instruments needed to accomplish certain competencies. It is also assumed that each student has received instruction to locate and use current reference and materials from industry publications that present manufacturers' recommended or required specifications and procedures for doing the various competencies.
2. The individual program should have written and detailed evaluation standards for each competency covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system that informs all students of their progress throughout the program should be in place.
3. It is recognized that individual courses will differ across the technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

4. These national standards require that competencies contained in the list be included in the program to validate that the program is meeting the needs of the electronics industry.

The standard curriculum for Electronics Technology is designed to serve as the core curriculum for approximately 75% of each course at the postsecondary level. The remaining 25% of each course is to be added at the local level based upon needs of students and area employers.

The technical program in Electronics Technology requires a minimum of 64 semester credit hours (sch) beyond the essential skills level. Fifteen semester credit hours of academic core courses are included in this minimum.

The certificate program in Electronics Technology requires a minimum of 33 semester hours of credit.

Articulation

Articulation credit from Secondary Basic Electronics to Postsecondary Electronics Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is DC Circuits (EET 1114), with the stipulation of passing the MS-CPAS2 according to MCCB guidelines.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Electronics Technology
Career Certificate

FIRST YEAR

3 sch	Technical Electives	3 sch	AC Circuits (EET 1123)
4 sch	DC Circuits (EET 1114)	4 sch	Microprocessors (EET 1324)
4 sch	Digital Electronics (EET 1214)	4 sch	Linear Integrated Circuits (EET 2334)
4 sch	Solid State Devices and Circuits (EET 1334)	4 sch	Electronic Communications (EET 2414)
15 sch		3 sch	Technical Electives
		18 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Electronics Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Technical Electives
4 sch	DC Circuits (EET 1114)
4 sch	Digital Electronics (EET 1214)
3 sch	Computer-Related Elective
3 sch	Math/Science Elective
17 sch	

3 sch	AC Circuits (EET 1123)
4 sch	Solid State Devices and Circuits (EET 1334)
4 sch	Microprocessors (EET 1324)
3 sch	Technical Electives
3 sch	Written Communications Elective
17 sch	

SECOND YEAR

4 sch	Linear Integrated Circuits (EET 2334)
4 sch	Electronic Communications (EET 2414)
4 sch	Technical Electives
3 sch	Humanities/Fine Arts Elective
15 sch	

9 sch	Technical Electives
3 sch	Oral Communications
3 sch	Social/Behavioral Science Elective
15 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

- 3 sch Drafting for Electronic/Electrical Technology (EET 1713)
- 4 sch Solid State Motor Control (ELT 2424/EET 2354)
- 3 sch Programmable Logic Controllers (ELT 2613/EET 2363)
- 4 sch Introduction to Computers (CPT 1114)†
- 3 sch Computer Fundamentals for Electronics/Electricity (EET 1613)†
- 3–4 sch Approved Computer Programming Language†
- 2 sch Fundamentals of Electronics (EET 1192)
- 4 sch Interfacing Techniques (EET 2514)
- 4 sch Fluid Power (INT 1214/EET 1174)
- 4 sch Equipment Maintenance, Troubleshooting, and Repair (IMM 2114/EET 1154)
- 4 sch IT Foundations (IST 1124/EET 1224) **OR** Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)†
- 3 sch Math for Electronics (EET 1413)
- 3 sch Physics in Electronics (EET 2433)
- 3 sch Computer Servicing Lab I (CST 2113/EET 1233)
- 1–3 sch Special Project [EET 291(1–3)]
- 1–6 sch Supervised Work Experience in Electronics Technology [EET 292(1–6)]
- 3 sch Digital Television Systems (EET 2823)
- 3 sch Fundamentals of Fiber Optics (EET 2423)
- 3 sch Computer Servicing Lab II (CST 2123/EET 2233)
- 3 sch Motor Control Systems (ELT 1413/EET 1343)
- 3 sch Motor Maintenance and Troubleshooting (ELT 1223/EET 1163)
- 3 sch Electrical Power (ELT 1213/EET 1133)
- 3 sch Commercial and Industrial Wiring (ELT 1123/EET 1143)
- 1–3 sch Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

† May be selected as computer-related elective

Electronics and Related Engineering Technology
Biomedical Equipment Repair Technology

Biomedical Equipment Repair Technology is an instructional and field service program that provides the students with technical knowledge and skills necessary for gaining employment as a biomedical equipment technician. They are entry-level technicians who can install, set up, troubleshoot, integrate, program, test, operate, and repair biomedical equipment.

The AAS Degree in Electronics Technology (BMET) option will be awarded upon the successful completion of a minimum of 64 semester hours of the courses within the program. Upon completion, the student will have an opportunity to apply for the Biomedical Equipment Technician Certification Examination.

This curriculum corresponds with the international certification content areas from the Examination for Certification as Biomedical Equipment Technician of the Association for the Advancement of Medical Instrumentation.

Articulation

Articulation credit from Secondary Basic Electronics to Postsecondary Electronics Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is DC Circuits (EET 1114), with the stipulation of passing the MS-CPAS2 according to MCCB guidelines.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Biomedical Equipment Repair Technology
Associate of Applied Science Degree

FIRST YEAR

1 sch	Orientation to Biomedical Equipment Repair (EET 1311)	3 sch	AC Circuits (EET 1123)
4 sch	DC Circuits (EET 1114)	4 sch	Solid State Devices and Circuits (EET 1334)
4 sch	Digital Electronics (EET 1214)	4 sch	Microprocessors (EET 1324)
3 sch	Anatomy and Physiology I (BIO 2513)	3 sch	Anatomy and Physiology II (BIO 2523)
1 sch	Anatomy and Physiology I Lab (BIO 2511)	1 sch	Anatomy and Physiology II Lab (BIO 2521)
3 sch	Written Communications Elective	3 sch	Math/Science Elective
16 sch		18 sch	

SECOND YEAR

3–6 sch	Supervised Work Experience in Biomedical Equipment Repair I [EET 211(3–6)]	3–6 sch	Supervised Work Experience in Biomedical Equipment Repair II [EET 222(3–6)]
4 sch	Linear Integrated Circuits (EET 2334)	3 sch	Fundamentals of Fiber Optics (EET 2423)
4 sch	Technical Electives	4 sch	Technical Electives
3 sch	Oral Communications Elective	3 sch	Humanities/Fine Arts Elective
		3 sch	Social/Behavioral Science Elective
14–17 sch		16–19 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

3 sch	Fundamentals of Microcomputer Applications (CPT 1113)
2 sch	Fundamentals of Electronics (EET 1192)
3 sch	Computer Fundamentals for Electronics/Electricity (EET 1613)
1–3 sch	Special Project [EET 291(1–3)]
4 sch	Interfacing Techniques (EET 2514)
4 sch	Electronic Communications (EET 2414)
4 sch	Fluid Power (INT 1214/EET 1173)
3 sch	Computer Servicing Lab I (CST 2113/EET 1233)
3 sch	Computer Servicing Lab II (CST 2123/EET 2233)
4 sch	IT Foundations (IST 1124/EET 1224) **OR** Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)†
3–4 sch	Approved Computer Programming Language†
3 sch	Math for Electronics (EET 1413)
3 sch	Physics in Electronics (EET 2433)
1–3 sch	Work-Based Learning [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291 (1–3), WBL 292(1–3), WBL 293(1–3)]

Electronics and Related Engineering Technology
Telecommunications Technology

This 2-year program is designed to prepare students for a wide range of technical positions within the telecommunications industry. Specific preparation is in modes, techniques, and mediums of voice, and data transmissions and reception. Emphasis is on the telephone instrument, key systems, PBX systems, analog and digital voice communications, data communications, fiber-optic communications, and satellite and microwave communications. Graduates will be qualified to help select, install, operate, maintain, troubleshoot, and repair telecommunications systems. An Associate of Applied Science Degree is awarded upon successful completion of a minimum of 64 semester credit hours of approved course work.

This curriculum was developed using the Electronics Technicians Association, International, standards from the National Coalition for Electronics Education and ETA's Associate C.E.T. Examination Development Committee.

Articulation

Articulation credit from Secondary Basic Electronics to Postsecondary Electronics Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is DC Circuits (EET 1114), with the stipulation of passing the MS-CPAS2 according to MCCB guidelines.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Telecommunications Technology
Associate of Applied Science Degree

FIRST YEAR

4 sch	Fundamentals of Telecommunications (TCT 1114)	4 sch	Telephone Systems (TCT 2214)
4 sch	DC Circuits (EET 1114)	3 sch	AC Circuits (EET 1123)
4 sch	Digital Electronics (EET 1214)	4 sch	Solid State Devices and Circuits (EET 1334)
3 sch	Math/Science Elective	4 sch	Digital Communications I (TCT 2314)
		3 sch	Written Communications Elective
15 sch		18 sch	

SECOND YEAR

4 sch	Digital Communications II (TCT 2324)	4 sch	Microwave and Satellite Systems (TCT 2414)
4 sch	Technical/Academic-Related Elective	3–4 sch	Technical/Academic-Related Elective
3 sch	Computer-Related Elective	3 sch	Fundamentals of Fiber Optics (EET 2423)
3 sch	Oral Communications Elective	3 sch	Humanities/Fine Arts Elective
3 sch	Social/Behavioral Science Elective		
17 sch		13–14 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

3 sch Computer Fundamentals for Electronics/Electricity (EET 1613)
3 sch Fundamentals of Data Communications (CPT 1413)
3 sch Network Management (CPT 2153)
3 sch Approved Computer Programming Language Course
4 sch PBX Systems (TCT 2224)
4 sch Electronic Communications (EET 2414)
3 sch Drafting for Electronic/Electrical Technology (EET 1713)
3 sch Math for Electronics (EET 1413)
3 sch Physics in Electronics (EET 2433)
4 sch Network Systems (TCT 2424)
4 sch Interfacing Techniques (EET 2514)
4 sch Linear Integrated Circuits (EET 2334)
4 sch Microprocessers (EET 1324)
3 sch Computer Servicing Lab I (CST 2113/EET 1233)
4 sch IT Foundations (IST 1124/EET 1224) **OR** Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)
1–3 sch Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]
1–4 sch Special Project [TCT 291(1–4)]
1–6 sch Supervised Work Experience [TCT 292(1–6)]

Electronics and Related Engineering Technology
Industrial Electronics Technology

This 2-year program is designed to prepare students for a wide range of technical positions within the industrial manufacturing industry. The Industrial Electronics program is designed to prepare graduates for a career in the installation, maintenance, testing, and repair of industrial electrical and electronic equipment and systems. This program introduces the fundamentals of electricity, electronics, digital techniques, electrical power distribution, motor controls, fluid systems controls, programmable logic controllers, and instrumentation. Graduates will possess the skills necessary to enter the workforce as technicians in the fields of telephone service, industrial electronic and electrical servicing, plc and process control, industrial automation, and power distribution and as general electronic technicians. An Associate of Applied Science Degree is awarded upon successful completion of a minimum of 64 semester credit hours of approved course work.

Articulation

Articulation credit from Secondary Basic Electronics to Postsecondary Electronics Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is DC Circuits (EET 1114), with the stipulation of passing the MS-CPAS2 according to MCCB guidelines.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Industrial Electronics Technology
Associate of Applied Science Degree

FIRST YEAR

4 sch	DC Circuits (EET 1114)
3 sch	AC Circuits (EET 1123)
4 sch	Digital Electronics (EET 1214)
3 sch	Written Communications Elective
3 sch	Math/Science Elective
17 sch	

3 sch	Electrical Power (EET 1133)
4 sch	Solid State Devices and Circuits (EET 1334)
3 sch	Motor Control Systems (EET 1343)
3 sch	Elective
3 sch	Computer-Related Elective
16 sch	

SECOND YEAR

4 sch	Solid State Motor Control (EET 2354)
3 sch	Programmable Logic Controllers (EET 2363)
3 sch	Technical Electives
3 sch	Oral Communication Elective
3 sch	Humanities/Fine Arts Elective
16 sch	

4 sch	Equipment Maintenance, Troubleshooting, and Repair (EET 1154)
9 sch	Technical Electives
3 sch	Social/Behavioral Science Elective
16 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

3 sch Drafting for Electronic/Electrical Technology (EET 1713)
4 sch Solid State Motor Control (ELT 2424/EET 2354)
3 sch Adv. Prog Logic Controllers Technical Electives (ELT 2623)
4 sch Introduction to Computers (CPT 1114)†
3 sch Computer Fundamentals for Electronics/Electricity (EET 1613)†
3–4 sch Approved Computer Programming Language†
2 sch Fundamentals of Electronics (EET 1192)
3 sch Fundamentals of Robotics (EET 1353)
3 sch Fundamentals of Instrumentation (EET 1443)
4 sch Interfacing Techniques (EET 2514)
4 sch Fluid Power (INT 1214/EET 1174)
4 sch Equipment Maintenance, Troubleshooting, and Repair (IMM 2114/EET 1154)
4 sch IT Foundations (IST 1124/EET 1224) **OR** Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)†
3 sch Math for Electronics (EET 1413)
3 sch Physics in Electronics (EET 2433)
4 sch Microprocessors (EET 1324)
3 sch Computer Servicing Lab I (CST 2113/EET 1233)
1–3 sch Special Project [EET 291(1–3)]
1–6 sch Supervised Work Experience in Electronics Technology [EET 292(1–6)]
3 sch Digital Television Systems (EET 2823)
3 sch Fundamentals of Fiber Optics (EET 2423)
3 sch Computer Servicing Lab II (CST 2123/EET 2233)
3 sch Motor Control Systems (ELT 1413/EET 1343)
3 sch Motor Maintenance and Troubleshooting (ELT 1223/EET 1163)
3 sch Electrical Power (ELT 1213/EET 1133)
3 sch Commercial and Industrial Wiring (ELT 1123/EET 1143)
1–3 sch Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

† May be selected as computer-related elective

FORESTRY TECHNOLOGY

Postsecondary Forestry Technology is an instructional program that prepares individuals to produce, protect, and manage timber and other forest crops. Students enrolled in the program will participate in a variety of learning experiences related to land and forest measurements, growth processes of timber stands, tree identification, timber and forest product harvesting, timber stand management and protection, and forest products utilization. Emphasis is placed on the development of job skills that allow students to enter employment. The latest technologies and computer application skills are incorporated into courses. The program combines lecture-based activities with laboratory field experiences.

Forestry Technology is a two-year technical program. An Associate of Applied Science degree is awarded upon successful completion of the curriculum.

Industry standards referenced were adapted from *Standards and Procedures for Recognizing Educational Programs in Forest Technology*, as published by the Society of American Foresters http://www.safnet.org/education/techaccstd082409.doc

Suggested Course Sequence*
Forestry Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Botany (BIO 1313)/Natural Science Elective	4 sch	Elective
4 sch	Forest Measurements I (FOT 1114)	4 sch	Elective
3 sch	Microcomputer Application Elective	4 sch	Applied Soils – Conservation and Use (AGT 1714)
3 sch	Fundamentals of Forestry (FOT 1813)	3 sch	Elective
3 sch	Math/Science Elective	3 sch	Written Communications Elective
16 sch		18 sch	

SECOND YEAR

4 sch	Forest Surveying and Spatial Applications (FOT 2124)	4 sch	Timber Harvesting (FOT 2424)
4 sch	Silviculture I (FOT 2614)	3 sch	Elective
4 sch	Applied Dendrology (FOT 1714)	3 sch	Elective
3 sch	Oral Communications Elective	3 sch	Humanities/Fine Arts Elective
15 sch		3 sch	Social/Behavioral Science Elective
		16 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

ELECTIVES

Any Instructor approved elective

4 sch	Forest Measurements II (FOT 1124)
4 sch	Forest Protection (FOT 1314)
4 sch	Forest Products Utilization (FOT 1414)
4 sch	Silviculture II (FOT 2624)
4 sch	Advanced GIS/GPS in Forestry (FOT 2214)
3 sch	Principles of Accounting I (ACC 1213)
3 sch	Applied Agricultural Economics (AGT 2263)
1-3 sch	Special Problem in Forestry Technology [FOT 291(1-3)]
1-6 sch	Supervised Work Experience in Forestry Technology [FOT 292(1-6)]
1-6 sch	Work-Based Learning [WBL 292(1-6)]
3 sch	Legal Environment of Business (BAD 2413)
3 sch	Mapping and Topography (DDT 2423)
3 sch	Fundamentals of Drafting (DDT 1113)

3 sch Business Statistics (BAD 2323 or MAT 2323)
3 sch Economics I (Macroeconomics) (ECO 2113)
3 sch Economics II (Macroeconomics) (ECO 2123)

INSTRUMENTATION TECHNOLOGY

Instrumentation Technology

This 2-year program is designed to prepare students for a wide range of technical positions within the commercial/industrial manufacturing industry and the utility and petroleum industries. The Instrumentation program is designed to prepare graduates for a career in the installation, maintenance, testing, and repair of industrial electrical and electronic equipment and systems. This program introduces process computers, instrument system communications, smart transmitters, control valves, distributed control systems, process simulations, and computer graphic display interfaces. Graduates will possess the skills necessary to enter the workforce as technicians in the field of chemical, petrochemical, exploration & production, pulp & paper, power generation, utilities, food & beverage, and water/waste treatment. An Associate of Applied Science Degree is awarded upon successful completion of a minimum of 64 semester credit hours of approved course work.

Articulation

Articulation credit from Secondary Basic Electronics to Postsecondary Electronics Technology will be awarded upon implementation of this curriculum by the college. The course to be articulated is DC Circuits (EET 1114), with the stipulation of passing the MS-CPAS2 according to MCCB guidelines.

Suggested Course Sequence*
Electronics and Related Engineering Technology
Instrumentation Technology
Associate of Applied Science Degree

FIRST YEAR

4 sch	Fundamentals of Industrial Measurement I (IET 1114)	3 sch	AC Circuits (EET 1123)
4 sch	Fundamentals of Industrial Measurement II (IET 1214)	4 sch	Industrial Controls I (IET 1314)
3 sch	DC Circuits (EET 1114)	4 sch	Digital Electronics (EET 1214)
3 sch	Computer-Related Elective	4 sch	Technical Elective
3 sch	Math/Science Elective	3 sch	Written Communications Elective
17 sch		18 sch	

SECOND YEAR

3 sch	Linear Integrated Circuits (EET 2334)	4 sch	Final Control Elements (IET 2114)
4 sch	Industrial Controls II (IET 2414)	3 sch	Technical Elective
4 sch	Technical Elective	3 sch	Technical Elective
3 sch	Approved Elective	3 sch	Oral Communication Elective
3 sch	Humanities/Fine Arts Elective	3 sch	Social/Behavioral Science Elective
17 sch		16 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

3 sch Electrical Power (EET 1133)
4 sch Equipment Maintenance, Troubleshooting, and Repair (EET 1154)
3 sch Drafting for Electronic/Electrical Technology (EET 1713)
4 sch Solid State Motor Control (ELT 2424/EET 2354)
3 sch Adv. Prog Logic Controllers Technical Electives (ELT 2623)
4 sch Introduction to Computers (CPT 1114)†
3 sch Computer Fundamentals for Electronics/Electricity (EET 1613)†
3–4 sch Approved Computer Programming Language†
2 sch Fundamentals of Electronics (EET 1192)
3 sch Fundamentals of Robotics (EET 1353)
3 sch Fundamentals of Instrumentation (EET 1443)
4 sch Interfacing Techniques (EET 2514)
4 sch Fluid Power (INT 1214/EET 1174)
4 sch Equipment Maintenance, Troubleshooting, and Repair (IMM 2114/EET 1154)
4 sch IT Foundations (IST 1124/EET 1224) **OR** Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)†
3 sch Math for Electronics (EET 1413)
3 sch Physics in Electronics (EET 2433)
3 sch Microprocessors (EET 1324)
3 sch Solid State Devices & Circuits (EET 1334)
3 sch Computer Servicing Lab I (CST 2113/EET 1233)
1–3 sch Special Project [EET 291(1–3)]
1–6 sch Supervised Work Experience in Electronics Technology [EET 292(1–6)]
3 sch Digital Television Systems (EET 2823)
3 sch Fundamentals of Fiber Optics (EET 2423)
3 sch Computer Servicing Lab II (CST 2123/EET 2233)
3 sch Motor Control Systems (ELT 1413/EET 1343)
3 sch Motor Maintenance and Troubleshooting (ELT 1223/EET 1163)
3 sch Electrical Power (ELT 1213/EET 1133)
3 sch Commercial and Industrial Wiring (ELT 1123/EET 1143)
4 sch Solid State Motor Control (EET 2354)
3 sch Programmable Logic Controllers (EET 2363)
3 sch Safety Health and Environment I (PPT 1513)
1–3 sch Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

† May be selected as computer-related elective

MEDIA TECHNOLOGY

Media Technology is a postsecondary instructional program that prepares individuals to work in various broadcasting media as announcing, broadcasting control room, editing, and other various technician positions. The content includes communication skills, leadership skills, human relations, employability skills, safe and efficient work practices, announcing and moderating programs, preparing copy, programming, and operation of radio/television broadcasting equipment to support broadcast managers in the production of materials and production and broadcasting of materials or programs in radio/television format.

Industry standards referenced are from the *Audio and Video Technology and Film Knowledge and Skill Statements* published by the National Association of State Directors of Career Technical Education Consortium. Additional research data used in the development of this publication were collected from a review of related literature and from surveys of local experts in business, industry, and education.

