

AUTOMOBILE-MECHANICAL (404)

Information provided includes course descriptions by subject only. For complete 2018-2019 programs/academic plans, please refer to Academic Programs (<http://catalog.blackhawk.edu/academics>).

404-338 Service Fundamentals Credits: 2

Introduction to the automotive service facility. Safety, basic hand tool and power tools application is defined to help the prospective automobile technician work safely and efficiently. Students will learn how to use both comprehensive and manufacturer's shop manuals to perform basic under-hood and under-car services.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-339 Engine Service Credits: 4

This course is designed to introduce the student to the theory of gasoline engine operation and design. The course also includes methods of diagnosis, disassembly, measurement, and reassembly. Emphasis is placed upon diagnostic ability and skill development.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-342 Heating & Air Conditioning Service Credits: 4

This course provides a basic understanding of the automobile cooling and air conditioning system. Theory of air conditioning is defined. Emphasis is placed on laboratory performance and related skills development.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-343 Automotive Machine Shop Credits: 1

This course is designed to acquaint the student with automotive machine shop practices. It gives the student an opportunity to correctly use tools such as the outside micrometer, telescoping gauge, drill press, brake rotor and drum lathe, and other measuring instruments. Both English and metric systems are covered in this course.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-345 Brake Service Credits: 4

The student is introduced to the fundamentals of automotive brake systems including drum, disc, hydraulic, power, and antilock systems. Brake measurement is a high priority.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-346 Steering & Suspension Service Credits: 4

The student is introduced to basic wheel alignment, suspension systems, and steering systems. Computerized four-wheel alignment is a high priority in this course.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-347 Drive Train Service 1 Credits: 3

This course is designed to introduce the student to the fundamentals of the power train. Emphasis is placed on the diagnosis and repair of differentials and manual transmissions.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-348 Service Simulation Credits: 2

This course is designed to introduce the student to shop operating procedures. Students can obtain credit for part-time employment in an automotive related work environment.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-349 Service Management Credits: 1

The student becomes familiar with the use of service related documents and procedures in this course. Emphasis is placed on shop liability and state and federal laws concerning automotive servicing.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-350 ASE Certification Review Credits: 1

This course is designed to prepare the student for ASE certification.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-351 Electronic Engine Control Fundamentals Credits: 4

This course is designed to introduce the student to computerized engine controls and related electrical components. Emphasis is placed on theory of operation and diagnostics using state of the art diagnostic equipment. Special emphasis will be placed on skillfully understanding and using shop manuals for related systems.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing

404-352 Computerized Fuel Systems Service Credits: 2

The student is introduced to various computerized fuel systems. Topics covered are: electronic fuel injection, throttle body injection systems, port fuel injection, multi-port injection systems and sequential injection systems. Emphasis is placed on diagnostics and development of skills in using sophisticated diagnostic equipment.

Aid Code: 32 - Two-year Technical Diploma.
Pre-requisites: (404-357)
Complete Course Listing

404-353 Emission Control Service and Certification

Credits: 1

This course is designed to help the student develop skills necessary to diagnose, adjust, replace, or repair emission related component parts by skillfully demonstrating the use of diagnostic equipment.

Aid Code: 32 - Two-year Technical Diploma.

Complete Course Listing

404-354 Engine Performance Testing

Credits: 4

This course is designed to maintain OBD II computerized vehicles and develop systematic repair procedures through the use of shop manuals and sophisticated diagnostic equipment. Emphasis is placed on driveability problems.

Aid Code: 32 - Two-year Technical Diploma.

Pre-requisites: (404-357)

Complete Course Listing

404-355 Drive Train/Transaxle Service II

Credits: 2

This course is designed to introduce the student to automatic transmission and transaxle service.

Aid Code: 32 - Two-year Technical Diploma.

Pre-requisites: (404-357)

Complete Course Listing

404-356 Electrical Service

Credits: 4

This course is designed to help the students learn how to diagnose and repair electrical problems related to automobile accessories. Emphasis is placed on skillfully understanding and testing procedures necessary for repair.

Aid Code: 32 - Two-year Technical Diploma.

Complete Course Listing

404-357 Electronic Engine Control Diagnosis

Credits: 2

This course is a composite of all computerized systems. Emphasis is placed on electrical skills, diagnostic procedure, driveability problems, and repair. An over view of engine computer function, computerized fuel delivery, emission controls, and computer chassis control is included.

Aid Code: 32 - Two-year Technical Diploma.

Co-requisites: (404-351)

Complete Course Listing

404-358 Service Internship

Credits: 2

Students wishing for hands-on shop experience can obtain two credits for on-the-job training related directly and in cooperation with a service facility. Prior consent of automotive instructor is required. The student completes a comprehensive study after successfully completing the intern requirements.

Aid Code: 32 - Two-year Technical Diploma.

Pre-requisites: (404-357)

Complete Course Listing