

Automotive Technology

The automotive technology program is designed to prepare students for a career in the automotive repair field. It combines theory classes with practical shop work to properly train students for entry-level into the automotive industry.

Automotive Service Excellence (ASE) certification through National Technicians Education Foundation (NATEF) evaluation ensures that certified training programs meet or exceed industry-recognized, uniform standards of excellence. Graduates of the program will have achieved competencies based on ASE tasks. Student achievement will be based upon demonstrated performance ability and testing in all required areas, which promotes individualized instruction.

Automotive Technology Degrees and Certificates

- Automotive Technology
- Automotive Technology - Light Diesel Certificate

Automotive Technology Classes

AUTO 100: Shop Procedures

Includes use and maintenance of special tools and equipment, service and repair record keeping, use of technical reference materials, and regulations governing the automotive repair industry. Special emphasis placed on development of a positive attitude toward personal safety, a safe workplace and treatment of hazardous materials.

Credits 1

Weekly Contact Hours 1

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program

AUTO 110: Electrical Systems

Modular, self-paced course presenting fundamental principles and terminology. Ohm's Law, wiring diagrams, diagnostic and test instruments. Diagnosis and repair of batteries, starting systems, charging systems, lighting systems, operator information systems, and on-board body, computer control systems. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 112: Engine Repair

Modular, self-paced course covering internal combustion engine mechanical systems, components and operation. Diagnosis of component systems malfunctions. Practical application in cylinder head reconditioning and repair. Leadership and human relations are an integral part of instruction.

Credits 4

Weekly Contact Hours 6

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 113: Engine Performance

Modular, self-paced instructor-guided course encompassing spark-system management, fuel-system management, emissions control, computerized engine control systems sensors and actuators, and use of diagnostic equipment. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 114: Auto Transmission/Transaxle

Modular self-paced course of study of theory, application, diagnosis and repair of fluid power, hydraulics, power transmission and final drive units as applied to automatic transmissions and trans-axles. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 115: Manual Drivetrains

Modular, self-paced course of study in theory, diagnosis, adjustment and repair of manual drive train components including clutch, transmission, driveline and axles. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 116: Suspension Steering and Alignment Laboratory

Study and application of automotive suspension and steering systems. Studies include two-wheel and four-wheel alignment, diagnosis, adjustment, and repair of systems and system components. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 117: Brake Systems

Modular course covering theory and the use of scan tools in the diagnosis, adjustment and repair of automotive brake systems including brake hydraulic systems, drum-brake and disc-brake systems, brake power boosters, parking brake systems and anti-skid brake systems. Leadership and human relations are an integral part of instruction.

Credits 7.5

Weekly Contact Hours 10

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 118: Auto Heating and Air Conditioning

Modular self-paced course on automotive heating and air conditioning systems, including diagnosis, service and repair of system components, theory of operation, and system controls. Leadership and human relations are an integral part of instruction.

Credits 7.5

Weekly Contact Hours 10

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 191: Auto Project Laboratory I

For first-year automotive students who require extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks. Graded on a pass/fail basis.

Credits 2

Weekly Contact Hours 4

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program

AUTO 192: Auto Project Laboratory II

For first-year automotive students who require extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks. Graded on a pass/fail basis.

Credits 2

Weekly Contact Hours 4

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and Auto 100 and Auto 113

AUTO 193: Auto Project Laboratory III

For first-year automotive students who require extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks. Graded on a pass/fail basis.

Credits 2

Weekly Contact Hours 4

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and Auto 114 and Auto 116

AUTO 196: Cooperative Work Experience

Designed to provide students with on-the-job practical field experience. One credit for each five hours of work experience per week.

Credits 1-5

Weekly Contact Hours 25

Meets Degree Requirements For

Restricted Elective

AUTO 210: Advanced Electrical Systems

Modular, self-paced course presenting fundamental principles and terminology. Ohm's Law, wiring diagrams, diagnostic and test instruments. Diagnosis and repair of batteries, starting systems, charging systems, lighting systems, operator information systems, and on-board body, computer control systems. Leadership and human relations are an integral part of instruction.