Suggested Course Sequence*
Media Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Fundamentals of Microcomputer Applications (CPT 1113)	4 sch	Fundamentals of Television Production (MDT 1314)
4 sch	Principles of Mass Communication (MDT 1244)	4 sch	Broadcast Writing (MDT 1214)
3 sch	Principles of Audio Production (MDT 1413)	3 sch	Advanced Audio Production (MDT 1423)
3 sch	Humanities/Fine Arts Elective	3 sch	Oral Communications Elective
3 sch	Written Communications Elective	3 sch	Math/Science Elective
16 sch		17 sch	

SECOND YEAR

4 sch	Intermediate Television Production (MDT 2314)	4 sch	Advanced Television Production (MDT 2324)
4 sch	Broadcast Announcing (MDT 2114)	4 sch	Advanced Editing (MDT 2424)
3 sch	Social/Behavioral Science Elective	8 sch	Technical Electives
4 sch	Basic Editing (MDT 2414)		
15 sch		16 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

TECHNICAL ELECTIVES

Basic Photography (MDT 2513)
Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), WBL 293(1-3)]
Special Project in Media Technology [MDT 291(1-3)]
Station Administration (MDT 2213)

MEDICAL LABORATORY TECHNOLOGY

The Medical Laboratory Technology curriculum is a 2-year Associate of Applied Science degree program of study that prepares individuals to work in a medical laboratory. As members of the health-care delivery team, clinical laboratory personnel are responsible for assuring reliable and accurate laboratory test results that contribute to the diagnosis, treatment, prognosis, and prevention of physiological and pathological conditions. This program is designed to meet the standards and requirements for careers in clinical laboratory science. At career entry, the medical laboratory technician will be able to perform routine clinical laboratory tests (such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and or emerging diagnostics) as the primary analyst making specimen-oriented decisions on predetermined criteria. Upon successful completion of the technical program, the student will be eligible to take a national certification examination. This program is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS), 5600 North River Road, Suite 720, Rosemont, IL, 60018, (773) 714-8880.

Suggested Course Sequence*
Medical Laboratory Technology
Associate of Applied Science Degree

FIRST YEAR

3 sch	Written Communications Elective	3 sch	Math/Science Elective
1 sch	Fundamentals of Medical Laboratory Technology/ Phlebotomy (MLT 1111)	3 sch	Immunology/Serology (MLT 1413)
		4 sch	Hematology II (MLT 1324)
2 sch	Urinalysis/Body Fluids (MLT 1212)	4 sch	Approved Electives†
		5 sch	Clinical Chemistry (MLT 1515)
3 sch	Hematology I (MLT 1313)		
8 sch	Approved Electives†		
17 sch		19 sch	

SECOND YEAR

3 sch	Humanities/Fine Arts Elective	3 sch	Social/Behavioral Science Elective
4 sch	Immunohematology (MLT 2424)		
4 sch	Approved Elective†	3 sch	Oral Communications Elective
2 sch	Parasitology (MLT 2512)		
4 sch	Pathogenic Microbiology (MLT 2614)	6 sch	Clinical Practice I (MLT 2916)
0-3 sch	Career-Technical Elective†† (District option)	6 sch	Clinical Practice II (MLT 2926)
		0-3 sch	Career-Technical Elective†† (District option)
17-20 sch		18-21 sch	

SUMMER TERM

6 sch	Clinical Practice III (MLT 2936)
0-6 sch	Career-Technical Elective†† (District Option)
6-12 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

† APPROVED ELECTIVES - MEDICAL LABORATORY TECHNOLOGY

General Biology I (BIO 1133)
Anatomy and Physiology I (BIO 1514 or 2514)
Anatomy and Physiology II (BIO 1524 or 2524)
Microbiology (BIO 2924)
General Chemistry Laboratory I (CHE 1211)
General Chemistry I (CHE 1213)
General Chemistry Laboratory II (CHE 1221)
General Chemistry II (CHE 1223)
Principles of Chemistry I (CHE 1314)
Principles of Chemistry II (CHE 1324)

†† APPROVED CAREER-TECHNICAL ELECTIVES

Principles of Organic and Biochemistry (MLT 1523)
Medical Laboratory Technology Seminar (MLT 2711)
Certification Fundamentals for Medical Laboratory Technology (MLT 2723)
Clinical Instrumentation (MLT 2812)
(Career-Technical Electives may be offered during any semester of the Sophomore year.)

MILLWRIGHT TECHNOLOGY

The uniform program structure for Millwright Technology is designed to serve as the core of instruction for approximately 75% of each major machine tool operation course. The remaining 25% of each course is to be added at the local level based upon needs of students and local employers.

The Modular Option for Millwright Technology is designed to provide flexibility in scheduling and timely certification testing through NIMS. This curriculum revision was developed by utilizing the national standards for machining skills as developed and approved by the National Institute for Metalworking Skills (NIMS). Industry standards are based on the *National Institute for Metalworking Skills.*

Millwright Technology two year certificate – Construction option is an instructional program that prepares individuals to manufacture metal parts on machines such as lathes, grinders, drill presses, and milling machine equipment. Included is instruction in making computations related to work dimensions, testing, feeds, and speeds of machines; using precision measuring instruments such as layout tools, micrometers, and gauges; machining and heat-treating various metals; and laying out machine parts. The construction option offers learning experiences in blueprint reading, estimating, building, installing, and repairing structural units. Students receive basic instruction in residential and light commercial foundations, walls, roof systems, and finishing.

Millwright Technology two year certificate – Industrial Maintenance option is an instructional program that prepares individuals to manufacture metal parts on machines such as lathes, grinders, drill presses, and milling machine equipment. Included is instruction in making computations related to work dimensions, testing, feeds, and speeds of machines; using precision measuring instruments such as layout tools, micrometers, and gauges; machining and heat-treating various metals; and laying out machine parts. The Industrial Maintenance option is designed to prepare students for entry-level employment as multi-skilled maintenance technicians. Industrial maintenance trade technicians are responsible for assembling, installing, and maintaining/repairing machinery used in the manufacturing or industrial environment. Students receive basic instruction in a wide variety of areas including safety, machinery maintenance and troubleshooting/service, blueprint reading, basic welding and cutting operations, basic machining operations, fundamentals of piping and hydro-testing, and fundamentals of industrial electricity

Suggested Course Sequence*
Millwright Technology

CERTIFICATE OF MILLWRIGHT TECHNOLOGY
(CONSTRUCTION OPTION)

FIRST YEAR

Course outlines used in the first year of Millwright Technology are found in the Mississippi Curriculum Framework for Postsecondary Precision Manufacturing and Machining Technology. Revisions in the machining courses are made by instructors within the Postsecondary Precision Manufacturing and Machining curriculum.

3 sch	Machine Tool Mathematics (MST 1313)
2–3 sch	Blueprint Reading (MST 1412-3)
4–6 sch	Power Machinery I (MST 1114-6)**
3–8 sch	Elective
13–20 sch	

4–6 sch	Power Machinery II (MST 1124-6)***
3 sch	Precision Layout (MST 1613)
3 sch	Advanced Blueprint Reading (MST 1423)
3–8 sch	Elective
13–20 sch	

SECOND YEAR

Course outlines used in the second year Millwright Technology Construction Option are found in the Mississippi Curriculum Framework for Postsecondary Residential Carpentry Technology program. Revisions in the Residential Carpentry courses are made by instructors within the Postsecondary Residential Carpentry curriculum.

6 sch	Foundations (CAV 1116)
6 sch	Floor and Wall Framing (CAV 1236)
3 sch	Blueprint Reading (CAV 1133)
3 sch	Elective
18 sch	

5 sch	Ceiling and Roof Framing (CAV 1245)
3 sch	Roofing (CAV 1413)
3 sch	Exterior Finishing (CAV 1513)
6 sch	Interior Finishing and Cabinet Making (CAV 1316)
17 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** Drill Press & Band Saw Operations MST 121(1-3), Lathe Turning Knowledge MST 122(1-3), and Milling Machines Knowledge MST 123(1-3) may be taken in lieu of Power Machinery I MST 111(4-6).

*** Precision Lathe Operations MST 124(2-3), Surface Grinding Operations MST 125(1-2), and Milling Machine Operations MST 126(2-3) may be taken in lieu of Power Machinery II MST 112(4-6).

ELECTIVES

Electives used in this curriculum option are located in the related curriculum:

- [P] Precision Manufacturing and Machining Technology
- [P] Residential Carpentry Technology

Any other technical or academic course as approved by the instructor

Suggested Course Sequence*
Millwright Technology

CERTIFICATE OF MILLWRIGHT TECHNOLOGY
(INDUSTRIAL MAINTENANCE OPTION)

FIRST YEAR

Course outlines used in the first year of Millwright Technology are found in the Mississippi Curriculum Framework for Postsecondary Precision Manufacturing and Machining Technology. Revisions in the machining courses are made by instructors within the Postsecondary Precision Manufacturing and Machining curriculum.

3 sch	Machine Tool Mathematics (MST 1313)
2–3 sch	Blueprint Reading (MST 1412-3)
4–6 sch	Power Machinery I (MST 1114-6)**
3–8 sch	Elective
13–20 sch	

4–6 sch	Power Machinery II (MST 1124-6)***
3 sch	Precision Layout (MST 1613)
3 sch	Advanced Blueprint Reading (MST 1423)
3–8 sch	Elective
13–20 sch	

SECOND YEAR

Course outlines used in the second year Millwright Technology Industrial Maintenance option are found in the Mississippi Curriculum Framework for Postsecondary Industrial Maintenance Trades. Revisions in the Industrial Maintenance courses are made by instructors within the Postsecondary Industrial Maintenance curriculum.

2 sch	Industrial Maintenance Safety (IMM 1112)
2 sch	Industrial Maintenance Math and Measurement (IMM 1122)
2 sch	Industrial Maintenance Blueprint Reading (IMM 1132)
3 sch	Industrial Hand Tools and Mechanical Components (IMM 1213)
3 sch	Industrial Electricity for Industrial Maintenance Mechanics (IMM 1813)
3-8 sch	Electives
14-20 sch	

4 sch	Principles of Piping and Hydro-Testing (IMM 1614)
4-6 sch	Maintenance Welding and Metals (IMM 1734) OR Shielded Metal Arc Welding I (WLV 1116)
3 sch	Industrial Electricity for Industrial Maintenance Mechanics (IMM 1813)
4-7 sch	Electives
15-20 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** Drill Press & Band Saw Operations MST 121(1-3), Lathe Turning Knowledge MST 122(1-3), and Milling Machines Knowledge MST 123(1-3) may be taken in lieu of Power Machinery I MST 111(4-6).

*** Precision Lathe Operations MST 124(2-3), Surface Grinding Operations MST 125(1-2), and Milling Machine Operations MST 126(2-3) may be taken in lieu of Power Machinery II MST 112(4-6).

ELECTIVES

Electives used in this curriculum option are located in the related curriculum:

- [P] Precision Manufacturing and Machining Technology
- [P] Industrial Maintenance Trades

Any other technical or academic course as approved by the instructor

OCCUPATIONAL THERAPY ASSISTANT

The Occupational Therapy Assistant curriculum is a two-year program of study that prepares an individual to work under the direction of a certified Occupational Therapist to administer treatment pertinent to restorative, preventive, and maintenance programs. The focus is on the development and maintenance of capacity to perform those tasks essential to productive living and to the mastery of self and the environment. This program prepares the graduate to practice in a variety of health care and community settings as a member of a professional team. Opportunities for employment are varied and extensive. Admission to the program is selective and competitive. An associate's degree is granted upon successful completion of the program.

Industry standards referenced are based on the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association, Inc.'s *Standards for an Accredited Educational Program for the Occupational Therapy Assistant*.

Suggested Course Sequence**
Occupational Therapy Assistant
Associate of Applied Science Degree

Anatomy and Physiology I and II (BIO 1514/1524 or 2514/2524) are required prerequisites for the program.

FIRST YEAR

FALL SEMESTER

3 sch*	Foundations of Occupational Therapy (OTA 1113)
3 sch	Pathology of Psychiatric Conditions (OTA 1213)
1 sch	Medical Terminology (OTA 1121) or other approved medical terminology course
2 sch	Therapeutic Anatomy (OTA 1132)
3 sch	Group Process (OTA 1513)
3 sch	Occupational Therapy Skills I (OTA 1423)
3 sch	Social/Behavioral Science Elective
18 sch	

SPRING SEMESTER

3 sch	Pathology of Physical Disability Conditions (OTA 1223)
5 sch	Kinesiology (OTA 1315)
3 sch	Therapeutic Media (OTA 1413)
3 sch	Occupational Therapy Skills II (OTA 1433)
4 sch	Math/Science Elective***
18 sch	

SUMMER SEMESTER

2 sch	Healthcare Systems (OTA 2812)
3 sch	Pathology of Developmental Conditions (OTA 1233)
2 sch	Pathology of Orthopedic Conditions (OTA 1242)
3 sch	Fieldwork IA (OTA 1913)
3 sch	Written Communications Elective
13 sch	

* sch = semester credit hour

** Students who lack entry level skills in math, English, science, etc. will be provided related studies.

*** Anatomy and Physiology II (BIO 1524 or 2524) is required and should be taken prior to entrance into the program.

SECOND YEAR

FALL SEMESTER

3 sch	Occupational Therapy Skills III (OTA 2443)
4 sch	Concepts in Occupational Therapy (OTA 2714)
5 sch	Fieldwork IB (OTA 2935)
1 sch	Occupational Therapy Transitions I (OTA 2961)
3 sch	Fine Arts/Humanities Elective
3 sch	Oral Communications Elective
19 sch	

SPRING SEMESTER

6 sch	Fieldwork IIA (OTA 2946)
6 sch	Fieldwork IIB (OTA 2956)
1 sch	Occupational Therapy Transitions II (OTA 2971)
13 sch	

SMALL ENGINE AND EQUIPMENT REPAIR TECHNOLOGY

Small Engine and Equipment Repair Technology is designed to provide students with entry-level skills needed to compete in today's small engine and equipment repair industry. Training is provided in the areas of Engine Repair, Diagnostic skills, Cutting Systems, Chassis Repair, Electrical Systems, and Shop Management Skills. Students may earn a technical certificate in Small Engine and Equipment Repair by completing a minimum of 35 hours of required SET courses. Students desiring to earn an Associate of Applied Science degree in Small Engine and Equipment Repair must earn an additional 32 hours including required academic courses and approved electives.

Courses in the program have been correlated to standards for small engine and equipment repair programs as published by the Equipment and Engine Training Council, a nationally recognized association for the outdoor power equipment industry.

Certificate Suggested Course Sequence*
Small Engine and Equipment Repair Technology
Career Certificate

4 sch	Small Engine Mechanics I (SET 1114)	3 sch	Small Engine Shop Management (SET 1413)
3 sch	Small Engine Electrical Systems (SET 2613)	4 sch	Small Engine Mechanics II (SET 1124)
2 sch	Measurements (SET 1212)	2 sch	Two-Cycle Engines(SET 1322)
3 sch	Four-Cycle Engines (SET 1313)	2 sch	Frame Inspection and Maintenance (SET 1512)
3 sch	Maintenance and Repair of Cutting Mechanisms (SET 2523)	3 sch	Transmissions and Transaxles (SET 2543)
2 sch	Elective(s)	3 sch	Engine Troubleshooting (SET 2353)
___		___	
17 sch		17 sch	

SUMMER TERM

1-6 sch Supervised Work Experience in Small Engine and Engine Technology (SET 291-6)

Or

5 sch Small Engine and Equipment Analysis and Repairs I (SET 2155)

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

Suggested Course Sequence*
Small Engine and Equipment Repair Technology
Associate of Applied Science

FIRST YEAR

4 sch	Small Engine Mechanics I (SET 1114)	3 sch	Small Engine Shop Management (SET 1413)
2 sch	Measurements (SET 1212)	4 sch	Small Engine Mechanics II (SET 1124)
3 sch	Four-Cycle Engines (SET 1313)	2 sch	Two-Cycle Engines (SET 1322)
3 sch	Written Communications	2 sch	Frame Inspection and Maintenance (SET 1512)
3 sch	Elective(s)	3 sch	Math/Science Elective
		3 sch	Computer Elective
15 sch		17 sch	

SUMMER TERM

1-6 sch Supervised Work Experience in Small Engine and Equipment Repair Technology (SET 2911-6)

Or

5 sch Small Engine and Equipment Analysis and Repairs I (SET 2155)

SECOND YEAR

3 sch	Small Engine Electrical Systems (SET 2613)	3 sch	Engine Troubleshooting (SET 2353)
3 sch	Maintenance and Repair of Cutting Mechanisms (SET 2523)	4 sch	Small Engine Mechanics IV (SET 2144)
3 sch	Hydraulics (SET 2533)	3 sch	Transmissions and Transaxles (SET 2543)
4 sch	Small Engine Mechanics III (SET 2134)	3 sch	Oral Communications Elective
3 sch	Social Behavioral Science Elective	3 sch	Spanish Elective
16 sch		16 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

***APPROVED ELECTIVES

SET 281(1-3)	Special Problem in Small Engine and Equipment Repair Technology
SET 2165	Small Engine and Equipment Analysis and Repairs II
SET 2313	Small Engine and Equipment Projects I
SET 2323	Small Engine and Equipment Projects II
SET 2333	Small Engine and Equipment Projects III
SET 2343	Small Engine and Equipment Projects IV
SET 291(1-6)	Supervised Work Experience in Small Engine and Equipment Repair
ATE 1213	Conversational Spanish
BOT 1433	Business Accounting or ACC 1213 Principles of Accounting
BOT 1313	Applied Business Math or BAD 1313 Business Mathematics
BAD 2413	Legal Environment of Business
EDU/RSV 1312	Freshman Orientation
HLT 1222	Green Industry Seminar
HLT 1411	Leadership Management I
HLT 1421	Leadership Management II
HLT 1431	Leadership Management III
HLT 1441	Leadership Management IV
HLT 1614	Landscape Equipment Operation and Maintenance
HLT 2113	Turfgrass Management
PHY 1214	Survey of Physics
WBL 191(1-3)	Work Based Learning

(Other courses may be approved by the instructor when they can be shown to relate to the student's career pathway.)

UTILITY LINE WORKER TECHNOLOGY

The Lineworker Technology curriculum is designed to prepare the student for entry-level employment in the field of utility power transmission and distribution construction, troubleshooting, and repair. The curriculum includes Climbing in Elevated Work Site (Pole Climbing), Overhead Construction, Underground Construction, System Design and Operation, National Electric Safety Code, AC and DC Circuits, and Electric Power. Electives are available in advanced levels of utility line worker technology.

The line worker competencies required in this curriculum were developed to coincide with the standards for the electric power generation, distribution, and transmission industry as described in the United States Department of Labor Occupational Safety and Health Administration.

Suggested Course Sequence*
16-Week Line Worker Certificate

2 sch Line Worker Safety (ULT 1122)
2 sch Fundamentals of Electricity for Lineworkers (ULT 1192) or Fundamentals of Electricity (ELT 1192)
2 sch AC and DC Circuits for Line Workers (ULT 1152) or AC and DC Circuits for Electrical Technology (ELT 1144) **
3 sch Pole Climbing (ULT 1413)
3 sch Line Worker Truck Driving (ULT 1313) or Truck Driving for Line Workers (ULT 1324) or Commercial Truck Driving I (DTV 1114)
4 sch Overhead, Underground, and Substation Construction (ULT 1514)
3 sch Elective***
2 sch Elective***

_____
21 sch (Minimum Required)

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** DC Circuits (EET 1114) **AND** AC Circuits (EET 1123) may be taken instead of AC and DC Circuits for Electrical Technology (ELT 1144) **AND** may be used as a 3-hr elective.

*** APPROVED ELECTIVES

Basic Technical Math (TMA 1023)
Interpersonal Skills for line Worker (ULT 1112)
Electrical Power (ELT 1213)
Electrical Power (ULT 1213)
Transformer Operation and Banking (ULT 1223)
Electric Power and Transformer Banking for Lineworkers (ULT 1232)
Basic Utility Equipment Operation (ULT 1333)
National Electrical Safety Code (ULT1523)
Fundamentals of Geographical Information Systems (GIS) (GIT 2123)
System Design and Operation (ULT 2233)
Working in Elevated Worksites (ULT 2244)
Advanced Utility Equipment Operation (ULT 2333)
Special Projects I, II, and III (ULT 291(1–3), ULT 292(1-3), ULT 293(1–3))
Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]
Seminar and Planning CTE 200(1-6)
Supervised Work Experience I, II [ULT 292(1–3), ULT 294(1–3)]
Any other technical or academic course **as approved by the instructor**

† COMPUTER RELATED ELECTIVE

Computer Fundamentals for Line Workers (ULT 1612)

Computer Fundamentals for Electronics/Electrical (EET 1613) †
Fundamentals of Microcomputer Applications (CPT 1113) †
Introduction to Computer Concepts (CSC 1113) †
Any other computer related technical or academic course as approved by the instructor

Suggested Course Sequence*
Utility Lineman Technology

Associate of Applied Science

FIRST YEAR

3 sch	Safety for Line Workers (ULT 1133)	3 sch	Overhead Construction (ULT 2133)
2 sch	Fundamentals of Electricity for Lineworkers (ULT 1192) or Fundamentals of Electricity (ELT 1192)	3 sch	Underground Construction (ULT 2143)
3 sch	National Electrical Safety Code (ULT 1523)	3 sch	Basic Utility Equipment Operations (ULT 1333)
4 sch	AC and DC Circuits for Lineworker Technology (ULT 1144)	3 sch	Approved Technical Elective**
3 sch	Pole Climbing (ULT 1213)	3 sch	Approved Technical Elective**
4 sch	Truck Driving for Line Workers (ULT 1324) or Commercial Truck Driving (DTV 1114)	3 sch	Approved Technical Elective**
19 sch		18 sch	

SECOND YEAR

3 sch	System Design and Operation (ULT 2233)	3 sch	Oral Communication Elective
4 sch	Working in Elevated Work Sites (ULT 2244)	3 sch	Humanities/Fine Arts Elective
3 sch	Computer Application Elective†	3 sch	Written Communication Elective
3 sch	Approved Technical Elective**	3 sch	Math/Science Elective
		3 sch	Social/Behavioral Science Elective
13 sch		15 sch	

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

** APPROVED TECHNICAL ELECTIVES

Interpersonal Skills for line Worker (ULT 1112)
Electrical Power (ELT 1213)
Electrical Power (ULT 1213)
Transformer Operation and Banking (ULT 1223)
Advanced Utility Equipment Operation (ULT 2333)
Special Projects I, II, and III (ULT 291(1–3), ULT 292(1-3), ULT 293(1–3))

Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]
Seminar and Planning CTE 200(1-6)
Supervised Work Experience I, II [ULT 292(1–3), ULT 294(1–3)]
Any other technical or academic course as approved by the instructor.

