

Automotive Technology (AMT)

AMT 93D: Cooperative Education

This cooperative training experience will provide students an opportunity to apply their professional and technical skills in dealership service centers. Students will be supervised on the job by a professional Journeyman Technician. Students will complete 225 hours per training experience. This course may be repeated up to four times, for a maximum of 15 credits.

Credits: 3

Prerequisites: AMT 100, AMT 141 and AMT 144 with a grade of C or better

Program: [Automotive Technology](#)

AMT 100: Introduction to Automotive Technology

This course will cover policies and procedures of the Automotive Technology (AMT) program, various career opportunities in the automotive field, shop safety, proper use of technical reference manuals, and identifying and proper use of basic hand tools and precision measuring tools. (Formerly AMT 20)

Credits: 2

Prerequisites: MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 129: Engine Repair

This course will cover shop safety, tools and all components found in the modern internal combustion engine. The course is designed to provide students with an understanding of the fundamental operation and construction of internal combustion engines. Instruction will include theory and laboratory (shop) activities in which students will learn how to inspect, service, maintain, diagnose, and repair automobile engine malfunctions. This course includes live work. (Formerly AMT 30)

Credits: 7

Prerequisites: AMT 100, AMT 141 and AMT 152 with a grade of C or better and ENG 100 or higher or equivalent with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 141: Electrical/Electronic Systems I

This course will provide students with fundamental principles of automotive electricity and electronics. Practical skills to diagnose, test, and service battery, starting, charging and lighting systems are covered. Testing and repair of electrical safety devices, wiring, connectors, and relays are also covered. (Formerly AMT 40)

Credits: 5

Prerequisites: AMT 100 with a grade of C or better or concurrent enrollment and MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 144: Heating and Air Conditioning

This course provides an understanding of the theory, diagnosis, service, safe handling of refrigerants and repair of automotive heating, ventilation and air conditioning (HVAC) systems. The course presents the operation and function of vacuum, electrical, refrigeration circuits, and computer controls. Training is provided in the use of tools and equipment while performing diagnostics, repairs, and service on HVAC systems. (Formerly AMT 43)

Credits: 4

Prerequisites: AMT 100, AMT 129, AMT 141, AMT 145, AMT 149, AMT 152, AMT 154 and AMT 241 with a grade of C or better and MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 145: Manual Drive Trains and Axles

This course covers the theory and fundamental operating principles of the modern automotive drive trains and axles. Students learn maintenance and repair of C-V shafts, propeller shafts, clutch systems, standard transmissions, standard transaxles, all-wheel drive, four-wheel drive, and final-drive systems. (Formerly AMT 46)

Credits: 4

Prerequisites: AMT 100, AMT 129, AMT 141, AMT 152 and AMT 154 with a grade of C or better and MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment and Natural Science 100 level with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 149: Automatic Transmissions and Transaxles

This course covers the fundamental principles of automatic transmission design and operation found on Front Wheel Drive (FWD) and Rear Wheel Drive (RWD) automobiles. Service, repair, and overhaul procedures are included for a variety of import and domestic automatic transmissions. (Formerly AMT 50)

Credits: 4

Prerequisites: AMT 100, AMT 129, AMT 141, AMT 152 and AMT 154 with a grade of C or better and MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment and AMT 145 with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 152: Brake Systems

This course covers the principles in the operation of the modern automotive brake systems. Further development in new technology such as computerized ABS (Anti-skid Brake Systems), electronic power brakes, and four-wheel disc brakes will be covered. Repair and service techniques of the complete brake systems will be demonstrated. (Formerly AMT 53)

Credits: 4

Prerequisites: AMT 100 and AMT 141 with a grade of C or better or concurrent enrollment and MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment

Co-Requisites: AMT 162

Program: [Automotive Technology](#)

AMT 154: Suspension and Steering Systems

This course presents the theory and practical application of the operation, problem diagnosis, maintenance and repair of the modern suspension and steering systems to include: front wheel drive steering and suspension systems; rear wheel drive steering and suspension systems; four wheel drive steering and suspension systems; and all-wheel drive steering and suspension systems. Wheel alignment and tire servicing for all systems are also covered. (Formerly AMT 55)

Credits: 4

Prerequisites: AMT 100, AMT 141 and AMT 152 with a grade of C or better and AMT 129 with a grade of C or better or concurrent enrollment and ENG 100 or higher or equivalent with a grade of C or better or concurrent enrollment

Co-Requisites: AMT 164

Program: [Automotive Technology](#)

AMT 162: Advanced Brake Systems

This course is a continuation of AMT 152 Brake Systems with a more detailed examination of the modern technologies of current production electronic braking systems. Professional level diagnostic procedures and techniques will be emphasized.

Credits: 1

Co-Requisites: AMT 152

Program: [Automotive Technology](#)

AMT 164: Advanced Suspension and Steering Systems

This course is a continuation of AMT 154 with a detailed examination of the modern technologies of current production electronic suspension and steering systems. Professional level diagnostic procedures and techniques will be emphasized.

Credits: 1

Co-Requisites: AMT 154

Program: [Automotive Technology](#)

AMT 241: Electrical/Electronic Systems II

This course covers essential theories and practical skills in diagnosing electronic control systems, networking, and the repair of automotive accessory circuits such as power windows, power door locks, power antennas, power mirrors, audio systems, anti-theft systems, power seats, horns, blower fan, and wiper/washer. Also covered are conventional instrumentation, digital

instrumentation, supplemental inflatable restraint (SRS), and high voltage systems. (Formerly AMT 41)

Credits: 4

Prerequisites: AMT 100, AMT 129, AMT 141, AMT 152 and AMT 154 with a grade of C or better and MATH 100 or higher or equivalent or QM 107C or higher or equivalent with a grade of C or better or concurrent enrollment and AMT 145 and AMT 149 with a grade of C or better or concurrent enrollment

Program: [Automotive Technology](#)

AMT 245: Engine Performance Systems

Examines the theory, operation and relationships of engine, ignition, air induction, fuel delivery, emission and computerized control systems. Diagnostic procedures are covered using professional service information and test equipment. These include oscilloscopes, gas analyzers, scan tools, and specialized meters. (Formerly AMT 40D)

Credits: 8

Prerequisites: AMT 100, AMT 129, AMT 141, AMT 241, AMT 145, AMT 149, AMT 152, AMT 154, AMT 162 and AMT 164 with a grade of C or higher and AMT 144 with a grade of C or higher or concurrent enrollment

Program: [Automotive Technology](#)