

# AUTOMOTIVE TECHNOLOGY (AUTO)

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## **AUTO 100 Introduction to Automotive Technology 5 Credits**

Introduces basic engine and electrical systems design on most import and domestic automobiles, including green technology vehicles. Emphasizes basic electrical theory, use of automobile owner manuals, technical service information, computer-based information systems, tools, shop safety practices, and OSHA regulations and procedures.

**Prerequisite:** None.

## **AUTO 141 Chassis Systems 13 Credits**

Provides an in-depth study of modern domestic and import vehicle steering, suspension, and braking systems including inspection, diagnosis, repair, and adjustment.

**Prerequisite:** Prerequisite: C or better in AUTO 100, or instructors permission.

## **AUTO 142 Electrical/Electronic Systems 13 Credits**

Provides an in-depth study of the electrical/electronic systems in modern vehicles. Emphasizes Ohm's Law, electrical diagrams, diagnosis of advanced circuits, battery systems and testing including high voltage batteries, and automotive starting, charging, and chassis accessory circuits.

**Prerequisite:** Prerequisite: C or better in AUTO 100, or instructors permission.

## **AUTO 143 Engine Repair 13 Credits**

Introduces basic engine component identification and engine theory on most import and domestic vehicles. Emphasizes engine condition diagnosis, disassembly, engine measurements and component diagnosis, precise measuring procedures, and engine reassembly.

**Prerequisite:** Prerequisite: C or better in AUTO 100, or instructors permission.

## **AUTO 241 Manual Drivetrains 13 Credits**

Provides an in-depth study of modern domestic and import vehicle manual transmissions, clutches, all wheel drive, differential, axles, and electric vehicle drive systems including inspection, diagnosis, repair, and adjustment.

**Prerequisite:** Prerequisite: C or better in all 100-level AUTO courses, or instructors permission.

## **AUTO 242 Automatic Transmissions 7 Credits**

Explores the theory, operation, tools and techniques necessary to properly maintain, diagnose, service, and repair automatic transmissions, hybrid transmissions, torque converters, and all related components.

**Prerequisite:** Prerequisite: C or better in all 100-level AUTO courses, or instructors permission.

## **AUTO 243 Heating and Air Conditioning 6 Credits**

Explores the theory, operation, tools, and techniques necessary to properly maintain, diagnose, service, and repair both manual and automatic temperature-controlled systems in automobiles, including hybrid and electric components.

**Prerequisite:** Prerequisite: C or better in all 100-level AUTO courses, or instructors permission.

## **AUTO 244 Engine Performance 13 Credits**

Provides an in-depth study of engine management systems, the diagnostic process used to locate complex engine performance concerns, and procedures used to restore normal operations. Emphasizes fuels and fuel systems, exhaust gas analysis, emission control components and systems, electric vehicle operation and systems, and alternative fuel systems.

**Prerequisite:** Prerequisite: C or better in all 100-level AUTO courses, or instructors permission.