† COMPUTER RELATED ELECTIVE
Lineworkers Computer Fundamentals (ULT 1623)
Computer Fundamentals for Electronics/Electrical (EET 1613) †
Fundamentals of Microcomputer Applications (CPT 1113) †
Introduction to Computer Concepts (CSC 1113) †
Fundamentals of Geographical Information Systems (GIS) (GIT 2123) †
Any other computer related technical or academic course as approved by the instructor.

LISTING OF COURSES

AGRICULTURAL TECHNICIAN TECHNOLOGY

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Course Name: Agricultural Mechanics Fundamentals
Course Abbreviation: AMT 1123
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: A study of safe practices and procedures used in Agricultural Mechanics. Included are personal and shop safety, safe use of tools and equipment, flammable materials and fire safety, disposal of hazardous materials, and a comprehensive safety exam. An introduction to agricultural mechanics occupations, the development of employability skills, the utilization of technical media, and the identification and use of fasteners and hardware identified in the agricultural mechanics industry (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Basic Electrical/Electronics Systems
Course Abbreviation: AMT 1213
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: A study of electrical/electronic systems and repair as it relates to agricultural power machinery and equipment (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Advanced Electrical/Electronics Systems
Course Abbreviation: AMT 1223
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: An advanced study of electrical/electronic systems and repair as it relates to agricultural power machinery and equipment (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: Basic Electrical/Electronics Systems (AMT 1213)

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Course Name: Basic Power Trains
Course Abbreviation: AMT 1313
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: A study of machines and the principles upon which they operate in the transmission of power (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Advanced Power Trains
Course Abbreviation: AMT 1323
Classification: Career–Technical Core (Associates Degree)
Description: Advanced study of machines and the principles upon which they operate in the transmission of power (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: Basic Power Trains (AMT 1313)

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Course Name: Basic Engines
Course Abbreviation: AMT 1413
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: A study of the theory of operation disassembly/assembly, parts identification, service, and repair of gasoline engines used in compact equipment (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Advanced Engines
Course Abbreviation: AMT 1423
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: A study of the theory of operation disassembly/assembly, parts identification, service, and repair of diesel engines (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: Basic Engines (AMT 1413)

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Course Name: Principles of Air Conditioning
Course Abbreviation: AMT 1511
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: Principles and service of air conditioning systems used on agricultural equipment (1 sch: 2-hr lab)
Prerequisite: None

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Course Name: Basic Hydraulic Systems
Course Abbreviation: AMT 1613
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: Basic theory and application of hydraulic systems in agricultural machinery and equipment (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Grain Harvesting Equipment
Course Abbreviation: AMT 211(1-3)
Classification: Career–Technical Elective

Description: Procedures for the inspection, adjustment, repair, and lubrication of grain harvesting equipment (1 sch: 2-hr lab; 2 sch: 1-hr lecture, 2-hr lab; 3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Cotton Harvesting Equipment
Course Abbreviation: AMT 231(1-3)
Classification: Career–Technical Elective
Description: Functions, maintenance, and repair of cotton picker drums and support systems (1 sch: 2-hr lab; 2 sch: 1-hr lecture, 2-hr lab; 3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Hay Harvesting Equipment
Course Abbreviation: AMT 241(1-3)
Classification: Career–Technical Elective
Description: Procedures for inspection, adjustment, repair, and lubrication of hay harvesting equipment (1 sch: 2-hr lab; 2 sch: 1-hr lecture, 2-hr lab; 3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Spray Equipment
Course Abbreviation: AMT 2513
Classification: Career–Technical Elective
Description: Selection, assembly, inspection, adjustment, calibration, and repair of spray equipment including safety procedures and environmental concerns (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Advanced Hydraulic Systems
Course Abbreviation: AMT 2623
Classification: Career–Technical Core (Associates Degree)
Description: Advanced theory and application of hydraulic systems in agricultural machinery and equipment (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: Basic Hydraulic Systems (AMT 1613)

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Course Name: Row Crop Planting Systems
Course Abbreviation: AMT 2712
Classification: Career–Technical Core (Associate Degree); Career–Technical Elective (Certificate)
Description: Setup, inspection, adjustment, and service of row crop planting equipment including an introduction to variable rate application equipment (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Compact Engines and Equipment
Course Abbreviation: AMT 2813
Classification: Career–Technical Core (Certificate and Associates Degree)
Description: Inspection, service, and repair of compact equipment (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Service Repair Center Management and Operations
Course Abbreviation: AMT 2823
Classification: Career–Technical Elective
Description: Management and daily operations of an agricultural equipment service center including record-keeping, reference materials, tool and equipment maintenance, and service scheduling (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Special Problem in Agricultural Mechanics Technology
Course Abbreviation: AMT 291(1-3)
Classification: Career–Technical Elective
Description: A course to provide students with an opportunity to utilize skills and knowledge gained in other Agricultural Mechanics Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6-hr lab)
Prerequisite: Sophomore standing in Agricultural Mechanics Technology and/or consent of the instructor

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Course Name: Supervised Work Experience in Agricultural Technician Technology
Course Abbreviation: AMT 292(1-6)
Classification: Career–Technical Elective
Description: A course that is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18-hr externship)
Prerequisite: Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and work-site supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and

technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews (1-3 sch: 3-9-hr externship)
Prerequisite: Concurrent enrollment in Career–Technical program area courses

AUTOMATION AND CONTROL

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Course Name: Fundamentals of Instrumentation
Course Abbreviation: INT 1113
Classification: Career-Technical Elective
Description: This course provides students with a general knowledge of instrumentation principles. This course includes instruction in the basis of hydraulics and pneumatics and the use and testing of electrical circuits in the instrumentation process. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Fluid Power
Course Abbreviation: INT 1214
Classification: Career-Technical Core
Description: This basic course provides instruction in hydraulics and pneumatics. The course covers actuators, accumulators, valves, pumps, motors, coolers, compression of air, control devices, and circuit diagrams. Emphasis is placed on the development of control circuits and troubleshooting techniques. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Control Systems I
Course Abbreviation: INT 2114
Classification: Career-Technical Core
Description: This is an introductory course to provide information on various instrumentation components and processes. Topics include analyzing pressure processes, temperatures, flow, and level. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: AC Circuits (EET 1123)

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Course Name: Control Systems II
Course Abbreviation: INT 2124
Classification: Career-Technical Elective
Description: This course is a continuation of Control Systems I with special emphasis on application of applied skills along with new skills to develop instrument process controls. The student will be given a process to develop the appropriate instruments and needed diagrams, utilizing various controlling processes and demonstrating loop troubleshooting techniques. (4 sch: 3 hr. lecture, 2 hr. lab.)
Prerequisite: Control Systems I (INT 2114)

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Course Name: Calibration and Measurement Principles
Course Abbreviation: INT 2214
Classification: Career-Technical Elective

Description: This course introduces the student to various terms related to measurement principles and calibration techniques. The topics also include the procedures and calibration of various instruments used in the industry. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Introduction to Automation and Controls
Course Abbreviation: MFT 1112
Classification: Career-Technical Core
Description: Introduction to manufacturing/industrial technology with emphasis on safe work practices, manufacturing dynamics, use of test equipment, and fundamentals of automation and control technology. (2 sch: 1 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Electrical Wiring for Automation and Control Technology
Course Abbreviation: MFT 1123
Classification: Career-Technical Core
Description: Basic electrical wiring for automation and controls including safety practices; installation and maintenance of raceways, conduit, and fittings; and three-phase service entrances, metering devices, main panels, raceways or ducts, subpanels, feeder circuits, and branch circuits according to electrical codes. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Automated Motion Control
Course Abbreviation: MFT 2013
Classification: Career-Technical Elective
Description: This course is designed to develop advanced skills in the set up of servo motion controller systems, troubleshooting and maintenance of servo motion control systems, and programming of servo motion control. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Consent of instructor

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Course Name: Materials Requirement Planning (MRP)
Course Abbreviation: MFT 2113
Classification: Career-Technical Elective
Description: This is a course that will develop student skills and mechanics in MRP II. Areas include resource management for productive manufacturing, development, and executing an MRP II plan, order point inventory, and closed loop systems. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Consent of instructor

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Course Name: Statistical Process Control
Course Abbreviation: MFT 2313
Classification: Career-Technical Elective

Description: This course provides a detailed study of the methods of implementing and using a computer-based statistical process control system and the associated gauging and automated data collection devices. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Computer Integrated Manufacturing
Course Abbreviation: MFT 2413
Classification: Career-Technical Elective
Description: This course is a study of how computers, robots, CAD/CAM, vision systems, and other automated systems can be used in computer integrated manufacturing (CIM).
(3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Consent of instructor

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Course Name: Data Acquisition and Communications
Course Abbreviation: MFT 2513
Classification: Career-Technical Elective
Description: This is a course in acquisition and communication of systems data in automated applications. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Consent of instructor

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Course Name: Flexible Manufacturing Systems
Course Abbreviation: MFT 2614
Classification: Career-Technical Elective
Description: This course is a production project which requires the student to apply technical skills acquired in previous courses. Project management is provided by the instructor with the students working as teams in each particular area of the manufacturing system. The students are required to plan the project and prepare the integrated system to manufacture a product. This includes all software, hardware, fixtures, clamping mechanisms, material handling requirements, sensors and interfacing, and external control devices. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Consent of instructor

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Course Name: Special Project in Automation and Control Technology
Course Abbreviation: MFT 291(1-3)
Classification: Career-Technical Elective
Description: A course to provide students with an opportunity to utilize skills and knowledge gained in other Automation and Control Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project.
(1-3 sch: 2-6 hr. lab)
Prerequisite: Sophomore standing in Automation and Control Technology and/or consent of the instructor.

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Course Name: Supervised Work Experience in Automation and Control Technology
Course Abbreviation: MFT 292(1-6)
Classification: Career-Technical Elective
Description: A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours.
(1-6 sch: 3-18 hr. externship)
Prerequisite: Consent of instructor

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Course Name: Fundamentals of Robotics
Course Abbreviation: ROT 1113
Classification: Career-Technical Elective
Description: This course is designed to introduce the student to industrial robots. Topics to be covered include robotics history, industrial robot configurations, operation, and basic programming. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Industrial Hydraulics
Course Abbreviation: ROT 1213
Classification: Career-Technical Elective
Description: This course introduces the students to basic hydraulics, hydraulic actuators, accumulators, valves, pumps, motors, fluids, coolers, and filters. Emphasis is placed on development of hydraulic control circuits and troubleshooting. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Industrial Pneumatics
Course Abbreviation: ROT 1223
Classification: Career-Technical Elective
Description: This course introduces the students to basic pneumatic principles, compression of air, work devices, control devices, and circuit diagrams. Emphasis is placed on development of pneumatic control circuits, electro-mechanical control of fluid power, and troubleshooting techniques. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Industrial Hydraulics (ROT 1213)

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Course Name: Industrial Robotics
Course Abbreviation: ROT 1313
Classification: Career-Technical Elective
Description: This course teaches the operating systems and advanced programming methods of industrial robots. Actual industrial grade robots are used to train the student in the areas of operation, maintenance, troubleshooting, service procedures, and robotics applications.

(3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Fundamentals of Robotics (ROT 1113)

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Course Name: Automated Manufacturing Controls
Course Abbreviation: ROT 2413
Classification: Career-Technical Elective
Description: This course is designed to teach the students the integrated control systems found in automated systems. Emphasis will be placed on encoders, optical devices, servo motors, stepper motors, computerized numerical control (CNC), vision and sensing systems, lasers, programmatic controllers, motor speed controls, and other similar devices.
(3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Industrial Robotics (ROT 1313)

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Course Name: Servo Control Systems
Course Abbreviation: ROT 2423
Classification: Career-Technical Elective
Description: This course is designed to teach servo components; servo valves; velocity servos; positional servos; force, pressure, and torque servos; servo amplifiers; programmers; and servo analysis. Emphasis is placed on servo trim and maintenance and the applications of servo systems. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Mechanical Systems
Course Abbreviation: ROT 2613
Classification: Career-Technical Elective
Description: This course introduces the students to mechanical components and drive systems commonly used in the industry. Emphasis is placed on installation, maintenance, and troubleshooting of these components and systems. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. Includes regular meetings and seminars with school personnel for supplemental instruction and progress reviews. (1-3 sch: 3-9 hours externship)
Prerequisite: Concurrent enrollment in Career-technical program area courses

AUTOMOTIVE TECHNOLOGY

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Course Name: Basic Electrical/Electronic Systems
Course Abbreviation: ATV/ATT 1124
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to all components of the vehicle electrical system including lights, battery, and charging components. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Advanced Electrical/Electronic Systems
Course Abbreviation: ATV/ATT 1134
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to all components of the vehicle electrical system including gauges, driver information systems, horn, wiper/washer systems, and accessories. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Brakes
Course Abbreviation: ATV/ATT 1214
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to the repair and maintenance of brake systems on automobiles. It includes instruction and practice in diagnosis of braking systems problems and the repair of brake systems. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Manual Drive Trains/Transaxles
Course Abbreviation: ATV/ATT 1314
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to the maintenance and repair of manual transmissions, transaxles, and drive train components. It includes instruction in the diagnosis of drive train problems, and the repair and maintenance of transmissions, transaxles, clutches, CV joints, differentials, and other components.
(4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Engine Performance I
Course Abbreviation: ATV/ATT 1424
Classification: Career–Technical Core

Description: This is a course designed to provide advanced skills and knowledge related to the maintenance and adjustment of gasoline engines for optimum performance. It includes instruction, diagnosis, and correction of problems associated within these areas.
(4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Basic Electrical/Electronic Systems (ATV/ATT 1124)

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Course Name: Engine Repair
Course Abbreviation: ATV/ATT 1715
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to the repair and rebuilding of automotive engines. It includes instruction and practice in the diagnosis and repair of engine components including valve trains, blocks, pistons and connecting rods, crankshafts, and oil pumps. (5 sch: 2-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Introduction, Safety, and Employability Skills
Course Abbreviation: ATV/ATT 1811
Classification: Career–Technical Core
Description: This is a course designed to provide knowledge of classroom and lab policies and procedures. Safety practices and procedures associated with the automotive program and automotive industry. (1 sch: 1-hr lecture)
Prerequisite: None

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Course Name: Automatic Transmissions/Transaxles
Course Abbreviation: ATV/ATT 2325
Classification: Career–Technical Core
Description: This is a course designed to provide skills and knowledge related to the diagnosis of automatic transmissions and transaxles. Includes instruction and practice of testing, inspecting, and repair of these devices (5 sch: 2-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Steering and Suspension Systems
Course Abbreviation: ATV/ATT 2334
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to the inspection and repair of steering and suspension systems of automobiles. Includes instruction and practice in the diagnosis of steering system problems and the repair/replacement of steering components (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Engine Performance II
Course Abbreviation: ATV/ATT 2434
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to the ignition system, fuel, air induction, and exhaust systems. It includes instruction, diagnosis, and correction of problems associated within these areas. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Engine Performance III
Course Abbreviation: ATV/ATT 2444
Classification: Career–Technical Core
Description: This is a course designed to provide advanced skills and knowledge related to the emissions control systems and engine related service. It includes instruction, diagnosis, and correction of problems associated within these areas. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Heating and Air Conditioning
Course Abbreviation: ATV/ATT 2614
Classification: Career–Technical Core
Description: This course is designed to provide advanced skills and knowledge associated with the maintenance and repair of automotive heating and air conditioning systems. It includes instruction and practice in the diagnosis and repair of heating and air conditioning system components, and control systems. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None
(**NOTE**: All practices and procedures related to the servicing of a sealed refrigeration system **must** be performed under the direct supervision of an instructor who has been certified to service air conditioning and refrigeration equipment. All practices and procedures **must** be performed according to current mandates and standards regarding the servicing of refrigerant systems. Students would be qualified to take the ASE certification test in Automotive Heating and Air Conditioning.)

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Course Name: Special Problem I in Automotive Technology
Course Abbreviation: ATV/ATT 291(1-6)
Classification: Career–Technical Elective
Description: A basic course to provide students with an opportunity to utilize basic skills and general knowledge gained in other Automotive Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-6 sch: 2-8-hr lab)
Prerequisite: Consent of instructor

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Course Name: Special Problem II in Automotive Technology
Course Abbreviation: ATV/ATT 293(1-6)
Classification: Career–Technical Elective
Description: A continuation of Special Problem I in Automotive technology. An advanced course to provide students with an opportunity to utilize advanced skills and specific knowledge gained in other Automotive Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-6 sch: 2-8-hr lab)
Prerequisite: Consent of instructor

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Course Name: Supervised Work Experience in Automotive Technology
Course Abbreviation: ATV/ATT 292(1-6)
Classification: Career–Technical Elective
Description: A course that is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18-hr externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Automotive Technology

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Career–Technical Elective
Description: A structured work-site learning experience in which the student, program area teacher, work-based learning coordinator, and work-site supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. Includes regular meetings and seminars with school personnel for supplemental instruction and progress reviews (1-3 sch: 3-9-hr externship)
Prerequisite: Concurrent enrollment in career–technical program area courses

BRICK BLOCK AND STONE MASONRY

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Course Name: Brick and Block Laying
Course Abbreviation: BBV 1115
Classification: Career–Technical Core
Description: This course is designed to give the student experience in laying brick and block. (5 sch: 1-hr lecture, 8-hr lab)
Prerequisite: None

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Course Name: Masonry Construction
Course Abbreviation: BBV 1215
Classification: Career–Technical Core
Description: This course is designed to give the student experience in various types of walls, finishing, and masonry construction techniques. (5 sch: 1-hr lecture, 8-hr lab)
Prerequisite: None

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Course Name: Masonry Math, Estimating, and Blueprint Reading
Course Abbreviation: BBV 1223
Classification: Career–Technical Core
Description: This course is designed to give the student experience in calculations, estimating, and blueprint reading. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Tools, Equipment, and Safety
Course Abbreviation: BBV 1313
Classification: Career–Technical Core
Description: This course is designed to give the student experience in the use and care of tools and equipment along with the safety procedures used in the masonry trade.
(3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Advanced Block Laying
Course Abbreviation: BBV 1425
Classification: Career–Technical Core
Description: This course is designed to give the student experience in laying block columns, piers, and various walls. (5 sch: 1-hr lecture, 8-hr lab)
Prerequisite: None

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Course Name: Advanced Bricklaying
Course Abbreviation: BBV 1525
Classification: Career–Technical Core
Description: This course is designed to give the student advanced experience in brick columns, piers, and various walls. (5 sch: 1-hr lecture, 8-hr lab)
Prerequisite: None

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Course Name: Chimney and Fireplace Construction
Course Abbreviation: BBV 1623
Classification: Career–Technical Elective
Description: The student will gain advanced experiences in layout and construction of chimneys, fireplaces, and refractory masonry. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Arch Construction
Course Abbreviation: BBV 1723
Classification: Career–Technical Core
Description: Students will gain advanced experiences in layout and construction of arches. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Steps, Patios, and Brick Floors
Course Abbreviation: BBV 1823
Classification: Career–Technical Core
Description: Students will gain advanced experiences in layout and construction of steps, patios, and brick floors. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Special Problem in Brick, Block, and Stone Masonry
Course Abbreviation: BBV 191(1-3)
Classification: Career–Technical Elective
Description: A course to provide students with an opportunity to utilize skills and knowledge gained in other Brick, Block, and Stone Masonry courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6-hr lab)
Prerequisite: None

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Course Name: Supervised Work Experience in Brick, Block, and Stone Masonry
Course Abbreviation: BBV 292(1-6)
Classification: Career–Technical Elective
Description: A course that is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours.
(1-6 sch: 3-18-hr externship)
Prerequisite: Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, work-based learning coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. This course is designed to integrate the student's academic and technical skills into a work environment, and may include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews.
(1-3 sch: 3-9-hr externship)
Prerequisite: Concurrent enrollment in Career–technical program area courses

CIVIL ENGINEERING TECHNOLOGY

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Course Name: Route Surveying
Course Abbreviation: CIT 1114
Classification: Career-Technical Core
Description: This course teaches highway route design and factors in route location. The calculation and layout of simple horizontal and vertical curves, grades, and related earthwork are covered. Modern surveying, measuring, and mapping instruments, including electronic total stations with data collectors, are used. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413) or permission from instructor.

