Automotive Technology

Automotive Technology (AUTO) Classes

AUTO110G : Automotive Maintenance and Light Repair

The Maintenance and Light Repair course prepares students for entry into the automotive repair industry. Students explore career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills. Students study safety, tools, equipment, shop operations, vehicle service fundamentals, and basic technician skills. Instruction will incorporate hands-on lab work, discussion, demonstration, lecture, and assigned readings. Upon completion of the Maintenance and Light Repair course students will be eligible to take the MLR ASE Student Certification Exam.
Credits 4
Theory Hours 2

Lab Hours 4
Semester Offered
Fall semester

AUTO120G : Automotive Engines (Mechanical)

This course provides a comprehensive study of the theory, construction, design, and repair of the internal combustion engine. Topics discussed include engine classification, power and torque development, engine power-efficiency tests, engine performance parameters, and mechanical design and failure analysis. The mathematical solution of performance characteristics is demonstrated. Alternative engines and fuels are also discussed. The lab reinforces the lecture by providing engine mechanical diagnostic procedures, repair and overhaul procedures. System problem diagnosis and component failure analysis are continually stressed.
Credits 4
Theory Hours 2

Lab Hours 6
Prerequisites
AUTO110G Automotive Maintenance and Light Repair with a C or better.
Semester Offered
Spring semester

AUTO125G : Automotive Electronics I

This course will introduce the student to general vehicle electrical and electronic principles, theory, and components. Topics include Ohm's Law, circuit analysis, basic circuits, diodes, transistors, relays, and solenoids. The lab will use electrical test equipment to analyze and troubleshoot basic electrical circuits including warning systems, electrical accessories, battery, starting, and charging systems.
Credits 4
Theory Hours 3

Lab Hours 3
Co-Requisite Courses
AUTO110G: Automotive Maintenance and Light Repair

Semester Offered
Fall semester

AUTO130G : Automotive Electronics II

Electricity/Electronics II. This course builds on the material covered in Electrical/Electronics I and includes communication and networking, body control systems, security systems, occupant safety systems, entertainment and audio systems and driver information and navigation systems. Students will practice diagnosis and repair using scan tools, oscilloscopes and multi-meters.
Credits 4
Theory Hours 2

Lab Hours 4
Prerequisites
AUTO110G Automotive Maintenance and Light Repair with a C or better; and AUTO125G Automotive Electronics I with a C or better
Semester Offered
Spring semester

AUTO140G : Braking Systems

This course covers diagnosing, evaluating and servicing base brake systems, parking brake systems, anti-lock brake systems, and traction control systems. Students will machine drums and rotors using both on-car and off-car lathes, diagnose, evaluate and repair using pressure gauges, measuring tools, scan tools, oscilloscopes and multi-meters, and demonstrate safe use of all tools and equipment used in the course.
Credits 4
Theory Hours 2

Lab Hours 4
Prerequisites
AUTO110G with a C or better
Semester Offered
Summer semester

AUTO150G : Suspension and Steering

In this course students will diagnose, evaluate, repair and document steering and suspension systems, including both base and electronically controlled systems. They will replace steering and suspension components, practice 2 wheel and 4-wheel alignment, and document their work.
Credits 4
Theory Hours 2

Lab Hours 6
Prerequisites
AUTO110G with a C or better
Semester Offered
Summer semester