

AUTOMOTIVE TECHNOLOGY (AUT)

AUT 110 (3 credit hours)

Brake Systems

Involves the operational theory and application of hydraulic and anti-lock brake systems; discusses disc and drum brakes. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 111 (2 credit hours)

Brake Systems Lab

Develop skills in the diagnosis and repair of hydraulic and anti-lock brake systems, covering both disc and drum type braking systems. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 110.

Attributes: Technical

Components: LAB: Laboratory

AUT 130 (3 credit hours)

Manual Drive Train and Axles

Involves an in-depth study of principles of operation, construction, and service of manual transmissions and related drive train components (differentials, clutches, u-joints, rear wheel drive and 4-wheel drive). Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 131 (2 credit hours)

Manual Drive Train and Axles Lab

Develop skills in the diagnosis and repair of manual transmissions and related drive train components (differentials, clutches, u-joints, rear wheel drive, and 4-wheel drive). The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 130.

Attributes: Technical

Components: LAB: Laboratory

AUT 140 (3 credit hours)

Basic Fuel and Ignition Systems

Includes the theory, component identification, application, operation, service and repair of the basic automotive ignition, fuel, and emission systems, including related components. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 141 (2 credit hours)

Basic Fuel and Ignition Systems Lab

Provides skills necessary to diagnose and repair the automotive basic ignition, fuel, and emission systems and related components are developed. The student may be provided a unique work experience alternating between periods of work on-site and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 140.

Attributes: Technical

Components: LAB: Laboratory

AUT 142 (3 credit hours)

Emission Systems

Presents the theory, component identification, application, operation, service and repair of advanced automotive ignition, fuel, and emission systems, including related components. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 143 (2 credit hours)

Emission Systems Lab

Introduces skills necessary to diagnose, service and repair automotive advanced ignition, fuel, and emission systems, including related components are developed. The student may be provided a work-study experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 142.

Attributes: Technical

Components: LAB: Laboratory

AUT 160 (3 credit hours)

Suspension and Steering

Presents the automotive suspension system, the diagnosing of suspension problems, identifying components, recognizing tire wear problems, wheel balancing and the use of alignment. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 161 (2 credit hours)

Suspension and Steering Lab

Introduces skills necessary in the diagnosis and repair of automotive suspension systems, wheel alignment, and wheel balancing. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 160.

Attributes: Technical

Components: LAB: Laboratory

AUT 180 (3 credit hours)

Automatic Transmission/Transaxle

Involves the study of the operating principles of rear and front wheel drive automatic transmissions and transaxles and the testing and diagnostic process. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 181 (2 credit hours)

Automatic Transmission/Transaxle Lab

Develop diagnostic and repair skills related to the operation of rear and front wheel automatic transmissions and transaxles. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 180.

Attributes: Technical

Components: LAB: Laboratory

AUT 198 (1 credit hours)**Practicum**

The Practicum provides supervised on-the-job work experience related to the student's educational objectives. Students who participate in the practicum do not receive compensation. Practicum: 1 credit (75 contact hours).

Pre-requisite: Permission of the Instructor.

Attributes: Technical

Components: PCM: Practicum

AUT 199 (1 credit hours)**Cooperative Education Program**

Co-op provides supervised on-the-job work experience related to the student's educational objectives. Students who participate in the Cooperative Education program receive compensation for their work. Co-op: 1 credit (75 contact hours).

Pre-requisite: Permission of the Instructor.

Attributes: Technical

Components: COP: Co-op

AUT 240 (3 credit hours)**Computer Control Systems and Diagnosis**

Presents the comprehensive diagnostics of on-board computer control systems, including distributorless ignition systems. Presents the problem solving process including flowchart reading. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

Components: LEC: Lecture

AUT 241 (2 credit hours)**Computer Control Systems and Diagnosis Lab**

Introduces the skills necessary to diagnose and repair drivability problems associated with on-board computer control systems. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre- or co-requisite: AUT 240.

Attributes: Technical

Components: LAB: Laboratory

AUT 275 (3 credit hours)**Hybrid and Electric Vehicle Technology**

Focuses on the theories, principles, and diagnosis relating to hybrid automobiles. Lecture: 3.0 credits (45 contact hours).

Pre-requisite: ADX 120 and ADX 121 and ADX 260 and ADX 261.

Co-requisite: AUT 276.

Attributes: Technical

Components: LEC: Lecture

AUT 276 (2 credit hours)**Hybrid and Electric Vehicle Technology Lab**

Focuses on the theories, principles, and diagnosis relating to hybrid automobiles. The student may be provided a work-study experience alternating between periods of work off campus and work in a classroom laboratory setting. Lab: 2.0 credits (90 contact hours).

Pre-requisite: ADX 120 and ADX 121 and ADX 260 and ADX 261.

Co-requisite: AUT 275.

Attributes: Technical

Components: LAB: Laboratory

AUT 290 (1 credit hours)**Special Problems I**

A course designed for the student who has demonstrated specific needs for additional training. The student may be provided a work/study experience alternating between periods of work off campus and work in a classroom laboratory setting. Laboratory: 1 credit (45 contact hours).

Pre-requisite: Permission of Instructor.

Attributes: Technical

Components: LAB: Laboratory

AUT 291 (2 credit hours)**Special Problems II**

A course designed for the student who has demonstrated specific needs for additional training. The student may be provided a work/study experience alternating between periods of work off campus and work in a classroom laboratory setting. Laboratory: 2 credits (90 contact hours).

Pre-requisite: Permission of Instructor.

Attributes: Technical

Components: LAB: Laboratory

AUT 292 (3 credit hours)**Special Problems III**

A course designed for the student who has demonstrated specific needs for additional training. The student may be provided a work/study experience alternating between periods of work off campus and work in a classroom laboratory setting. Laboratory: 3 credits (135 contact hours).

Pre-requisite: Permission of Instructor.

Attributes: Technical

Components: LAB: Laboratory

AUT 298 (1 credit hours)**Practicum**

The practicum provides supervised on-the-job work experience related to the students educational objectives. Students who participate in the practicum do not receive compensation. Practicum: 1 credit hour (75 contact hours).

Pre-requisite: Permission of the Instructor.

Attributes: Technical

Components: PCM: Practicum

AUT 299 (1 credit hours)**Cooperative Education Program**

Co-op provides supervised on-the-job work experience related to the students educational objectives. Students who participate in the Cooperative Education program receive compensation for their work. Co-op: 1 credit hour (75 contact hours).

Pre-requisite: Permission of the Instructor.

Attributes: Technical

Components: COP: Co-op