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Course Name: Road Design and Construction Methods and Materials
Course Abbreviation: CIT 1213
Classification: Career-Technical Core
Description: A study of equipment, construction methods, and materials used in the construction of roadways and drainage structures. (3 sch: 3 hr. lecture)
Prerequisite: None

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Course Name: Road Construction Plans and Specifications
Course Abbreviation: CIT 1223
Classification: Career-Technical Core
Description: A course to provide students with an introduction to the plans and specifications for the construction of streets and highways. Includes instruction in the interpretation of plans and specifications, the bidding process, and estimation of material and labor costs.
(3 sch: 3 hr. lecture)
Prerequisite: None

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Course Name: Elementary Surveying
Course Abbreviation: CIT 1413
Classification: Career-Technical Core
Description: Basic course dealing with principles of geometry, theory, and use of instruments, mathematical calculations, and the control and reduction of errors. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: Consent of Teacher

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Course Name: Legal Principles of Surveying
Course Abbreviation: CIT 2113
Classification: Career-Technical Core
Description: A study of the legal aspects of boundary controls for the survey and resurvey of real property. (3 sch: 2 hr. lecture, 2 hr. lab)

Corequisite: Land Surveying (CIT 2434)

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Course Name: Advanced Surveying Practices
Course Abbreviation: CIT 2124
Classification: Career-Technical Elective
Description: A course designed to provide the student with practical applications of skills and knowledge gained in other surveying and related courses. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413), Route Surveying (CIT 1114), and Land Surveying (CIT 2434)

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Course Name: Soil Mechanics
Course Abbreviation: CIT 2313
Classification: Career-Technical Elective
Description: Elementary study of exploring, sampling, testing, and evaluating sub-surface materials and their effect on types of foundations and construction. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Concrete and Hot-Mix Asphalt Testing
Course Abbreviation: CIT 2413
Classification: Career-Technical Elective
Description: A course which emphasizes standard procedures for sampling, testing, and evaluating materials used in concrete and hot-mix asphalt mixtures.
(3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Mapping and Topography
Course Abbreviation: CIT 2423
Classification: Career-Technical Core
Description: Selected drafting techniques are applied to the problem of making maps, traverses, plot plans, plan drawings, and profile drawings using maps, field survey data, aerial photographs, and related references and materials including symbols, notations, and other applicable standardized materials. (3 sch: 2 hr. lecture, 2 hr. lab)
Pre/corequisites: Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413) and Intermediate CAD (DDT 1323), or by permission of instructor

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Course Name: Land Surveying
Course Abbreviation: CIT 2434
Classification: Career-Technical Core
Description: This course teaches aspects of boundary controls, principles for land surveying, methods of land boundary location, and land description in accordance with original surveys and resurveys. (4 sch: 2 hr. lecture, 4 hr. lab)

Prerequisite: Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413) or permission from instructor.

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Course Name: GPS Surveying
Course Abbreviation: CIT 2444
Classification: Career-Technical Core
Description: This course teaches principles of surveying utilizing artificial earth orbit satellites. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Elementary Surveying (CIT 1413) or Elementary Surveying (DDT 1413), Route Surveying (CIT 1114), and Land Surveying (CIT 2434), or by permission of instructor

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Course Name: Fundamentals of Geographical Information Systems (GIS)
Course Abbreviation: CIT 2453
Classification: Career-Technical Elective
Description: This course includes the use of computer mapping and databases in multiple applications. Included is incorporation of imagery and data into a graphical oriented database system. Also included are the fundamentals of geographical information systems techniques, approaches, and applications. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Principles of CAD (DDT 1313)

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Course Name: Water and Water Distribution
Course Abbreviation: CIT 2513
Classification: Career-Technical Elective
Description: A study of the hydrological principles in the distribution and movement of water on and under the earth's surface and in water distribution systems. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Special Project
Course Abbreviation: CIT 291(1-3)
Classification: Career-Technical Elective
Description: A course designed to provide the student with practical application of skills and knowledge gained in other Civil Engineering Technology courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6 hr. lab)
Prerequisite: Minimum of 12 sch Civil Engineering Technology related courses

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Course Name: Supervised Work Experience in Civil Engineering Technology
Course Abbreviation: CIT 292(1-6)
Classification: Career-Technical Elective

Description: A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours.
(1-6 sch: 3-18 hr. externship)
Prerequisite: Consent of instructor and the completion of at least one semester of coursework in the Civil Engineering Technology program.

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1-3 sch: 3-9 hours externship)
Prerequisite: Concurrent enrollment in Career-technical program area courses

COLLISION REPAIR TECHNOLOGY

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Course Name: Structural Analysis and Damage Repair I
Course Abbreviation: ABT 1143
Classification: Career–Technical Core
Description: A course to provide skills and practice in structural analysis and repair procedures that are used in the collision repair industry. This course also covers the complete inspection and non-structural analysis of damaged vehicles. It is designed to enable the student to determine the conditions and severity of the damage, the repair or replacement of parts, the estimated repair time, and correct use of reference manuals. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Structural Analysis and Damage Repair II
Course Abbreviation: ABT 1153
Classification: Career–Technical Core
Description: This course is a continuation of Structural Analysis and Damage Repair I. This course provides instruction and practice in the removal and reinstallation of glass. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Collision Welding and Cutting
Course Abbreviation: ABT 1213
Classification: Career–Technical Core
Description: A course to provide skills and practice in welding and cutting procedures that are used in the collision repair industry. This course also covers the complete inspection and non-structural analysis of damaged vehicles. It is designed to enable the student to determine the conditions and severity of the damage, the repair or replacement of parts, the estimated repair time, and correct use of reference manuals. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Non-Structural Analysis and Damage Repair I
Course Abbreviation: ABT 1223
Classification: Career–Technical Core
Description: A course in the procedures and practices for metal finishing and body filling. This course also covers the complete inspection and non-structural analysis of damaged vehicles. It is designed to enable the student to determine the conditions and severity of the damage, the repair or replacement of parts, the estimated repair time, and correct use of reference manuals.
(3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Non-Structural Analysis and Damage Repair II
Course Abbreviation: ABT 1233
Classification: Career–Technical Core
Description: This course is a continuation of Non-Structural Analysis and Damage Repair I. This course provides instruction for preparation principles and practices.
(3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Refinishing I
Course Abbreviation: ABT 1314
Classification: Career–Technical Core
Description: A course to provide skills and practices in vehicle preparation, cleaning, sanding, metal treatment, and masking. Included is determining imperfections in paint jobs. Emphasis is placed upon personal safety and environmental concerns. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Refinishing II
Course Abbreviation: ABT 1323
Classification: Career–Technical Core
Description: Continuation of Refinishing I. Included are types of paint defects and paint gun application and maintenance procedures. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Mechanical and Electrical Components I
Course Abbreviation: ABT 1443
Classification: Career–Technical Core
Description: A course designed to provide theory and practice in the areas of restraint systems, cooling systems, and air conditioning/heating systems. An introduction to small business management techniques as applied to the collision repair shop. Includes computerized information and record systems. Also included are financial responsibilities, shop layout, inventory, and employee-employer relations. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Mechanical and Electrical Components II
Course Abbreviation: ABT 1453
Classification: Career–Technical Core
Description: A course designed to provide theory and practice in the areas of brakes and electrical (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Structural Analysis and Damage Repair III
Course Abbreviation: ABT 2163
Classification: Career–Technical Core (Two Year Certificate, Associate Degree)
Description: This course is a continuation of Structural Analysis and Damage Repair II. This course provides instruction and practice in unibody inspection, measurement, and repair. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Structural Analysis and Damage Repair IV
Course Abbreviation: ABT 2173
Classification: Career–Technical Core (Two Year Certificate, Associate Degree)
Description: This course is a continuation of Structural Analysis and Damage Repair III. This course provides the procedures and practices for frame inspection and repair. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Non-Structural Analysis and Damage Repair III
Course Abbreviation: ABT 2243
Classification: Career–Technical Core (Two Year Certificate, Associate Degree)
Description: This course is a continuation of Non-Structural Analysis and Damage Repair II. This course provides instruction for outer body panel repair, replacement, and adjustment principles and practices. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Non-Structural Analysis and Damage Repair IV
Course Abbreviation: ABT 2253
Classification: Career–Technical Core (Two Year Certificate, Associate Degree)
Description: This course is a continuation of Non-Structural Analysis and Damage Repair III. This course provides instruction and practice for the following areas: moveable glass, hardware associated with glass, plastics and adhesive. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Refinishing III
Course Abbreviation: ABT 2333
Classification: Career–Technical Core (Two Year Certificate, Associate Degree)
Description: A continuation of Refinishing II with emphasis on advanced painting techniques including paint mixing, matching, and applying (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Refinishing IV
Course Abbreviation: ABT 2343
Classification: Career–Technical Core (Two Year Certificate, Associate Degree)
Description: A continuation of Refinishing III, with emphasis on advanced techniques of painting; including, detailing (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Special Problem in Collision Repair Technology
Course Abbreviation: ABT 291(1-3)
Classification: Career–Technical Elective
Description: A course to provide students with an opportunity to utilize skills and knowledge gained in other Collision Repair Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6-hr lab)
Prerequisite: Consent of the Instructor

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Course Name: Supervised Work Experience in Collision Repair Technology
Course Abbreviation: ABT 292(1-6)
Classification: Career–Technical Elective
Description: A course that is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18-hr externship)
Prerequisite: Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and work-site supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1-3 sch: 3-9-hr externship)
Prerequisite: Concurrent enrollment in Career–Technical program area courses

COMMERCIAL RESIDENTIAL MAINTENANCE

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Course Name: Fundamentals of Maintenance Services
Course Abbreviation: CRM 1113
Classification: Career–Technical Core
Description: Emphasis on basic concepts and practices in the maintenance programs for commercial and residential facilities including scheduling, work order systems, workforce management, inventory control, safety, and right-to-know programs. (3 sch: 2-hr lecture, 2- hr lab)
Prerequisite: None

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Course Name: Maintenance Regulations
Course Abbreviation: CRM 1122
Classification: Career–Technical Core
Description: Basic information on the various federal, state, and local regulations agencies that govern maintenance operations and practices, including Occupational and Safety Health Act (OSHA), Environmental Protection Agency (EPA), and American with Disabilities Act (ADA). (2 sch: 2-hr lecture)
Prerequisite: None

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Course Name: Mathematics and Blueprint Interpretation
Course Abbreviation: CRM 1134
Classification: Career–Technical Core
Description: Basic instruction in mathematics and the methods of interpreting information and the relationship of details and sections to an overall blueprint utilizing scale drawings, symbols, abbreviations, floor plans, elevations, and specifications tables. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Carpentry
Course Abbreviation: CRM 1214
Classification: Career–Technical Core
Description: Basic course in carpentry skills required to perform building maintenance activities. Covers the installation methods and materials available to make repairs to building structures using accepted trade practices. (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Surface Finishes
Course Abbreviation: CRM 1222
Classification: Career–Technical Elective

Description: Various techniques and processes of surface cleaning, preparation, and repair. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Masonry
Course Abbreviation: CRM 1313
Classification: Career–Technical Core
Description: Techniques of brick, block, and ceramic tile laying and repairing processes to include safety practices. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Plumbing
Course Abbreviation: CRM 1414
Classification: Career–Technical Core
Description: Basic design, function, maintenance, repair, and replacement of all types of light commercial and residential plumbing fixtures. (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Pool and Spa Maintenance
Course Abbreviation: CRM 1422
Classification: Career–Technical Elective
Description: Basic skills and techniques for the safe and proper maintenance of pools and spas. (2 sch: 1 hr. lecture, 2-hr lab)
Prerequisite: None

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Course Name: Landscape Irrigation
Course Abbreviation: CRM 1432
Classification: Career–Technical Elective
Description: Basic use of irrigation in residential and light commercial applications. Sprinkler designs and plans, practices, equipment, and maintenance for single-family dwellings, light commercial buildings, and apartment/townhouse complexes. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Electrical
Course Abbreviation: CRM 1514
Classification: Career–Technical Core
Description: Basic electrical diagnosis and repair techniques including basic circuit theory, safety and grounding essentials, wiring systems, circuitry, and electrical troubleshooting. (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Heating, Ventilating, and Air Conditioning (HVAC)
Course Abbreviation: CRM 1616
Classification: Career–Technical Core
Description: Basic principles, operation, maintenance, and repair of heating, ventilation, air conditioning, ice machines, and refrigerators in residential and light commercial buildings (6 sch: 2-hr lecture, 8-hr lab)
Prerequisite: None

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Course Name: Welding
Course Abbreviation: CRM 1713
Classification: Career–Technical Elective
Description: Basic course in the development of welding skills in the safe use of the oxyfuel and arc welding techniques. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Special Project in Commercial/Residential Maintenance
Course Abbreviation: CRM 291(1-3)
Classification: Career–Technical Elective
Description: Practical application of skills and knowledge gained in other building maintenance courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6-hr lab)
Prerequisite: None

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Course Name: Supervised Work Experience in Commercial/Residential Maintenance
Course Abbreviation: CRM 292(1-6)
Classification: Career–Technical Elective
Description: A cooperative program between industry and education designed to integrate the student's technical studies with work experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18-hr externship)
Prerequisite: None

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and work site supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews.
(1-3 sch: 3-9-hr externship)
Prerequisite: Concurrent enrollment in Career–Technical program area courses

COMMERCIAL TRUCK DRIVING

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Course Name: Commercial Truck Driving I
Course Abbreviation: DTV 1114-6
Classification: Career-Technical Core
Description: Fundamental instruction on safety, rules and regulations, driving practices, air brakes, hazardous materials, and emergencies. Includes instruction and practice in performing vehicle inspections, coupling and uncoupling, maneuvering, backing, and driving a tractor-trailer truck under varying road and climate conditions. (4 sch: 1 lecture, 6-10 hr. lab)
Prerequisite: None

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Course Name: Commercial Truck Driving II
Course Abbreviation: DTV 1124-6
Classification: Career-Technical Core
Description: Continuation of Commercial Truck Driving I with additional instruction on safety, rules and regulations, driving practices, air brakes, hazardous materials, and emergencies. Includes instruction and practice in performing vehicle inspections, coupling and uncoupling, maneuvering, backing, and driving a tractor-trailer truck under varying road and climate conditions. (4 sch: 1 lecture, 6-10 hr. lab)
Prerequisite: Commercial Truck Driving I (DTV 1114-6)

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Course Name: Commercial Truck Driving Internship
Course Abbreviation: DTV 1137
Classification: Career–Technical
Description: Under the supervision of a company trainer, this course will enable the student to apply the training he/she received at the Community/Junior College program they attended with the company of his/her choice. The successful completion of this course will enable the student to drive independently with minimum supervision with the company of his/her choice. (0 hour lecture, 315 hours lab)
Prerequisites: Completion of DTV 1114-6 and DTV 1124-6 and Consent of instructor

COSMETOLOGY SCIENCE CLUSTER

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Course Name: Cosmetology Orientation
Course Abbreviation: COV 1122
Classification: AOC Core (Cosmetology and Nail Technician)
Description: This course will cover the history, career opportunities, life skills, professional image, Mississippi Cosmetology laws, rules and regulations and communicating for success in the cosmetology industry. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 2 hr. lecture)
Prerequisites: None

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Course Name: Cosmetology Sciences I
Course Abbreviation: COV 1245
Classification: AOC Core (Cosmetology and Nail Technician)
Description: This course consists of the study of bacteriology, sterilization, and sanitation. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (5 sch: 3 hr. lecture, 3 hr. clinical lab)
Pre/corequisites: None

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Course Name: Cosmetology Sciences II
Course Abbreviation: COV 1255
Classification: AOC Core (Cosmetology)
Description: This course consists of the study of anatomy and physiology. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (5 sch: 3 hr. lecture, 3 hr. clinical lab)
Pre/corequisites: Cosmetology Sciences I (COV 1245)

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Course Name: Cosmetology Sciences III
Course Abbreviation: COV 1263
Classification: AOC Core (Cosmetology)
Description: This course consists of the application and demonstration of chemistry and electricity. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (3 sch: 2 hr. lecture, 1.5 hr. clinical lab)
Prerequisites: Cosmetology Sciences II (COV 1255)

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Course Name: Hair Care I
Course Abbreviation: COV 1426
Classification: AOC Core (Cosmetology)
Description: This course consists of the study of properties of the hair and scalp; principles of hair design; shampooing, rinsing, and conditioning; haircutting; hairstyling; braiding and braid extensions; wigs and hair enhancements; chemical texture services; and hair coloring. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (6 sch: 2 hr. lecture, 6 hr. clinical lab)
Pre/corequisites: None

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Course Name: Hair Care II
Course Abbreviation: COV 1436
Classification: AOC Core (Cosmetology)
Description: This course consists of the advanced study of properties of the hair and scalp; principles of hair design; shampooing, rinsing, and conditioning; haircutting; hairstyling; braiding and braid extensions; wigs and hair enhancements; chemical texture services; and hair coloring. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (6 sch: 2 hr. lecture, 6 hr. clinical lab)
Pre/corequisites: Hair Care I (COV 1426)

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Course Name: Hair Care III
Course Abbreviation: COV 1443
Classification: AOC Core (Cosmetology)
Description: This course consists of the practical applications of the study of properties of the hair and scalp; principles of hair design; shampooing, rinsing, and conditioning; haircutting; hairstyling; braiding and braid extensions; hair enhancements; chemical texture services; and hair coloring. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (3 sch: 6 hr. clinical lab)
Pre/corequisites: Hair Care II (COV 1436)

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Course Name: Nail Care I
Course Abbreviation: COV 1522
Classification: AOC Core (Cosmetology and Nail Technician)
Description: This course consists of basic nail care services including nail structure and growth, manicuring and pedicuring, and advanced nail techniques. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 2 hr. clinical lab)

Pre/corequisites: None

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Course Name: Nail Care II
Course Abbreviation: COV 1532
Classification: AOC Core (Cosmetology)
Description: This course consists of basic nail care services including nail structure and growth, manicuring and pedicuring, and advanced nail techniques. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 1.5 hr. clinical lab)
Pre/corequisites: Nail Care I (COV 1522)

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Course Name: Nail Care III
Course Abbreviation: COV 1542
Classification: AOC Core (Cosmetology)
Description: This course consists of basic nail care services including nail structure and growth, manicuring and pedicuring, and advanced nail techniques. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 2 hr. clinical lab)
Pre/corequisites: Nail Care II (COV 1532)

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Course Name: Skin Care I
Course Abbreviation: COV 1622
Classification: AOC Core (Cosmetology and Nail Technician)
Description: This course consists of the introduction to basic skin care services including anatomy of skin, disorders of skin, hair removal, facials, and facial makeup. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 3 hr. clinical lab)
Pre/corequisites: None

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Course Name: Skin Care II
Course Abbreviation: COV 1632
Classification: AOC Core (Cosmetology)
Description: This course consists of intermediate skin care services including anatomy of skin, disorders of skin, hair removal, facials, and facial makeup. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 3 hr. clinical lab)
Pre/corequisites: Skin Care I (COV 1622)

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Course Name: Skin Care III
Course Abbreviation: COV 1642
Classification: AOC Core (Cosmetology)
Description: This course consists of advanced skin care services including anatomy of skin, disorders of skin, hair removal, facials, and facial makeup. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 6 hr. clinical lab)
Pre/corequisites: Skin Care II (COV 1632)

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Course Name: Salon Business I
Course Abbreviation: COV 1722
Classification: AOC Core (Cosmetology and Nail Technician)
Description: This course will cover preparing to operate a successful salon. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 3 hr. clinical lab)
Pre/corequisites: None

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Course Name: Salon Business II
Course Abbreviation: COV 1732
Classification: AOC Core (Cosmetology)
Description: This course will cover operating a successful salon and seeking employment. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 4.5 hr. clinical lab)
Pre/corequisites: Salon Business I (COV 1722)

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Course Name: Cosmetology Teacher Training I
Course Abbreviation: COV 2816
Classification: AOC Core (Cosmetology Teacher Training)
Description: Instruction will be given in developing appropriate communication skills, effective use of visual aids, identification of various teaching styles, and practical application of cosmetology instruction. (6 sch: 3 hr. lecture, 4.5 hr. clinical lab)
Pre/corequisites: Students must have at least two years of active practical experience as a licensed cosmetologist and currently hold a valid Mississippi cosmetology license.