Credits 7.5

Weekly Contact Hours 10

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 100](#) Completed or Concurrently Enrolled

AUTO 212: Advanced Engine Repair

Modular, self-paced course covering internal combustion engine mechanical systems, components and operation. Diagnosis of component systems malfunctions. Practical application in cylinder head reconditioning and repair. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech program and [AUTO 100](#) and [AUTO 112](#), or Instructor Permission

AUTO 213: Advanced Engine Performance

Modular, self-paced instructor-guided course encompassing spark-system management, fuel-system management, emissions control, computerized engine control systems sensors and actuators, and use of diagnostic equipment. Leadership and human relations are an integral part of instruction.

Credits 7.5

Weekly Contact Hours 10

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech program [AUTO 100](#) and [AUTO 113](#) or Instructor Permission

AUTO 217: A.B.S. Brakers/Scanners

Course covering theory and the use of scan tools in the diagnosis, adjustment and repair of automotive brake systems including brake hydraulic systems, drum and disc-brake systems, brake power boosters, parking brake systems and anti-skid brake systems. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech program, [AUTO 100](#) and [AUTO 117](#), or Instructor Permission

AUTO 219: Engine Drivability

Course covering theory and the use of scan tools in the diagnosis, adjustment of automotive engine control systems including Can and Lan systems. Use of Factory and Aftermarket Diagnostic Equipment, Use of Oscilloscopes to interpret electrical waveforms, primary and secondary ignition systems. Use of low and high-pressure fuel injection tools. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 7.5

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech program [AUTO 100](#) and [AUTO 113](#), or Instructor Permission

AUTO 220: Advanced Technical Practices

Designed as a review of previously completed classes as selected by the student and the advisor/instructor for the purpose of review and/or area specialization. Course outline consists of a composite of the learning competency packets that the student has completed during previous participation in automotive classes.

Credits 15

Weekly Contact Hours 20

Meets Degree Requirements For

Restricted Elective

AUTO 250: Diesel Engine Construction

Modular, self-paced course covering internal combustion and mechanical systems of diesel engine components and operation. Diagnosis of component systems malfunctions and practical application in diagnosing cylinder block and head performance and repair. Leadership and human relations are an integral part of instruction.

Credits 5

Weekly Contact Hours 6

Meets Degree Requirements For

Restricted Elective

AUTO 260: Diesel Fuel & Ignition

Intermediate course focusing on the function, properties and characteristics of diesel fuel. Learn about high- and low-pressure fuel systems, hydraulically actuated electronic unit injector systems and high pressure common rail fuel injection systems. Students will also learn about air intake systems including turbo/blower applications.

Credits 5

Weekly Contact Hours 6

Meets Degree Requirements For

Restricted Elective

AUTO 270: Diesel Diagnosis & Repair

Advanced course focusing on exhaust gas re-circulation and exhaust after treatment systems and components. Identify and learn the purpose of onboard diagnostics, and learn to use scan tools and lab scopes in the diagnostic procedures of OBD fault detection and emissions monitors.

Credits 5

Weekly Contact Hours 6

Meets Degree Requirements For

Restricted Elective

AUTO 291: Auto Project Laboratory IV

For second-year automotive students who require extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks. Graded on a pass/fail basis.

Credits 2

Weekly Contact Hours 4

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and completion of the First Year Certificate

AUTO 292: Auto Project Laboratory V

For automotive students who require extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks. Graded on a pass/fail basis.

Credits 2

Weekly Contact Hours 4

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and completion of the First Year Certificate

AUTO 293: Auto Project Laboratory VI

For automotive students who require extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks. Graded on a pass/fail basis.

Credits 2

Weekly Contact Hours 4

Meets Degree Requirements For

Restricted Elective

Prerequisites

Acceptance into the Automotive Tech Program and [AUTO 217](#)

AUTO 296: Cooperative Work Experience

Designed to provide students with on-the-job practical field experience. One credit for each five hours of work experience per week.

Credits 1-5

Weekly Contact Hours 25

Meets Degree Requirements For

Restricted Elective