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Course Name: Cosmetology Teacher Training II
Course Abbreviation: COV 2826
Classification: AOC Core (Cosmetology Teacher Training)

Description: Instruction will be given in development of instructional methods, development of visual aids, development of effective evaluation, and practical application of cosmetology instruction. (6 sch: 3 hr. lecture, 4.5 hr. lab)
Pre/corequisites: Cosmetology Teacher Training I (COV 2816)

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Course Name: Cosmetology Teacher Training III
Course Abbreviation: COV 2836
Classification: AOC Core (Cosmetology Teacher Training)
Description: Instruction will be given in development of appropriate lesson plans and practical application of cosmetology instruction. (6 sch: 3 hr. lecture, 4.5 hr. clinical lab)
Pre/corequisites: Cosmetology Teacher Training II (COV 2826)

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Course Name: Cosmetology Teacher Training IV
Course Abbreviation: COV 2846
Classification: AOC Core (Cosmetology Teacher Training)
Description: Instruction will be given in classroom management techniques; cosmetology laws, rules, and regulations; and practical application of cosmetology instruction. (6 sch: 3 hr. lecture, 4.5 hr. clinical lab)
Pre/corequisites: Cosmetology Teacher Training III (COV 2836)

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Course Name: Cosmetology Internship I
Course Abbreviation: COV 2914
Classification: Career–Technical
Description: Under the supervision of a company trainer, this course will enable the student to apply the training he or she received at the Community/Junior College program the student attended with the company of his or her choice. The successful completion of this course will enable the student to perform/observe independently with minimum supervision with the company of his or her choice. (0 hour lecture, 180 hours lab)
Prerequisites: Completion of COV 2816, COV 2826, COV 2836, and COV 2846 and Consent of instructor

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Course Name: Cosmetology Internship II
Course Abbreviation: COV 2924
Classification: Career–Technical
Description: Under the supervision of a company trainer, this course will enable the student to apply the training he or she received at the Community/Junior College program the student attended with the company of his or her choice. The successful completion of this course will enable the student to perform/observe independently with minimum supervision with the company of his or her choice. (0 hour lecture, 180 hours lab)
Prerequisites: Completion of COV 2816, COV 2826, COV 2836, and COV 2846 and Consent of instructor

DENTAL ASSISTING TECHNOLOGY

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Course Name: Dental Orientation
Course Abbreviation: DAT 1111
Classification: Career–Technical Core
Description: The development, function, status, and organization of the dental profession; and the professional, legal, and ethical responsibilities of the dental assistant. Terminology emphasizing prefixes, suffixes, roots, abbreviations, spelling, and definitions of medical and dental terms. (1 sch: 1-hr lecture)
Corequisites: All first semester courses

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Course Name: Dental Assisting Materials
Course Abbreviation: DAT 1214
Classification: Career–Technical Core
Description: Dental safety precautions will be emphasized. Includes a comprehensive study of the physical and chemical properties of dental materials. Lab sessions include measuring, manipulating, and preparing dental materials for use in the dental operatory and dental laboratory. (4 sch: 2-hr lecture, 4-hr lab)
Corequisites: All first semester courses

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Course Name: Dental Science I
Course Abbreviation: DAT 1313
Classification: Career–Technical Core
Description: Physiology, anatomy, and morphology as related to the oral cavity. Content organized to include a study of the body systems, the anatomy of the head and neck, and the form of each of the 32 teeth. (3 sch: 3-hr lecture)
Corequisites: All first semester courses

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Course Name: Dental Science II
Course Abbreviation: DAT 1323
Classification: Career–Technical Core
Description: Embryology, pharmacology, microbiology, and pathology as related to dentistry. Content organized to give the student basic information required for effective dental assisting. (3 sch: 3-hr lecture)
Prerequisites: All first semester courses

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Course Name: Chairside Assisting I
Course Abbreviation: DAT 1415
Classification: Career–Technical Core

Description: Comprehensive study of information relating to assisting at the dental chair. Laboratory sessions include all phases of chairside assisting from seating the patient to post-operative care in the treatment room. (5 sch: 2-hr lecture, 6-hr lab)
Corequisites: All first semester courses, CPR certification-Healthcare Provider level

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Course Name: Chairside Assisting II
Course Abbreviation: DAT 1423
Classification: Career–Technical Core
Description: Continuation of the study of information related to assisting at the dental chair. Emphasis on techniques utilized in performing all dental procedures at the chair. Special consideration to assisting in the dental specialties. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: Chairside Assisting I (DAT 1415)

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Course Name: Chairside Assisting III
Course Abbreviation: DAT 1433
Classification: Career–Technical Core
Description: Continuation of Chairside Assisting II. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: Chairside Assisting II (DAT 1423)

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Course Name: Dental Radiology I
Course Abbreviation: DAT 1513
Classification: Career–Technical Core
Description: Principles and safety precautions in dental radiology. Laboratory sessions include positioning, exposing, processing, and mounting bite-wing, occlusal, and periapical dental radiographs on a manikin. (3 sch: 2-hr lecture, 2-hr lab)
Corequisites: All first semester courses

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Course Name: Dental Radiology II
Course Abbreviation: DAT 1522
Classification: Career–Technical Core
Description: Continuation of Dental Radiology I. Emphasis placed on clinical competence in exposing periapical radiographs. (2 sch: 4-hr lab)
Prerequisites: Dental Radiology I (DAT 1513)

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Course Name: Dental Health Education
Course Abbreviation: DAT 1612
Classification: Career–Technical Core
Description: Study of the nutritional needs of the body. Emphasis on nutritional requirements for maintaining good oral hygiene. Comprehensive study of the dental assistant's responsibilities in patient education as related to good oral health. (2 sch: 2-hr lecture)
Prerequisites: All first semester courses

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Course Name: Practice Management
Course Abbreviation: DAT 1714
Classification: Career–Technical Core
Description: Comprehensive study of the dental office business procedures. Topics covered: patient contact, patient records, insurance, financial records, telephone usage, office management, basic skills in psychology, and professional ethics. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisites: All first semester Dental Assisting courses

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Course Name: Clinical Experience I
Course Abbreviation: DAT 1815
Classification: Career–Technical Core
Description: Supervised clinical experience in an authorized dental clinic. (5 sch: 1-hr lecture, 12-hr clinical)
Prerequisites: Chairside Assisting I (DAT 1415)

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Course Name: Clinical Experience II
Course Abbreviation: DAT 1822
Classification: Career–Technical Core
Description: Continuation of supervised clinical experience in an authorized dental clinic. (2 sch: 6-hr clinical)
Pre/corequisites: All first semester Dental Assisting courses

DENTAL HYGIENE TECHNOLOGY

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Course Name: Fundamentals of Dental Hygiene
Course Abbreviation: DHT 1115
Classification: Career-Technical Core
Description: This course will provide the dental hygiene student with the fundamental knowledge and skills necessary for interaction with clients. The lecture portion will focus on the history, philosophy, and theories relevant to the profession of dental hygiene. Lecture highlights will include discussion of the latest health care settings, trends, and approaches to comprehensive care. The preclinical portion will provide the student with opportunities for the development of psychomotor skills and opportunities for interaction with clients, which will provide emphasis on trust, care, and responsibility as part of becoming a professional. (5 sch: 2 hr. lecture, 6 hr. lab)
Prerequisite: None

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Course Name: Dental Anatomy
Course Abbreviation: DHT 1212
Classification: Career-Technical Core
Description: A study of the morphological characteristics of the teeth and supporting structures. (2 sch: 2 hr. lecture)
Prerequisite: None

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Course Name: Head and Neck Anatomy
Course Abbreviation: DHT 1222
Classification: Career-Technical Core
Description: A detailed study of skeletal, muscular, vascular, and neural features of the face, head, and neck. (2 sch: 2 hr. lecture)
Prerequisite: None

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Course Name: Oral Histology and Embryology
Course Abbreviation: DHT 1232
Classification: Career-Technical Core
Description: This course studies the microscopic structure and development of types of cells, tissues, and organs of the human body. Also given is a survey of the elements of embryology emphasizing the area of the head and neck, as related to the development of the dental arches, salivary glands, buccal mucosa, pharynx, and tongue. (2 sch: 2 hr. lecture)
Prerequisite: Dental Anatomy (DHT 1212) and Head and Neck Anatomy (DHT 1222)

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Course Name: Dental Radiology
Course Abbreviation: DHT 1314
Classification: Career-Technical Core

Description: This course involves a broad scope of study of radiology and its use by the dentist as a diagnostic aid. Also covered are techniques for making radiographs with safety for hygienist and patient, the processing and mounting of exposed film and their interpretation, and study of anatomical landmarks evident in periapical films. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Clinical Dental Hygiene
Course Abbreviation: DHT 1415
Classification: Career-Technical Core
Description: The student will apply the principles and techniques learned from previous didactic and preclinical experiences. (5 sch: 1 hr. lecture, 12 hr. clinical)
Prerequisite: Fundamentals of Dental Hygiene (DHT 1115)

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Course Name: Periodontics
Course Abbreviation: DHT 1512
Classification: Career-Technical Core
Description: An in-depth study of the supporting structures of the teeth is covered in this course. Also included is a clinical and theoretical understanding of their conditions in good health as well as their reaction to bacterial invasion in disease of varying etiology. The theory of clinical application to the management of the advanced periodontal patient to maintain a healthy and functional dental prosthesis is also studied. (2 sch: 2 hr. lecture)
Prerequisite: Oral Histology and Embryology (DHT 1232) and Dental Anatomy (DHT 1212)

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Course Name: Dental Hygiene Seminar I
Course Abbreviation: DHT 1911
Classification: Career-Technical Core
Description: This course provides the student with the opportunity to discuss managing dental office emergencies and professional development. (1 sch: 1 hr. lecture)
Prerequisite: None

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Course Name: Dental Hygiene Seminar II
Course Abbreviation: DHT 1921
Classification: Career-Technical Core
Description: This course provides the student with the opportunity to discuss patient care and treatment plans and professional development. (1 sch: 1 hr. lecture)
Prerequisite: Dental Hygiene Seminar I (DHT 1911)

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Course Name: General/Oral Pathology
Course Abbreviation: DHT 2233
Classification: Career-Technical Core

Description: This course offers a study of the etiology and symptomatology of the pathological conditions affecting the head and neck with emphasis on the oral cavity. (3 sch: 3 hr. lecture)
Prerequisite: Dental Anatomy (DHT 1212), Head and Neck Anatomy (DHT 1222), Oral Histology and Embryology (DHT 1232)

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Course Name: Clinical Dental Hygiene II
Course Abbreviation: DHT 2425
Classification: Career-Technical Core
Description: This course is a continuation of the principles and techniques involved in the practice of dental hygiene. Emphasis will be on theoretical background needed to provide advanced clinical skills. Clinical experiences will focus on treatment of clients with moderate to advanced periodontal disease. (5 sch: 1 hr. lecture, 12 hr. clinical)
Prerequisite: Periodontics (DHT 1512) and Clinical Dental Hygiene I (DHT 1415)

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Course Name: Clinical Dental Hygiene III
Course Abbreviation: DHT 2436
Classification: Career-Technical Core
Description: This course offers a culmination of practice and the clinical procedures and theoretical knowledge needed to provide preventive, interceptive, and definitive dental hygiene treatment. (6 sch: 2 hr. lecture, 12 hr. clinical)
Prerequisite: Clinical Dental Hygiene II (DHT 2425)

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Course Name: Dental Hygiene Materials
Course Abbreviation: DHT 2613
Classification: Career-Technical Core
Description: This course offers the study of materials used in dentistry, their physical and chemical properties, and proper manipulation as used in the operatory and laboratory. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Dental Pharmacology
Course Abbreviation: DHT 2712
Classification: Career-Technical Core
Description: This course gives a basic introduction to drug actions, their mechanisms, and the reactions of the body to these drugs. Special emphasis is given to the drugs used in the modern dental office including emergency procedures. (2 sch: 2 hr. lecture)
Prerequisite: None

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Course Name: Community Dental Health
Course Abbreviation: DHT 2813
Classification: Career-Technical Core

Description: This course provides an introduction to preventive dentistry as administered on federal, state, and local levels through official and voluntary health agencies. Supervised field experience gives an opportunity to observe and participate in some phases of community and school dental health programs. (3 sch: 2 hr. lecture, 3 hr. clinical)
Corequisite: Clinical Dental Hygiene III (DHT 2436)

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Course Name: Dental Ethics/Law
Course Abbreviation: DHT 2922
Classification: Career-Technical Core
Description: Focus on the ethical and legal aspects of providing dental health care. (2 sch: 2 hr. lecture)
Prerequisite: None

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Course Name: Dental Hygiene Seminar III
Course Abbreviation: DHT 2931
Classification: Career-Technical Core
Description: This course provides the student with the opportunity to discuss dental disciplines and professional development. (1 sch: 1 hr. lecture)
Prerequisite: Dental Hygiene Seminar II (DHT 1921)

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Course Name: Dental Hygiene Seminar IV
Course Abbreviation: DHT 2941
Classification: Career-Technical Core
Description: This course provides the student the opportunity to discuss the written registry exam, the clinical simulation exam format, and professional development. (1 sch: 1 hr. lecture)
Prerequisite: Dental Hygiene Seminar III (DHT 2931)

DIAGNOSTIC MEDIAL SONOGRAPHY TECHNOLOGY

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Course Name: Introduction to Ultrasound
Course Abbreviation: DMS 1114
Classification: Career-Technical Core
Description: Students will be introduced to ultrasound equipment. Cleaning and disinfectant procedures will be shown. Types of film, paper printers, video recorders, scanning tables, ultrasound probes, and recording methods will be discussed. Legal/ethical issues and patient contact within the ultrasound department, as well as scanning protocols, are included. Students will learn the sonographer's role in patient care. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Professional level CPR certification, Anatomy and Physiology I (with lab) (BIO 1514), Anatomy and Physiology II (with lab) (BIO 1524), College Algebra (MAT 1313), Survey of Physics I (PHY 1213), and Medical Terminology in Allied Health (TAH 1113)

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Course Name: Sectional Anatomy
Course Abbreviation: DMS 1213
Classification: Career-Technical Core
Description: This course provides students with ultrasound appearance of abdominal and pelvic sectional anatomy. It includes a description of gross sectional anatomy and identification of sonographic appearance of normal anatomy. (3 sch: 3-hr lecture)
Prerequisite: All core courses as scheduled

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Course Name: Ultrasound Physics and Instrumentation I
Course Abbreviation: DMS 1313
Classification: Career-Technical Core
Description: In-depth presentation of basic principles of diagnostic medical ultrasound physics and instrumentation. Description of diagnostic ultrasound transducers and ultrasound interaction with human tissue will be presented. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: All core courses as scheduled

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Course Name: Ultrasound Physics and Instrumentation II
Course Abbreviation: DMS 1323
Classification: Career-Technical Core
Description: A continuation of Ultrasound Physics and Instrumentation I (DMS 1313). This class includes an in-depth presentation of image display modes, Doppler, color, and hemodynamics of diagnostic ultrasound. The causes of artifacts and how to scan safely, conduct instrument performance measurements, and prepare for registry examinations. (3 sch: 2-hr lecture, 2 hr. lab)
Prerequisite: All core courses as scheduled

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Course Name: Clinical Experience I
Course Abbreviation: DMS 1414
Classification: Career-Technical Core
Description: This class includes clinical instruction in the scanning lab and in clinical site institutions. Students will first receive hands-on experience in the scanning lab and then in clinical site rotations. (4 sch: 12-hr clinical)
Prerequisite: CPR certification; all core courses as scheduled

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Course Name: Clinical Experience II
Course Abbreviation: DMS 1426
Classification: Career-Technical Core
Description: This course includes clinical practice and instruction in a clinical rotation site. (6 sch: 18-hr clinical)
Prerequisite: All core courses as scheduled

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Course Name: Clinical Experience III
Course Abbreviation: DMS 1436
Classification: Career-Technical Core
Description: This course is a clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, operation of equipment, and sonographic procedures. All procedures will be performed under direct supervision. (6 sch: 18-hr clinical)
Prerequisite: All core courses as scheduled

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Course Name: Abdominal Sonography
Course Abbreviation: DMS 1513
Classification: Career-Technical Core
Description: Presentation of pathology/pathophysiology of abdominal anatomy including liver, kidneys, spleen, gallbladder, pancreas, and vascular structures associated with organs, as well as the abdominal cavities and the non-cardiac chest. Normal aging changes and laboratory values are presented. (3 sch: 3-hr lecture)
Prerequisite: All core courses as scheduled

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Course Name: Obstetrical and Gynecological Sonography
Course Abbreviation: DMS 1523
Classification: Career-Technical Core
Description: This class discusses pathology/pathophysiology associated with female anatomy and obstetrical sonographic examinations. Sonographic appearance of the female pelvis premenopausal through postmenopausal and evaluation of pregnancy from conception to delivery will be discussed. Evaluating infertility and related laboratory values, as well as other imaging procedures, will be included. (3 sch: 3-hr lecture)

Prerequisite: All core courses as scheduled

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Course Name: Advanced Sonographic Procedures
Course Abbreviation: DMS 1533
Classification: Career-Technical Core
Description: Neurosonology, ophthalmology, adult cardiac, pediatric cardiac, and vascular technology will be discussed. Superficial structures scanning including prostate, thyroid, scrotum and breast will be included. (3 sch: 3-hr lecture)
Prerequisite: All core courses as scheduled

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Course Name: Sonography Seminar
Course Abbreviation: DMS 1613
Classification: Career-Technical Core
Description: This course will prepare students for ARDMS/ARRT certification examinations. (3 sch: 3-hr lecture)
Prerequisite: All core courses as scheduled

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Course Name: Ultrasound Examination Critique
Course Abbreviation: DMS 1623
Classification: Career-Technical Core
Description: This course will present case studies of normal and abnormal sonographic exams. Students will attend presentations of guest lecturers. (3 sch: 3-hr lecture)
Prerequisite: All core courses as scheduled

DIESEL EQUIPMENT TECHNOLOGY

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Course Name: Fundamentals of Equipment Mechanics
Course Abbreviation: DET 1114
Classification: Career Technical Core
Description: Review and update of safety procedures; tools and equipment usage; handling, storing, and disposing of hazardous materials; and operating principles of diesel engines. (4 sch: 4 hr. lecture)
Prerequisite: None

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Course Name: Hydraulic Brake Systems
Course Abbreviation: DET 1213
Classification: Career Technical Core
Description: Diagnosis and repair of hydraulic brake systems, includes instruction in hydraulic and mechanical systems, power assist units, and antilock braking systems. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Electrical/Electronic Systems I
Course Abbreviation: DET 1223
Classification: Career Technical Core
Description: Diagnosis, service, and repair of electrical and electronic systems on diesel engines, includes instruction in general systems diagnosis, starting and charging systems. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Electrical/Electronic Systems II
Course Abbreviation: DET 1263
Classification: Career Technical Core (Associate Degree, Two Year Certificate)
Description: Diagnosis, service, and repair of electrical and electronic systems on diesel engines, includes instruction on lighting systems, gauges and warning devices, and related electrical systems. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Diesel Systems I
Course Abbreviation: DET 1364
Classification: Career Technical Core
Description: Diagnosis, service, and repair of basic engine operating principles, with an emphasis on cylinder head and valve train engine block. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Hydraulics
Course Abbreviation: DET 1513
Classification: Technical Core
Description: Basic operation and maintenance of hydraulic systems associated with diesel powered equipment, includes instruction in safety, system components, operation, and repair. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Preventive Maintenance and Service
Course Abbreviation: DET 1614
Classification: Career Technical Core
Description: Practice in the preventive maintenance of diesel powered equipment, includes instruction in general preventive maintenance of vehicles and equipment. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Power Trains
Course Abbreviation: DET 1713
Classification: Career Technical Core
Description: Diagnosis, service, maintenance, and repair of power train units on diesel equipment, includes instruction on clutch, manual transmissions, drive shafts, and drive axles. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Welding for Diesel Equipment Technology
Course Abbreviation: DET 2113
Classification: Career Technical Elective
Description: Basic welding and cutting techniques which includes fundamental procedures and safety, oxyacetylene welding and cutting, shielded metal-arc welding, and metal inert gas welding procedures. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Steering and Suspension Systems
Course Abbreviation: DET 2253
Classification: Career Technical Core (Two Year Certificate, Associate Degree); Career Technical Elective (One Year Certificate)
Description: Operation, maintenance, and repair of heavy duty steering and suspension systems, Includes instruction in steering column and steering gear, power steering unit, steering linkage, suspension, wheel alignment, and related components diagnosis and repair. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: None

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Course Name: Electrical/Electronic Systems III
Course Abbreviation: DET 2273
Classification: Technical Core (Associate Degree, Two Year Certificate)
Description: Diagnosis, service, and repair of electrical and electronic systems on diesel engines, includes instruction in electronic fuel management systems. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Diesel Systems II
Course Abbreviation: DET 2374
Classification: Technical Core
Description: Diagnosis, service, and repair of lubrication systems, cooling system, and air induction and exhaust systems. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Diesel Systems III
Course Abbreviation: DET 2383
Classification: Career Technical Elective (Two Year Certificate, Associate Degree)
Description: Diagnosis, service, and repair of general engine operations and fuel system operations. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Fluid Power Trains
Course Abbreviation: DET 2523
Classification: Career Technical Elective
Description: Maintenance and repair of fluid power trains used on heavy equipment to include operation and diagnosis and repair of system components. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: None

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Course Name: Advanced Brake Systems (Air)
Course Abbreviation: DET 2623
Classification: Career Technical Core (Two Year Certificate, Associate Degree)
Description: Instruction and practice in the maintenance and repair of air brake systems commonly used on commercial diesel powered equipment, includes instruction in maintenance and repair of the air supply system, mechanical system, antilock braking system, and traction control system. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Air Conditioning and Heating Systems
Course Abbreviation: DET 2813
Classification: Career Technical Core (Two Year Certificate, Associate Degree); Career Technical Elective (One Year Certificate)
Description: Operation, maintenance, and repair of air conditioning and heating systems used in commercial equipment, includes instruction in theories and operating principles, A/C system diagnosis and repair, clutch and compressor repair, evaporator and condenser repair, and heating system repair. (3 sch: 1 hr. lecture, 4 hr. lab)
Prerequisite: Completion of certification requirements to service and repair air conditioning systems

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Course Name: Special Problem/Projects in Diesel Equipment Technology
Course Abbreviation: DET 291(1-9)
Classification: Career Technical Elective
Description: A course to provide students with an opportunity to utilize skills and knowledge gained in other Diesel Equipment Repair and Service courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project.
(1-6 sch: 2-12 hr. lab)
Prerequisite: Sophomore standing in Diesel Equipment Technology

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Course Name: Supervised Work Experience in Diesel Equipment Technology
Course Abbreviation: DET 292(1-3)
Classification: Career Technical Elective
Description: A course which is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Diesel Equipment Technology

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. This course is designed to integrate the student's academic and technical skills into a work environment, and may include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1-3 sch: 3-9 hours externship)
Prerequisite: Concurrent enrollment in Career Technical program area courses

ELECTRONICS AND RELATED ENGINEERING TECHNOLOGY

Communications Electronics Repair Technology

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Course Name: Satellite Systems
Course Abbreviation: CET 1113
Classification: Career–Technical Elective (Communications Electronics Repair Technology)
Description: Service, repair, and install home satellite receiving systems. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Diagnostics and Troubleshooting Lab
Course Abbreviation: CET 2223
Classification: Career–Technical Core (Communications Electronics Repair Technology)
Description: Laboratory course in applying skills and knowledge gained in other communications electronics courses in repairing various electronic devices. Isolate, locate, and repair devices in a simulated industry setting. (3 sch: 6-hr lab)
Pre/corequisite: Television Systems (EET 2813)

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Course Name: Video Recording Systems Lab
Course Abbreviation: CET 2323
Classification: Career–Technical Core (Communications Electronics Repair Technology)
Description: Maintenance and repair of consumer-type video recording, videocassette recorders, and playback equipment (3 sch: 6-hr lab)
Prerequisite: Television Systems (EET 2813)

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Course Name: Video Systems Repair Lab
Course Abbreviation: CET 2823
Classification: Career–Technical Core (Communications Electronics Repair Technology)
Description: Troubleshooting, repairing, and maintenance of consumer video equipment and television receivers (3 sch: 6-hr lab)
Pre/Corequisite: Television Systems (EET 2813)

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Course Name: Special Project
Course Abbreviation: CET 291(1–3)
Classification: Career–Technical Elective (Communications Electronics Repair Technology)
Description: Practical application of skills and knowledge gained in other electronics or electronics-related technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–3 sch: 2- to 6-hr lab)

Prerequisite: Consent of Instructor

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Course Name: Supervised Work Experience
Course Abbreviation: CET 292(1–6)
Classification: Career–Technical Elective (Communications Electronics Repair Technology)
Description: This cooperative program between industry and education is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced course work in electronics-related programs

Electronics Technology

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Course Name: DC Circuits
Course Abbreviation: EET 1114
Classification: Career–Technical Core (Communications Electronics Repair Technology, Electronics Technology, Biomedical Equipment Repair Technology Option, Telecommunications Technology); Career–Technical Elective (Computer Servicing Technology)
Description: Principles and theories associated with DC circuits. This course includes the study of electrical circuits, laws and formulae, and the use of test equipment to analyze DC circuits. (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisites: None

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Course Name: AC Circuits
Course Abbreviation: EET 1123
Classification: Career–Technical Core (Communications Electronics Repair Technology, Electronics Technology, Biomedical Equipment Repair Technology Option, Telecommunications Technology); Career–Technical Elective (Computer Servicing Technology)
Description: Principles and theories associated with AC circuits. This course includes the study of electrical circuits, laws and formulae, and the use of test equipment to analyze AC circuits. (3 sch: 2-hr lecture, 2-hr lab)
Pre/Corequisite: DC Circuits (EET 1114) or Equivalent

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Course Name: Fundamentals of Electronics
Course Abbreviation: EET 1192
Classification: Career–Technical Elective (Electronics Technology, Biomedical Equipment Repair Technology Option)
Description: Fundamental skills associated with all electronics courses. Safety, breadboarding, use of calculator, test equipment familiarization, soldering, electronic symbols, and terminology (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Digital Electronics
Course Abbreviation: EET 1214
Classification: Career–Technical Core (Communications Electronics Repair Technology, Computer Servicing Technology, Electronics Technology, Biomedical Equipment Repair Technology Option, Telecommunications Technology)
Description: Number systems, logic circuits, counters, registers, memory devices, combination logic circuits, Boolean algebra, and a basic computer system (4 sch: 3-hr lecture, 2-hr lab)
Corequisites: Consent of Instructor

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Course Name: Orientation to Biomedical Equipment Repair
Course Abbreviation: EET 1311
Classification: Career–Technical Core (Biomedical Equipment Repair Technology)
Description: Orientation to the biomedical equipment repair field. Topics covered are the different career paths open to students, types of biomedical equipment, and the organization and operation of the hospital environment. (1 sch: 1-hr lecture)
Prerequisites: None

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Course Name: Microprocessors
Course Abbreviation: EET 1324
Classification: Career–Technical Core (Computer Servicing Technology, Electronics Technology, Biomedical Equipment Repair Technology Option); Career–Technical Elective (Telecommunications Technology)
Description: Microprocessor architecture, machine and assembly language, timing, interfacing, and other hardware applications associated with microprocessor systems (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Digital Electronics (EET 1214)

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Course Name: Solid State Devices and Circuits
Course Abbreviation: EET 1334
Classification: Career–Technical Core (Communications Electronics Repair Technology, Electronics Technology, Biomedical Equipment Repair Technology Option, Telecommunications Technology)
Description: Active devices that include PN junction diodes, bipolar transistors, bipolar transistor circuits, and unipolar devices with emphasis on low-frequency application and troubleshooting (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: DC Circuits (EET 1114)

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Course Name: Mathematics for Electronics
Course Abbreviation: EET 1413
Classification: Career–Technical Elective
Description: Coverage of those areas of arithmetic, algebra, geometry, and trigonometry that have applications in electronics (3 sch: 2-hr lecture, 2-hr lab)
Pre/Corequisites: None

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Course Name: Computer Fundamentals for Electronics/Electricity
Course Abbreviation: EET 1613
Classification: Career–Technical Elective (Electronics Technology, Biomedical Equipment Repair Technology Option, Telecommunications Technology); Career–Technical Core (Computer Servicing Technology Associate's Degree)

Description: Basic computer science as used in electricity/electronics areas. Computer nomenclature, logic, numbering systems, coding, and operating system commands are covered. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Drafting for Electronic/Electrical Technology
Course Abbreviation: EET 1713
Classification: Career–Technical Elective (Computer Servicing Technology Associate's Degree, Electronics Technology, Telecommunications Technology)
Description: Preparation and interpretation of schematics (3 sch: 1-hr lecture, 4-hr lab)
Prerequisites: None

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Course Name: Supervised Work Experience in Biomedical Equipment Repair Technology I
Course Abbreviation: EET 211(3–6)
Classification: Career–Technical Core (Biomedical Equipment Repair Technology)
Description: This cooperative program between the health-care facility and education is designed to integrate the student's technical studies with health-care experience. **(NOTE: Biomedical equipment used in this course is for instructional purposes ONLY and not to be used in patients' care.)** Variable credit is awarded on the basis of 1 semester hour per 45 health-care contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisite: Consent of Instructor

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Course Name: Supervised Work Experience in Biomedical Equipment Repair Technology II
Course Abbreviation: EET 222(3–6)
Classification: Career–Technical Core (Biomedical Equipment Repair Technology)
Description: Continuation of EET 211(3–6) with advanced study in the repair and maintenance of biomedical equipment. (3–6 sch: 6- to 18-hr externship)
Prerequisites: Consent of Instructor and EET 211(3–6)

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Course Name: Linear Integrated Circuits
Course Abbreviation: EET 2334
Classification: Career–Technical Core (Electronics Technology, Biomedical Equipment Repair Technology Option); Career–Technical Elective (Telecommunications Technology)
Description: Advanced semiconductor devices and linear integrated circuits. Emphasis is placed on linear integrated circuits used with operational amplifiers, active filters, voltage regulators, timers, and phase-locked loops. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Solid State Devices and Circuits (EET 1334)

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Course Name: Electronic Communications
Course Abbreviation: EET 2414

Classification: Career–Technical Core (Communications Electronics Repair Technology, Electronics Technology); Career–Technical Elective (Biomedical Equipment Repair Technology Option, Telecommunications Technology)
Description: This course is designed to provide the student with concepts and skills related to analog and digital communications. Topics covered include amplitude and frequency modulation, transmission, and reception; data transmission formats and codes; and modulation-demodulation of digital communications. (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: Solid State Devices and Circuits (EET 1334)

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Course Name: Fundamentals of Fiber Optics
Course Abbreviation: EET 2423
Classification: Career–Technical Core (Biomedical Equipment Repair Technology Option, Telecommunications Technology); Career–Technical Elective (Electronics Technology)
Description: Fiber-optic cable in modern industry applications (3 sch: 2-hr lecture, 2-hr lab)
Pre/Corequisite: Electronic Communications (EET 2414)

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Course Name: Interfacing Techniques
Course Abbreviation: EET 2514
Classification: Career–Technical Elective (Electronics Technology, Biomedical Equipment Repair Technology Option, Computer Servicing Technology)
Description: Data acquisition devices and systems including their interface to microprocessors and other control systems (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Digital Electronics (1214)

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Course Name: Digital Television Systems
Course Abbreviation: EET 2823
Classification: Career–Technical Core (Communications Electronics Repair Technology); Career–Technical Elective (Computer Servicing Technology, Electronics Technology)
Description: Circuits and systems used in the production, transmission, and reception of video information to include color systems and computer-video interfacing (3 sch: 2-hr lecture, 2-hr lab)
Pre/Corequisite: Solid State Devices and Circuits (EET 1334)

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Course Name: Special Project
Course Abbreviation: EET 291(1–3)
Classification: Career–Technical Elective (Electronics Technology, Biomedical Equipment Repair Technology Option)
Description: Practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–3 sch: 2- to 6-hr lab)
Prerequisite: Consent of Instructor

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Course Name: Supervised Work Experience in Electronics Technology
Course Abbreviation: EET 292(1–6)
Classification: Career–Technical Elective (Electronics Technology)
Description: This cooperative program between industry and education is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisites: Consent of instructor and completion of at least one semester of advanced course work in electronics-related programs

Telecommunications Technology

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Course Name: Fundamentals of Telecommunications
Course Abbreviation: TCT 1114
Classification: Career–Technical Core (Telecommunications Technology); Career–Technical Elective (Computer Servicing Technology)
Description: History of voice/data communication, fundamental concepts of analog and digital communications, and basic telephone service (4 sch: 3-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Telephone Systems
Course Abbreviation: TCT 2214
Classification: Career–Technical Core (Telecommunications Technology)
Description: Information and hands-on experience in installation, operation, troubleshooting, and repair of commercial use telephone systems including analog and digital key systems (4 sch: 3-hr lecture, 2-hr lab)
Pre/Corequisite: Fundamentals of Telecommunications (TCT 1114)

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Course Name: PBX Systems
Course Abbreviation: TCT 2224
Classification: Career–Technical Elective (Telecommunications Technology)
Description: This course is a continuation of the PBX section of Telephone Systems (TCT 2214). Further emphasis will be placed on the installation, programming, and troubleshooting of PBX systems. Maintenance, cleaning, and paperwork will be covered. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Telephone Systems (TCT 2214)

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Course Name: Digital Communications I
Course Abbreviation: TCT 2314
Classification: Career–Technical Core (Telecommunications Technology); Career–Technical Elective (Computer Servicing Technology)
Description: Theories and applications of digital communications and analog pulse modulation (4 sch: 2-hr lecture, 4-hr lab)
Prerequisites: Fundamentals of Telecommunications (TCT 1114) and Digital Electronics (EET 1214)

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Course Name: Digital Communications II
Course Abbreviation: TCT 2324

Classification: Career–Technical Core (Telecommunications Technology); Career–Technical Elective (Computer Servicing Technology)
Description: Theories and applications of digital modulation methods and digital pulse modulation methods (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Digital Communications I (TCT 2314)

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Course Name: Microwave and Satellite Systems
Course Abbreviation: TCT 2414
Classification: Career–Technical Core (Telecommunications Technology)
Description: Theories and applications of microwave and satellite communications (4 sch: 3-hr lecture, 2-hr lab)
Pre/Corequisites: Fundamentals of Telecommunications (TCT 1114) and Solid State Devices and Circuits (EET 1314)

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Course Name: Physics for Electronics
Course Abbreviation: EET 2433
Classification: Career–Technical Elective
Description: Coverage of those areas of physics that have applications in electronics (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Network Systems
Course Abbreviations: TCT 2424
Classification: Career–Technical Elective (Telecommunications Technology)
Description: Networking fundamentals, voice networking, LANs, and the Internet. Also covered is upgrading of computers to support LAN technology. (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisites: Telephone Systems (TCT 2214) and Fundamentals of Fiber Optics (EET 2423)

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Course Name: Special Project
Course Abbreviation: TCT 291(1–4)
Classification: Career–Technical Elective (Telecommunications Technology)
Description: Practical application of skills and knowledge gained in other telecommunications or telecommunications-related technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–4 sch: 2- to 8-hr lab)
Prerequisite: Consent of Instructor

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Course Name: Supervised Work Experience
Course Abbreviation: TCT 292(1–6)
Classification: Career–Technical Elective (Telecommunications Technology)

Description: This cooperative program between industry and education is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisites: Consent of instructor and completion of at least one semester of advanced course work in electrical/electronics-related programs

FORESTRY TECHNOLOGY

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Course Name: Forest Measurements I
Course Abbreviation: FOT 1114
Classification: Career-Technical Core
Description: A course covering fundamentals of forest measurements. Includes instruction in locating land on a map, applying sampling techniques, and processing and summarizing field data. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: None

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Course Name: Forest Measurements II
Course Abbreviation: FOT 1124
Classification: Career-Technical Elective
Description: A continuation of Forest Measurement I with emphasis on electronic and computer applications in forest measurement. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: Forest Measurements I (FOT 1114)

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Course Name: Forest Protection
Course Abbreviation: FOT 1314
Classification: Career-Technical Elective
Description: A course in methods and techniques for protecting forests from fire, insect, and disease damage. Includes instruction in prescribed burning procedures. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: None

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Course Name: Forest Products Utilization
Course Abbreviation: FOT 1414
Classification: Career-Technical Elective
Description: A survey of wood and forest products processing operations. Includes instruction in principles related to forest products processing and their applications.
(4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: None

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Course Name: Applied Dendrology
Course Abbreviation: FOT 1714
Classification: Career-Technical Core
Description: A study of trees and woody vines including their classification and commercial uses. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: None

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Course Name: Fundamentals of Forestry
Course Abbreviation: FOT 1813
Classification: Career-Technical Core
Description: A study of the development of the forest industry in Mississippi and the United States. An exploration of occupational careers in forestry including forest products industries. Includes common terms used in forest occupations. (Previously taught as Survey of Forestry and Introduction to Forestry) (3 sch: 3 hr. lecture)
Prerequisites: None

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Course Name: Forest Surveying and Spatial Applications
Course Abbreviation: FOT 2124
Classification: Career-Technical Core
Description: A course to provide land surveying skills required in the forest industry. Includes instruction in interpreting legal descriptions, deeds, maps, and spatial imagery. Includes demonstration of surveying practices and spatial imagery practices and equipment.
(4 sch: 2 hr. lecture, 4 hr. lab) (Formerly Forest Surveying)
Prerequisites: None

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Course Name: Advanced GPS/GIS in Forestry
Course Abbreviation: FOT 2214
Classification: Career-Technical Elective
Description: A course that includes use of remote sensing imagery and geographic information systems software in forest operations. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: None

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Course Name: Timber Harvesting
Course Abbreviation: FOT 2424
Classification: Career-Technical Core
Description: A course dealing with harvesting practices including development of timber harvesting, regulations, harvesting plans, best management practices, and timber contracts (legal terminology). Includes observations of logging operations. (4 sch: 1 hr. lecture, 6 hr. lab)
Prerequisites: None

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Course Name: Silviculture I
Course Abbreviation: FOT 2614
Classification: Career-Technical Core
Description: A course dealing with the growth and development of trees and stands. Includes instruction in principles of tree and stand growth and development, regeneration, and intermediate cuttings. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisites: None

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Course Name: Silviculture II
Course Abbreviation: FOT 2624
Classification: Career-Technical Elective
Description: A continuation of Silviculture I with emphasis on site preparation and regeneration practices. (4 sch: 2 hr. lecture; 4 hr. lab)
Prerequisites: Silviculture I

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Course Name: Special Problem in Forestry Technology
Course Abbreviation: FOT 291(1-6)
Classification: Career-Technical Elective
Description: A course designed to provide the student with practical application of skills and knowledge gained in other Forest Technology courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-6 sch: 2-6 hr. lab)
Prerequisites: Minimum of 12 sch Forestry Technology related courses or consent of instructor

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Course Name: Supervised Work Experience in Forestry Technology
Course Abbreviation: FOT 292(1-6)
Classification: Career-Technical Elective
Description: A course which is a cooperative program involving students, employers, and educational staff and is designed to integrate the student's technical studies with real world situations. Variable credit is awarded on the basis of one semester hour per 45 contact hours. (1-6 sch: 3-18 hr. externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Forestry Technology.

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Course Name: Special Problem in Conservation Law
Course Abbreviation: FOT 294 (1-6)
Classification: Career-Technical Elective
Description: A course designed to provide the student with practical application of skills and knowledge gained in other Conservation Law courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-6 sch: 2-6 hr. lab)
Prerequisites: Minimum of 12 sch Forestry Technology/ Conservation Law related courses or consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective

Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews.
(1-3 sch: 3-9 hours externship)
Prerequisite: Concurrent enrollment in Career-technical program area courses

INSTRUMENTATION TECHNOLOGY

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Course Name: Fundamentals of Industrial Measurement I
Course Abbreviation: IET 1114
Classification: Career–Technical Core (Instrumentation Technology)
Description: A study of the concepts, principles and devices for the measurement of industrial pressure and level variables. The student will learn to apply the principles of process instruments and devices as applied to control and detection of pressure and level. The student will perform industrial pressure and level measurements. (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: none

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Course Name: Fundamentals of Industrial Measurement II
Course Abbreviation: IET 1214
Classification: Career–Technical Core (Instrumentation Technology)
Description: A study of the concepts, principles and devices for the measurement of industrial temperature and flow variables. The student will apply the principles of process instruments and devices as applied to control and detection of temperature and flow. The student will perform industrial temperature and flow measurements. (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: Fundamentals of Industrial Measurement I (IET 1114) or by instructor consent

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Course Name: Industrial Controls I
Course Abbreviation: IET 1314
Classification: Career–Technical Core (Instrumentation Technology)
Description: A review of measurement theory and includes the principles of operation, connection, maintenance, testing, calibration, troubleshooting and repairing/replacing of pneumatic and electronic analog process controllers, signal transmitters, recorders, alarms and associated test equipment along with annunciator/shutdown systems and introduce the concepts of proportional, integral, and derivative control modes, loop tuning, and documentation.
(4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: None

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Course Name: Industrial Controls II
Course Abbreviation: IET 2414
Classification: Career–Technical Core (Instrumentation Technology)
Description: A study of process controllers, implementing PID (Proportional, Integral, Derivative) feedback, cascade, ratio, feed forward and auto select/override and introduce other advanced control strategies; study techniques for loop tuning and calibrating process loop components including smart transmitters and field communicators. Loop documentation and drawings will also be used. (4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: Industrial Controls I (IET 1314) or by instructor consent

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Course Name: Final Control Elements
Course Abbreviation: IET 2114
Classification: Career–Technical Core (Instrumentation Technology)
Description: A study of the various designs of control valves including principles of operation, sizing, selection, servicing pneumatic and electric actuators, positioners, solenoid operated valves, self contained regulators, louvers, dampers, metering pumps and required documentation. Includes instruction in basic techniques and calculations for proper liquid and gas valve sizing and introduces concepts of variable speed drives and frequency speed circuitry.
(4 sch: 2-hr lecture, 4-hr lab)
Pre/Corequisite: Industrial Controls I (IET 1314) or by instructor consent.

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Course Name: Special Project
Course Abbreviation: IET 291(1–4)
Classification: Career–Technical Elective
Description: Practical application of skills and knowledge gained in instrumentation and other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–4 sch: 2- to 8-hr lab)
Prerequisite: Consent of Instructor

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Course Name: Supervised Work Experience
Course Abbreviation: IET 292(1–6)
Classification: Career–Technical Elective
Description: This cooperative program between industry and education is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisites: Consent of instructor and completion of at least one semester of advanced course work in electrical/electronics-related programs

MEDIA TECHNOLOGY

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Course Name: Broadcast Writing
Course Abbreviation: MDT 1214
Classification: Career-Technical Core
Description: Principles of broadcast writing to include scripts for television and radio news, commercials, and programs. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: Written Communications Elective

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Course Name: Principles of Mass Communication
Course Abbreviation: MDT 1244
Classification: Career-Technical Core
Description: Introduction to the field of radio/television broadcasting and the history of mass media. Emphasis is placed on the role of communication systems in our society. Job characteristics and opportunities are also emphasized. (4 sch: 4 hr. lecture)
Prerequisite: None

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Course Name: Fundamentals of Television Production
Course Abbreviation: MDT 1314
Classification: Career-Technical Core
Description: Introduction to the operation of a television studio. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Principles of Audio Production
Course Abbreviation: MDT 1413
Classification: Career-Technical Core
Description: Operations of audio taping as well as actual production. A discussion of the different types of equipment used in audio production will also be emphasized. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Advanced Audio Production
Course Abbreviation: MDT 1423
Classification: Career-Technical Core
Description: Continuation of Principles of Audio Production with further study in the development of and the use of equipment in audio production with emphasis placed on actual projects. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Principles of Audio Production (MDT 1413)

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Course Name: Broadcast Announcing
Course Abbreviation: MDT 2114
Classification: Career-Technical Core
Description: Introduction to the basic principles of broadcast announcing. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisite: Broadcast Writing (MDT 1214) and Oral Communications/Public Speaking Elective

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Course Name: Station Administration
Course Abbreviation: MDT 2213
Classification: Career-Technical Elective
Description: Study of radio, television, and cable stations which include: organization, operations, regulations, and the duties/responsibilities of station personnel. (3 sch:3 hr. lecture)
Prerequisite: Principles of Mass Communication (MDT 1244)

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Course Name: Intermediate Television Production
Course Abbreviation: MDT 2314
Classification: Career-Technical Core
Description: Operations of a television control room. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Fundamentals of Television Production (MDT 1314)

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Course Name: Advanced Television Production
Course Abbreviation: MDT 2324
Classification: Career-Technical Core
Description: Operations of original television productions. Directions, productions, layouts, and organization will be stressed. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Intermediate Television Production (MDT 2314)

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Course Name: Basic Editing
Course Abbreviation: MDT 2414
Classification: Career-Technical Core
Description: Student's basic projects are emphasized and include basic principles, procedures, and techniques of audio and video editing. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Fundamentals of Television Production (MDT 1314) and Principles of Audio Production (MDT 1413)

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Course Name: Advanced Editing
Course Abbreviation: MDT 2424

Classification: Career-Technical Core
Description: Student's continuation of Basic Editing with emphasis placed on the development and use of the broadcasting industry editing standards. Student's projects are emphasized and include advanced principles, procedures, and techniques of audio and video editing. (4 sch: 2 hr. lecture, 4 hr. lab)
Prerequisite: Basic Editing (MDT 2414)

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Course Name: Basic Photography
Course Abbreviation: MDT 2513
Classification: Career-Technical Elective
Description: Use of photography as a communication medium. Principles of picture taking and darkroom techniques are emphasized. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: None

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Course Name: Special Project in Media Technology
Course Abbreviation: MDT 291(1-3)
Classification: Career-Technical Elective
Description: A course designed to provide the student with practical application of skills and knowledge gained in the courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6 hr. lab)
Prerequisite: Consent of Instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1-3 sch: 3-9 hours externship)
Prerequisite: Consent of WBL Instructor and concurrent enrollment in Career-technical program area courses

MEDICAL LABORATORY TECHNOLOGY

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Course Name: Fundamentals of Medical Laboratory Technology/Phlebotomy
Course Abbreviation: MLT 1111
Classification: Career–Technical Core
Description: The course includes an overview of the field of Medical Laboratory Technology, as well as familiarization with laboratory safety, microscopes, glassware, and equipment. It also includes laboratory organization, medical ethics, and employment opportunities. Basic laboratory specimen collection techniques are introduced. (1 sch: 2-hr lab)
Prerequisite: None

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Course Name: Urinalysis/Body Fluids
Course Abbreviation: MLT 1212
Classification: Career–Technical Core
Description: This course is an introduction to urinalysis and laboratory analysis of miscellaneous body fluids. It includes the basic principles of routine and special urine tests and specimen examination through laboratory work. Theory and test profiles are also presented for miscellaneous body fluids with correlation to diseased states. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Hematology I
Course Abbreviation: MLT 1313
Classification: Career–Technical Core
Description: This course is a study of the function of blood, morphology, and maturation of normal cells, blood cell counts, differentials of white cells, and blood collection and handling. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Hematology II
Course Abbreviation: MLT 1324
Classification: Career–Technical Core
Description: This course includes the study of abnormal cell morphology and diseases involving blood cells, test procedures used in laboratory diagnosis of hematological disease, normal and abnormal hemostasis, and diagnostic procedures for evaluation of bleeding abnormalities and anticoagulant therapy. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Hematology I (MLT 1313)

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Course Name: Immunology/Serology
Course Abbreviation: MLT 1413
Classification: Career–Technical Core

Description: This course covers the science of immunology and serology through the study of theories and processes related to natural body defenses. Included are basic antigen-antibody reactions, complement action, cellular response, humoral immune response, and the basic serological procedures used to aid in the detection of certain diseases. Throughout this course, special emphasis is placed on correlating laboratory results with the patient's probable condition. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Clinical Chemistry
Course Abbreviation: MLT 1515
Classification: Career–Technical Core
Description: This course is the study of human biochemistry as an aid in the diagnosis of disease processes. It includes chemistry procedures performed on body fluids for aiding in diagnosis of disease processes. (5 sch: 3-hr lecture, 4-hr lab)
Prerequisite: Approved Chemistry Elective

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Course Name: Principles of Organic and Biochemistry
Course Abbreviation: MLT 1523
Classification: Career–Technical Elective
Description: A study of the basic mathematical formulas and organic chemistry (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: General Chemistry I (CHE 1213) or Principles of Chemistry I (CHE 1314)

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Course Name: Immunohematology
Course Abbreviation: MLT 2424
Classification: Career–Technical Core
Description: This course includes collection, processing, storage, and utilization of blood components. It also includes the study of immunological principles and procedures for blood typing, cross matching, antibody detection, identification, and investigation of hemolytic disease of the newborn. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Immunology/Serology (MLT 1413)

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Course Name: Parasitology
Course Abbreviation: MLT 2512
Classification: Career–Technical Core
Description: This course covers the morphology, physiology, life cycles, and epidemiology of parasites with emphasis on human pathogenic parasites. Identification of the parasites from human material is also included. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Pathogenic Microbiology
Course Abbreviation: MLT 2614
Classification: Career–Technical Core
Description: Basic skills, principles, and techniques for the staining, culturing, isolation, and identification of microorganisms of medical importance are emphasized in this course. Included are techniques used in determining the sensitivity of pathogenic bacteria to different antibiotic and other drugs. (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Medical Laboratory Technology Seminar
Course Abbreviation: MLT 2711
Classification: Career–Technical Elective
Description: This course represents a synthesis of previous didactic, laboratory, and clinical experiences. It is designed to facilitate activities incorporated in student and professional organizations and to allow students to select and present a case study. (1 sch: 2-hr lab)
Prerequisites: Completion of all didactic Medical Laboratory Technology courses

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Course Name: Certification Fundamentals for Medical Laboratory Technology
Course Abbreviation: MLT 2723
Classification: Career–Technical Elective
Description: This course is an in-depth study and review of material covered in the MLT curriculum. It is designed to prepare the student for the national registry/certifying exams. (3 sch: 3-hr lecture)
Prerequisite: Completion of all didactic Medical Laboratory Technology courses

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Course Name: Clinical Instrumentation
Course Abbreviation: MLT 2812
Classification: Career–Technical Elective
Description: A review of various types of instruments found in the clinical laboratory is emphasized in this course. Included are operation, calibration, quality control, and troubleshooting. (2 sch: 2-hr lecture)
Prerequisites: None

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Course Name: Clinical Practice I, II, III
Course Abbreviation: MLT 2916, MLT 2926, MLT 2936
Classification: Career–Technical Core
Description: This course includes clinical practice and didactic instruction in a clinical affiliate. Areas covered are hematology, clinical chemistry, immunohematology, urinalysis, microbiology, coagulation, and serology. (6 sch: 18-hr clinical for each Clinical Practice)
Prerequisites: All Career–Technical Core courses

OCCUPATIONAL THERAPY ASSISTANT

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Course Name: Foundations of Occupational Therapy
Course Abbreviation: OTA 1113
Classification: Career-Technical Core
Description: This intake course is an introduction to the field of occupational therapy including history, role orientation, professional organizational structure, legal and ethical implications, legislation, practice arenas, and the process of service delivery. (3 sch: 3 hr. lecture)
Prerequisite: Admission to Occupational Therapy Assistant Program

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Course Name: Medical Terminology
Course Abbreviation: OTA 1121
Classification: Career-Technical Core
Description: This intake course is a study of medical language relating to body systems including diseases, physical conditions, abbreviations, and symbols as applied to occupational therapy. Professional language for occupational therapy will be included. (1 sch: 1 hr. lecture)
Prerequisite: Admission to Occupational Therapy Assistant Program

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Course Name: Therapeutic Anatomy
Course Abbreviation: OTA 1132
Classification: Career-Technical Core
Description: This intake course will focus upon the structures of the human body and their respective functions. Emphasis will be placed upon the muscular, skeletal, and nervous systems (2 sch: 2 hr. lecture)
Prerequisite: Approved Anatomy and Physiology course

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Course Name: Pathology of Psychiatric Conditions
Course Abbreviation: OTA 1213
Classification: Career-Technical Core
Description: This intake course provides a basic knowledge of psychiatric disorders encountered in occupation therapy practice. Emphasis is on etiology, prognosis, and management of various psychiatric conditions. The role and function of the OTA in the treatment process is also emphasized. (3 sch: 3 hr. lecture)
Prerequisite: None

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Course Name: Pathology of Physical Disability Conditions
Course Abbreviation: OTA 1223
Classification: Career-Technical Core
Description: This intake course provides a basic knowledge of selected diseases and conditions encountered in occupational therapy practice. Emphasis is on etiology, prognosis, and

management of various pathological physical conditions. The role and function of the OTA in the treatment process is also emphasized. (3 sch: 3 hr. lecture)
Prerequisite: None

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Course Name: Pathology of Developmental Conditions
Course Abbreviation: OTA 1233
Classification: Career-Technical Core
Description: This intake course provides a basic knowledge of selected diseases and conditions encountered in occupational therapy practice. Emphasis is on etiology, prognosis, and management of various pathological developmental conditions. The student will compare and contrast normal and abnormal developmental patterns. The role and function of the occupational therapy assistant (OTA) in the treatment process is also emphasized. (3 sch: 3 hr. lecture)
Prerequisite: None

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Course Name: Pathology of Orthopedic Conditions
Course Abbreviation: OTA 1242
Classification: Career-Technical Core
Description: This intake course provides a basic knowledge of selected orthopedic conditions encountered in occupational therapy practice. Emphasis is placed upon mechanisms of pathology and basic treatment approaches. The role and function of the occupational therapy assistant (OTA) in the treatment process is also emphasized. (2 sch: 2 hr. lecture)
Prerequisites: Therapeutic Anatomy (OTA 1132) and Kinesiology (OTA 1315)

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Course Name: Kinesiology
Course Abbreviation: OTA 1315
Classification: Career-Technical Core
Description: This intake course studies individual muscles and muscle functions, biomechanical principles of joint motion, gait patterns, normal movement patterns, and goniometry. (5 sch: 4 hr. lecture, 2 hr. lab)
Prerequisite: Therapeutic Anatomy (OTA 1132)

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Course Name: Therapeutic Media
Course Abbreviation: OTA 1413
Classification: Career-Technical Core
Description: This manipulation course provides knowledge and use of tools, equipment, and basic techniques of therapeutic media. Emphasis is given to analysis and instruction of activities frequently used as occupational therapy media in multiple community and clinical settings. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Foundations of Occupational Therapy (OTA 1113)

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Course Name: Occupational Therapy Skills I
Course Abbreviation: OTA 1423
Classification: Career-Technical Core
Description: This manipulative course provides fundamental knowledge of practice skills used with patients/clients across the life span and with various diagnoses. Observation and documentation techniques will be introduced. (3 sch: 2 hr. lecture, 2 hr. lab)
Corequisites: Foundations of Occupational Therapy (OTA 1113) and Medical Terminology (OTA 1121)

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Course Name: Occupational Therapy Skills II
Course Abbreviation: OTA 1433
Classification: Career-Technical Core
Description: This manipulative course provides intermediate practice skills used with patients/clients across the lifespan and with various diagnoses. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Occupational Therapy Skills I (OTA 1423)

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Course Name: Group Process
Course Abbreviation: OTA 1513
Classification: Career-Technical Core
Description: This manipulative course introduces theory and research findings explaining group dynamics. The course teaches the student how to facilitate group effectiveness and the skills to apply that knowledge in practical situations. Methods and skills necessary to plan, write, lead, and evaluate an occupational therapy group will be taught. The course focuses on the importance of group activity intervention primarily with the psychiatric population. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisites: None

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Course Name: Fieldwork IA
Cour**se Abbreviation:** OTA 1913
Classification: Career-Technical Core
Description: This course is designed to provide the student with an opportunity to observe and participate in clinical fieldwork. The student will also begin to develop professional work habits. Students are expected to function as participant observers in the assigned clinical setting. (3 sch: 1 hr. lecture, 6 hr. clinical)
Prerequisite: Occupational Therapy Skills I (OTA 1423)

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Course Name: Occupational Therapy Skills III
Course Abbreviation: OTA 2443
Classification: Career-Technical Core

Description: This manipulative course provides intermediate practice skills used with patients/clients across the lifespan and with various diagnoses. (3 sch: 2 hr. lecture, 2 hr. lab)
Prerequisite: Occupational Therapy Skills I (OTA 1423)

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Course Name: Concepts in Occupational Therapy
Course Abbreviation: OTA 2714
Classification: Career-Technical Core
Description: This manipulative course studies occupational therapy treatment techniques for a variety of diagnoses while incorporating theoretical concepts. (4 sch: 3 hr. lecture, 2 hr. lab)
Prerequisites: Pathology of Physical Disability Conditions (OTA 1223), Occupational Therapy Skills I (OTA 1423), and Pathology of Orthopedic Conditions (OTA 1242)

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Course Name: Healthcare Systems
Course Abbreviation: OTA 2812
Classification: Career-Technical Core
Description: This intake course is designed to examine the context of service delivery for occupational therapy. Various models of health care, education, community, and social systems will be examined. (2 sch: 2 hr. lecture)
Prerequisite: None

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Course Name: Fieldwork IB
Course Abbreviation: OTA 2935
Classification: Career-Technical Core
Description: This application course is designed to provide the student with an opportunity to apply his or her knowledge in clinical fieldwork. The student will also begin to develop professional work habits. Students are expected to function as participant observers in the clinical setting. (5 sch: 1 hr. lecture, 12 hr. clinical)
Prerequisite: Occupational Therapy Skills I (OTA 1423)

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Course Name: Fieldwork IIA
Course Abbreviation: OTA 2946
Classification: Career-Technical Core
Description: This application course synthesizes previous didactic instruction and clinical experiences obtained in Fieldwork I. In Level IIA, the student may encounter a variety of populations in a traditional or non-traditional based setting. The student will assume increasing responsibilities under supervision as appropriate for the setting. (6 sch: 18 hr. clinical)
Prerequisite: All OTA classroom and level I fieldwork courses

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Course Name: Fieldwork IIB
Course Abbreviation: OTA 2956
Classification: Career-Technical Core

Description: This application course synthesizes previous didactic instruction and experiences obtained in Fieldwork IIA. In Fieldwork IIB, the student may also encounter a variety of populations in a traditional or non-traditional setting. The student will be placed in a setting different from Fieldwork IIA. Student will assume increasing responsibilities under supervision as appropriate for the setting. (6 sch: 18 hr. clinical)
Prerequisite: All OTA classroom and Level I fieldwork courses

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Course Name: Occupational Therapy Transitions I
Course Abbreviation: OTA 2961
Classification: Career-Technical Core
Description: This course provides information and guidance to the student for his or her transitional process of becoming an Occupational Therapy Practitioner. This course will encompass a variety of professional skills and concepts. In addition, vital life skills will be discussed. (1 sch: 1 hour lecture)
Prerequisite: None

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Course Name: Occupational Therapy Transitions II
Course Abbreviation: OTA 2971
Classification: Career-Technical Core
Description: This course provides final preparation to the student for the transitional process of becoming an Occupational Therapy Practitioner. (1 sch: 1 hour lecture)
Prerequisite: Occupational Therapy Transitions I (OTA 2961)

SMALL ENGINE AND EQUIPMENT REPAIR TECHNOLOGY

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Course Name: Small Engine Mechanics I
Course Abbreviation: SET 1114
Classification: Career-Technical Core (Certificate and associates)
Description: Introduces students to the basic principles of engine mechanics. Includes instruction on lubrication, fuel, and ignition systems (4 sch: 0-hr lecture, 8-hr lab)
Prerequisites: None

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Course Name: Small Engine Mechanics II
Course Abbreviation: SET 1124
Classification: Career-Technical Core (Certificate and Associates)
Description: A continuation of Small Engine Mechanics I with emphasis on cooling systems, engine governance, multi-cylinder engines, and diesel fuel systems (4 sch: 0-hr lecture, 8-hr lab)
Prerequisites: None

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Course Name: Measurements
Course Abbreviation: SET 1212
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge related to measurement tools, measurement tool usage, and fasteners of small engine and equipment components (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Four-Cycle Engines
Course Abbreviation: SET 1313
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge related to four-cycle small engine and equipment repair and maintenance. Includes instruction in assembly, lubrication, and fuel systems (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Two-Cycle Engines
Course Abbreviation: SET 1322
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge related to two-cycle small engine and equipment repair and maintenance. Includes instruction in assembly, lubrication, and fuel systems (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Small Engine Shop Management
Course Abbreviation: SET 1413
Classification: Career-Technical Core (Certificate and Associates)
Description: Provides students with skills and knowledge related to management and operation of a small engine repair shop. Includes instruction in shop safety and OSHA regulations, shop tools and equipment, shop design, overall shop maintenance, and inventory control (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Frame Inspection and Maintenance
Course Abbreviation: SET 1512
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge related to small equipment frame (chassis) repair and maintenance. Includes instruction in oxyfuel cutting and arc welding as well as painting and other frame (chassis) maintenance (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Small Engine Mechanics III
Course Abbreviation: SET 2134
Classification: Career-Technical Core (Associates)
Description: A continuation of Small Engine Mechanics II with emphasis on steering and suspension systems (4 sch: 0-hr lecture, 8-hr lab)
Prerequisites: None

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Course Name: Small Engine Mechanics IV
Course Abbreviation: SET 2144
Classification: Career-Technical Core (Associates)
Description: A continuation of Small Engine Mechanics III with emphasis on troubleshooting and performing maintenance on a variety of systems (4 sch: 0-hr lecture, 8-hr lab)
Prerequisites: None

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Course Name: Small Engine and Equipment Analysis and Repairs I
Course Abbreviation: SET 2155
Classification: Career-Technical Elective
Description: A course to provide skills and knowledge related to the operation, troubleshooting, and repair of systems related to equipment. Includes instruction on a variety of equipment and troubleshooting techniques related to equipment (5 sch: 0-hr lecture, 10-hr lab)
Prerequisites: Consent of instructor

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Course Name: Small Engine and Equipment Analysis and Repairs II
Course Abbreviation: SET 2165
Classification: Career-Technical Elective
Description: A course to provide advanced skills and knowledge related to the operation, troubleshooting, and repair of systems related to equipment. Includes instruction on a variety of equipment and advanced troubleshooting techniques related to equipment. (5 sch: 0-hr lecture, 10-hr lab)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

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Course Name: Engine Troubleshooting
Course Abbreviation: SET 2353
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge associated with the basics of equipment diagnostics and trouble shooting. Instruction is provided on tools and equipment used in diagnosis, fasteners, fluids, and measurement devices. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Maintenance and Repair of Cutting Mechanisms
Course Abbreviation: SET 2523
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge related to the maintenance and repair of cutting mechanisms used in landscape and turf operations including mowers, trimmers, edgers, and saws. Includes instruction in drive systems, blade sharpening and height adjustment, reel grinding and adjustment, and chain saw chain sharpening and adjustment (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Hydraulics
Course Abbreviation: SET 2533
Classification: Career-Technical Core (Associates)
Description: A course to develop skills and knowledge related hydraulics as it relates to small equipment chassis repair and maintenance. Includes instruction on hydraulics will be components, diagnosis, and repair of the hydraulic system (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Transmissions and Transaxles
Course Abbreviation: SET 2543
Classification: Career-Technical Core (Certificate and Associates)

Description: A course to develop skills and knowledge related to small equipment transmissions and transaxles. Includes instruction for transmission and transaxle service, diagnosis, and repair (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Small Engine Electrical Systems
Course Abbreviation: SET 2613
Classification: Career-Technical Core (Certificate and Associates)
Description: A course to develop skills and knowledge related to the operating principles of direct current circuits. Includes instruction on basic electrical principles, safety procedures, batteries, conductors, and switches (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Special Problem in Small Engine and Equipment Repair Technology
Course Abbreviation: SET 281(1-3)
Classification: Career-Technical Elective
Description: A course designed to provide the student with practical application of skills and knowledge gained in other Small Engine and Equipment Repair Technology courses through the use of a special problem. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6-hr lab)
Prerequisites: Consent of instructor

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Course Name: Supervised Work Experience in Small Engine and Equipment Repair Technology
Course Abbreviation: SET 291(1-6)
Classification: Free Elective
Description: A course that is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18-hr externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

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Course Name: Small Engine and Equipment Project I
Course Abbreviation: SET 2313
Classification: Free Elective
Description: A course designed for establishment of skills and knowledge for introductory projects related to small engine and equipment (3 sch: 6-hr lab)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

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Course Name: Small Engine and Equipment Project II
Course Abbreviation: SET 2323
Classification: Free Elective
Description: A course designed for establishment of skills and knowledge for basic projects related to small engine and equipment (3 sch: 6-hr lab)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

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Course Name: Small Engine and Equipment Project III
Course Abbreviation: SET 2333
Classification: Free Elective
Description: A course designed for establishment of skills and knowledge for intermediate projects related to small engine and equipment (3 sch: 6-hr lab)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

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Course Name: Small Engine and Equipment Project IV
Course Abbreviation: SET 2343
Classification: Free Elective
Description: A course designed for establishment of skills and knowledge for advanced projects related to small engine and equipment. (3 sch: 6-hr lab)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Free Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and work-site supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews (1-3 sch: 3-9-hr externship)
Prerequisite: Concurrent enrollment in Career–technical program area courses

UTILITY LINE WORKER TECHNOLOGY

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Course Name: Interpersonal Skills for Line Workers
Course Abbreviation: ULT 1112
Classification: Career- AAS Elective
Description: This course is designed to cover the basic communication skills for interaction with others. (2 sch: 2-hr lecture)
Prerequisite: None

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Course Name: Line Worker Safety
Course Abbreviation: ULT 1122
Classification: Career Core
Description: This course is designed to provide fundamental safety rules and procedures needed in performing basic line worker skills. (2 sch: 2-hr lecture)
Prerequisite: None

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Course Name: Safety for Line Workers
Course Abbreviation: ULT 1133
Classification: AAS Core
Description: This course is design to provide fundamental safety rules and procedures needed in performing basic line worker skills. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: AC and DC Circuits for Utility Line Worker Technology
Course Abbreviation: ULT 1144
Classification: AAS Core
Description: Principles and theories associated with AC and DC circuits used in the electrical trades. Includes the study of electrical circuits, laws and formulas, and the use of test equipment to analyze AC and DC circuits (4 sch: 3-hr lecture, 2-hr lab)

Pre/Co Requisite		
Fundamentals of Electricity for Line Workers (ULT 1192) **or** Fundamentals of Electricity (ELT 1192)	**OR**	By consent of instructor

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Course Name: AC and DC Circuits for Line Workers
Course Abbreviation: ULT 1152
Classification: Career Elective

Description: Principles and theories associated with AC and DC circuits used in the line worker trade. Includes the study of electrical circuits, laws and formulas, and the use of test equipment to analyze AC and DC circuits (2 sch: 1-hr lecture, 2-hr lab)

Pre/Co Requisite		
Fundamentals of Electricity for Line Workers (ULT 1192) **or** Fundamentals of Electricity (ELT 1192) **or** equivalent course	**OR**	By consent of instructor

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Course Name: Fundamentals of Electricity for Line Workers
Course Abbreviation: ULT 1192
Classification: Career - AAS Elective
Description: Fundamental skills associated with all electrical courses. Safety, basic tools, special tools, equipment, and introduction to AC and DC circuits (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Electric Power
Course Abbreviation: ULT 1213
Classification: Career - AAS Elective
Description: Electrical motors and their installation. Instruction and practice in using the different types of motors, protection devices, switches, transformers, and alternators found in utility transmission (3 sch: 2-hr lecture, 2-hr lab)

Pre/Co Requisite		
Fundamentals of Electricity for Line Workers (ULT 1192) **or** Fundamentals of Electricity (ELT 1192)	**OR**	By consent of instructor

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Course Name: Transformer Operation and Banking
Course Abbreviation: ULT 1223
Classification: Career - AAS Elective
Description: This course is designed to cover basic single phase operations and Delta and "Wye" Transformer Banks including hookups for 120/208—240/480/--120/240—277/480. (3 sch: 2-hr lecture, 2-hr lab)

Pre/Co Requisite				
Fundamentals of Electricity for Line Workers (ULT 1192) **or** Fundamentals of Electricity (ELT 1192)	**AND**	AC and DC for Utility Line Worker Technology (ULT 1144) **or** AC and DC Circuits (ELT 1144) **AND** Electric Power (ULT 1213)	**OR**	By consent of instructor

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Course Name: Electrical Power and Transformer Banking for Line Workers
Course Abbreviation: ULT 1232
Classification: Career Elective
Description: This course is designed to cover basic single phase operations and Delta and "Wye" Transformer Banks including hookups for 120/208—240/480/--120/240—277/480. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite:

Pre/Co Requisite		
Fundamentals of Electricity for Line Workers (ULT 1192) **or** Fundamentals of Electricity (ELT 1192)	**OR**	By consent of instructor

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Course Name: Line Worker Truck Driving
Course Abbreviation: ULT 1313
Classification: Career Core
Description: This course is designed to provide a line worker with fundamental skills needed to obtain a Class A CDL (Commercial Drivers License) with air brake endorsement. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: Consent of Instructor

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Course Name: Truck Driving for Line Workers
Course Abbreviation: ULT 1324
Classification: AAS Core
Description: This course is designed to provide a line worker with fundamental skills needed to obtain a Class A CDL (Commercial Drivers License) with air brake endorsement. (4 sch:1-hr lecture, 6-hr lab)
Prerequisite: Consent of Instructor

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Course Name: Basic Utility Equipment Operation
Course Abbreviation: ULT 1333
Classification: Career Elective, AAS Core
Description: This course is designed to prepare students in the basic operation of line worker equipment. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Pole Climbing
Course Abbreviation: ULT 1413
Classification: Career - AAS Core

Description: This course is designed to provide a line worker with fundamental skills needed to perform basic pole climbing. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: Consent of the instructor

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Course Name: Overhead, Underground, and Substation Construction
Course Abbreviation: ULT 1514
Classification: Career Core
Description: This course is designed to provide further fundamental training in the field of electric line work dealing with the overhead/underground line construction and substation construction. (4 sch: 2-hr lecture, 4-hr lab)

Pre/Co Requisite		
Pole Climbing (ULT 1413)	**OR**	By consent of instructor

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Course Name: National Electric Safety Code (Safety Code)
Course Abbreviation: ULT 1523
Classification: Career Elective, AAS Core
Description: The course is designed to introduce the students to the basic fundamentals and safety requirements as set forth in the National Electric Safety Code for the power line industry. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Computer Fundamentals for Line Workers
Course Abbreviation: ULT 1612
Classification: Career Elective
Description: This course is designed to introduce students to basic computer skills. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Lineworker Computer Fundamentals
Course Abbreviation: ULT 1623
Classification: AAS Elective
Description: This course is designed to introduce students to basic computer skills. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Overhead Construction
Course Abbreviation: ULT 2133
Classification: AAS Core
Description: This course is designed to provide further fundamental training in the field of electric line work dealing with the overhead line construction. (3 sch: 1-hr lecture, 4-hr lab)

Pre/Co Requisite		
Pole Climbing (ULT 1413)	**OR**	By consent of instructor

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Course Name: Underground Construction
Course Abbreviation: ULT 2143
Classification: AAS Core
Description: This course is designed to provide further fundamental training in the field of electric line work dealing with the overhead to the underground line construction. (3 sch: 1-hr lecture, 4-hr lab)

Pre/Co Requisite		
Pole Climbing (ULT 1413)	**OR**	By consent of instructor

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Course Name: System Design and Operation
Course Abbreviation: ULT 2233
Classification: Career Elective, AAS Core
Description: This course includes operation basics for protection of the electrical system overhead, underground, and substation. (3 sch: 1-hr lecture, 4-hr lab)

Pre/Co Requisite		
Pole Climbing (ULT 1413) **AND** Overhead Construction (ULT 2133) **AND** Underground Construction (ULT 2143)	**OR**	By consent of instructor

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Course Name: Working in Elevated Work Sites
Course Abbreviation: ULT 2244
Classification: Career Elective, AAS Core
Description: This course is designed to provide a line worker with fundamental skills needed to perform basic pole climbing. (4 sch: 1-hr lecture, 6-hr lab)

Pre/Co Requisite		
Pole Climbing (ULT 1413) **AND** Overhead Construction (ULT 2133) **AND** Underground Construction (ULT 2143)	**OR**	By consent of instructor

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Course Name: Advanced Utility Equipment Operation
Course Abbreviation: ULT 2333
Classification: Career – AAS Elective
Description: This course provides an in-depth understanding of the operation of line worker equipment. (3 sch: 2-hr lecture, 2-hr lab)

Pre/Co Requisite		
Basic Utility Equipment Operation (ULT 1333)	**OR**	By consent of instructor

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Course Name: Special Project I, II, III
Course Abbreviation: ULT 291(1–3), ULT 292(1-3), ULT 293(1–3)
Classification: Career–Technical Elective
Description: Practical application of skills and knowledge gained in other electrical or electrical-related technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6-hr lab)
Prerequisites: Completion of one semester of course work in Utility Lineworker Technology
OR Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)
Classification: Career-Technical Elective
Description: A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and work-site supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. Includes regular meetings and seminars with school personnel for supplemental instruction and progress reviews (1-3 sch: 3-9 hr externship)
Prerequisite: Concurrent enrollment in Career-technical program area courses

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Course Name: Seminar and Planning
Course Abbreviation: CTE 200(1-6)
Classification: Career–Technical Elective
Description: This course is designed to prepare students for program exit certifications and exams, enhance student study skills, and prepare students for entry into the workforce. Development of study principles and skills needed for entry into the workforce. The purpose of this course is to upgrade study skills and habits. Specific skills include, but are not limited to, understanding essential terminology related to the program, time management, listening, note-taking strategies, preparing for exams, and preparing for entry into the workforce. The instructor works closely with the student to ensure that the course enhances the student's learning experiences. (1-6 sch: 45 contact hours per sch)
Prerequisite: Completion of one semester of coursework in related program

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Course Name: Supervised Work Experience I, II
Course Abbreviation: ULT 292(1–3), ULT 294(1–3)
Classification: Career–Technical Elective

Description: A cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial contact hours. (1-6 sch: 3-9-hr externship)
Prerequisites: Consent of instructor and completion of at least one semester of advanced coursework in Utility Lineworker Technology

Appendix A: Related Academic Standards[1]

Reading
R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause–effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

Mathematics Computation
M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
M9 Algebraic Operations

Applied Mathematics
A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)

Language
L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

Spelling
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

[1] CTB/McGraw-Hill LLC. (2005). *Tests of adult basic education, forms 7 and 8.* Monterey, CA: Author.

Appendix B: 21st Century Skills[2]

CSS1-21st Century Themes

CS1 Global Awareness

1. Using 21st century skills to understand and address global issues
2. Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
3. Understanding other nations and cultures, including the use of non-English languages

CS2 Financial, Economic, Business, and Entrepreneurial Literacy

1. Knowing how to make appropriate personal economic choices
2. Understanding the role of the economy in society
3. Using entrepreneurial skills to enhance workplace productivity and career options

CS3 Civic Literacy

1. Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
2. Exercising the rights and obligations of citizenship at local, state, national, and global levels
3. Understanding the local and global implications of civic decisions

CS4 Health Literacy

1. Obtaining, interpreting, and understanding basic health information and services and using such information and services in ways that enhance health
2. Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance, and stress reduction
3. Using available information to make appropriate health-related decisions
4. Establishing and monitoring personal and family health goals
5. Understanding national and international public health and safety issues

CS5 Environmental Literacy

1. Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water, and ecosystems.
2. Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.).
3. Investigate and analyze environmental issues, and make accurate conclusions about effective solutions.
4. Take individual and collective action towards addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues).

CSS2-Learning and Innovation Skills

CS6 Creativity and Innovation

1. Think Creatively
2. Work Creatively with Others

[2] *21st century skills.* (n.d.). Washington, DC: Partnership for 21st Century Skills.

3. Implement Innovations

CS7 Critical Thinking and Problem Solving

1. Reason Effectively
2. Use Systems Thinking
3. Make Judgments and Decisions
4. Solve Problems

CS8 Communication and Collaboration

1. Communicate Clearly
2. Collaborate with Others

CSS3-Information, Media and Technology Skills

CS9 Information Literacy

1. Access and Evaluate Information
2. Use and Manage Information

CS10 Media Literacy

1. Analyze Media
2. Create Media Products

CS11 ICT Literacy

1. Apply Technology Effectively

CSS4-Life and Career Skills

CS12 Flexibility and Adaptability

1. Adapt to Change
2. Be Flexible

CS13 Initiative and Self-Direction

1. Manage Goals and Time
2. Work Independently
3. Be Self-directed Learners

CS14 Social and Cross-Cultural Skills

1. Interact Effectively with Others
2. Work Effectively in Diverse Teams

CS15 Productivity and Accountability

1. Manage Projects
2. Produce Results

CS16 Leadership and Responsibility

1. Guide and Lead Others
2. Be Responsible to Others

2011 Curriculum Revisions by Program

Industry advisory team members from colleges throughout the state were asked to give input related to changes to be made to each curriculum framework. Specific comments related to soft skills, occupational-specific skills, and safety were solicited and utilized. Additionally, instructors and Advisory Committee members from colleges throughout the state were also asked to give input on changes to be made to the curriculum framework.

Agricultural Technician Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 7 and 8* Academic Standards
- *21st Century Skills*
- *John Deere Ag Tech Standards*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the January 18, 2011, curriculum revision meeting included the following:

- Moved AMT 2113- Grain Harvesting to electives and in its place programs will choose from AMT 2113 - Grain Harvesting Equipment, AMT 2413 - Hay Harvesting Equipment, or AMT - 2313 Cotton Harvesting Equipment.
- Adjusted the course hours for AMT 2113 - Grain Harvesting Equipment, AMT 2413 - Hay Harvesting Equipment, or AMT - 2313 Cotton Harvesting Equipment from a 1-hr course to 1-3 hr for each course.
- Moved AMT 2513 - Spray Systems to the electives
- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Clarification to content that relates to the Ag Tech Standards
- The Recommended Tools and Equipment list was updated to reflect the tool list for successful competition of Ag Tech theory and content.

Automation and Control Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education*
- *21st Century Skills*
- *International Technology Education Association Standards for Technological Literacy*

Automotive Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 7 and 8* Academic Standards
- *21st Century Skills*
- *NATEF- 2008 Automobile Program Standards*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the November 8, 2010, curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Specific additions or deletions to content were related to updating from the 2005 NATEF standards to the 2008 NATEF standards.
- The Recommended Tools and Equipment list was updated to reflect the tool list for NATEF program certification.

Brick Block and Stone Masonry Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Contren Learning Series Best Practices*

Due to its importance in this curriculum, students are strongly encouraged to attend math tutoring sessions as requested by the instructor.

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process. Changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the November 2010 curriculum revision meeting included the following:

- Steps, Arches, and Brick Floors was split into two courses: Steps, Patios, and Brick Floors (BBV 1823); and Arch Construction (BBV 1723).
- Several competencies and objectives were added to Steps, Patios, and Brick Floors (BBV 1823):
    - Explain and describe the various types of pavers used in floor, patio, and step construction.
    - Explain and apply procedures to lay out and construct a floor section using paving brick with concrete base and mortar beds.

- Explain and apply procedures to lay out and construct a floor section using paving brick with limestone base and sand beds.
- Explain and apply procedures to lay out and construct flagstone walkways.
- Explain and apply procedures to lay out and construct tile floors and/or walls.

Civil Engineering Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*
- *American Design Drafting Association, American Society for Testing and Materials, Manual of Surveying Instructions from the Bureau of Land Management, Construction Specifications Institute,* and *Mississippi Department of Environmental Quality*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the January 18, 2011, curriculum revision meeting included:

- The title of the program was changed from "Civil Technology" to "Civil Engineering Technology."
- Webb's Depth of Knowledge (DOK) levels were added to competencies and objectives to aid in assessment alignment.
- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- References and Advisory Teams were revised.
- The Recommended Tools and Equipment list was reviewed.

Collision Repair Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 7 and 8* Academic Standards
- *21st Century Skills*
- *NATEF- 2009 Collision Repair Program Standards*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the of the curriculum revision meeting included:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.

- Specific additions or deletions to content were related to updating from the 2009 NATEF Standards to the 2009 NATEF Standards
- The Recommended Tools and Equipment list was updated to reflect the tool list for NATEF program certification.

Commercial Residential Maintenance Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Contren Learning Series Best Practices*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the November 2010 curriculum revision meeting included the following:

- A 2-year certificate (61 sch) for Commercial Residential Maintenance was developed.
- A 2-year associate's degree program (63 sch) for Commercial Residential Maintenance was developed.
- Fundamentals of Maintenance Services (CRM 1113) was changed from 2 to 3 scheduled credit hours.
- Maintenance Regulations (CRM 1122) was changed from 1 to 2 scheduled credit hours.
- Mathematics and Blueprint Interpretation (CRM 1134) was changed from 3 to 4 scheduled credit hours.
- Heating, Ventilating, and Air Conditioning (CRM 1616) was changed from 5 to 6 scheduled credit hours.
    - Two competencies pertaining to the EPA Clean Air Act, Section 608, and basic wiring of HVAC units were added to CRM 1616.
- The equipment list was amended to include a combination wrench set (1/4 in. to 2 in., QTY: 2), a sheet metal brake (QTY: 1), and a socket and ratchet set (1/4 in. to 1 ½ in., QTY: 2).

Commercial Truck Driving Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Mississippi Professional Driver's Manual for Class A, B, & C Commercial Driver's License*,

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the February 1, 2010 curriculum revision meeting included:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Commercial Truck Driving Internship course was added.
- References were updated.
- The Recommended Tools and Equipment list was updated.

Cosmetology Science Cluster Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- *CTB/McGraw-Hill LLC Tests of Adult Basic Education, Forms 9 and 10 Academic Standards*
- *21st Century Skills*
- *Milady's standard cosmetology*
- *Mississippi Board of Cosmetology Licensing of Instructors Regulations*

Dental Assisting Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- Dental Assisting National Board Certified Dental Assistant Examination Topics
- *21st Century Skills*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the 2011 curriculum revision meeting included:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- The Recommended Tools and Equipment list was updated.
- Suggested references for each course were updated.

Dental Hygiene Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*
- *2010 Accreditation Standards for Dental Hygiene Education Programs*

Diagnostic Medical Sonography Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC Tests of Adult Basic Education, forms 9 and 10 Academic Standards
- *21st Century Skills*
- *CAAHEP Standards and Guidelines for the Accreditation of Educational Programs in Diagnostic Medical Sonography*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the date curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- The Recommended Tools and Equipment list was updated.
- Anatomy and Physiology I and II were established as pre-requisites to the program and are no longer co-requisites.
- College Algebra is now required instead of Intermediate Algebra.

Diesel Equipment Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*
- *2007 Medium/Heavy Truck Certifications (Brakes, Diesel, Steering and Suspension, Electrical)*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the November 3, 2010, curriculum revision meeting included:

- The curriculum was aligned with the 2007 Medium/Heavy Truck Certifications (Brakes, Diesel, Steering and Suspension, Electrical).
- Competencies and objectives were reviewed to ensure accuracy and appropriateness. Some were rewritten to provide broader competencies and more specific, measurable objectives. Where appropriate, competencies were combined to ensure clarity and minimize repetition.
- The integration of workplace and academic skills including reading, math, language, and science was also documented.
- The Recommended Tools and Equipment list was updated.

Electronics and Related Engineering Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Contren Learning Series Best Practices*

Due to its importance in this curriculum, students are strongly encouraged to attend math tutoring sessions as requested by the instructor.

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the April 2008 curriculum revision meeting include the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Competencies and objectives related to the revised standards for an accredited educational program were added or changed.
- Electives were added.
- The reference list was updated.
- The Recommended Tools and Equipment list was updated.

Forestry Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Standards and Procedures for Recognizing Educational Programs in Forest Technology*, as published by the Society of American Foresters. http://www.safnet.org/education/techaccstd082409.doc

Instrumentation Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- 21st Century Skills Standards
- Industrial Instrumentation & Controls Technology Alliance standards.

Due to its importance in this curriculum, students are strongly encouraged to attend math tutoring sessions as requested by the instructor.

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific documentation creation was in the following areas:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Competencies and objectives related to the revised standards for an accredited educational program were added or changed.
- Electives were added.
- The reference list was updated.
- The Recommended Tools and Equipment list was updated.

Media Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards *OR* Mississippi Department of Education Subject Area Testing Program Academic Standards
- 21st Century Skills
- National Association of State Directors of Career Technical Education Consortium; Career Cluster Resources for Arts, A/V Technology and Communications

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the November 2010 revision meeting included:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Competencies and objectives related to the revised standards were added or changed.
- The references list was updated.
- The Recommended Tools and Equipment list was updated.
- Industry standards were updated and assigned to each competency.
- Webb's Depth of Knowledge Levels 1-4 were assigned to each competency and objective.
- Changes were made to the scheduled, lecture, and/or laboratory hours in the following courses: MDT 1214, MDT 1244, MDT 1413, MDT 1423, MDT 2114, MDT 2213, and MDT 2324.

Medical Laboratory Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*

- *Standards of Accredited Educational Programs for the Clinical Laboratory Technician/Medical Laboratory Technician*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the date curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- The Recommended Tools and Equipment list was updated.

Millwright Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 9 and 10* Academic Standards *21st Century Skills*
- *National Institute for Metalworking Skills*
- *Contren Learning Series Best Practices*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework.

Occupational Therapy Assistant Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, Forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Standards for an Accredited Educational Program for the Occupational Therapy Assistant*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum for the 2011 curriculum revision meeting included:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- The Recommended Tools and Equipment list was updated.

Small Engine and Equipment Repair Technology Curriculum Changes

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 9 and 10* Academic Standards
- *21st Century Skills*
- *Equipment and Engine Training Council Standards*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- The Recommended Tools and Equipment list was updated.
- Content of all courses was realigned with title of each course.
- Course Prefix was changed to reflect the true nature of the program.
- Several courses were added: Small Engine and Equipment Project I, II, III, and IV.