

# AUTOMOTIVE TECHNOLOGY (AUMT)

## **AUMT 1271 Manufacturers Maintenance and Pre-Delivery 2 Credits (1 Lec, 3 Lab)**

This course provides an overview of manufacturers specific automotive quick services and new/used vehicle preparation. Topics include vehicle inspections, preparing estimates, changing fluids and filters, proper hazardous waste disposal, minor electrical repairs and road-testing techniques using manufacturers information systems, forms, and maintenance/repair procedures. Students will learn how to inspect and evaluate vehicle systems to determine if advanced levels of repairs are needed. They also learn how to identify and operate necessary equipment and tools. May be taught manufacturer specific.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1272 Automotive Maintenance and Repair 2 Credits (1 Lec, 3 Lab)**

This course provides an overview of manufacturers specific automotive quick services and new/used vehicle preparation. Topics include vehicle inspections, preparing estimates, changing fluids and filters, proper hazardous waste disposal, minor electrical repairs and road-testing techniques using manufacturers information systems, forms, and maintenance/repair procedures. Students will learn how to inspect and evaluate vehicle systems to determine if advanced levels of repairs are needed. They also learn how to identify and operate necessary equipment and tools.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1316 Automotive Suspension and Steering 3 Credits (2 Lec, 4 Lab)**

This course is the study of the diagnosis and repair of automotive suspension and steering systems including electronically controlled systems. Includes component repair, alignment procedures, and tire and wheel service. May be taught manufacturer specific.

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1319 Automotive Engine Repair 3 Credits (2 Lec, 4 Lab)**

This course is the study of the fundamentals of engine operation, diagnosis and repair. Emphasis on identification, inspection, measurements, disassembly, repair, and reassembly of the engine. May be taught manufacturer specific.

Prerequisite(s): AUMT 1407; Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1345 Automotive Climate Control Systems 3 Credits (2 Lec, 4 Lab)**

This course is a study of the diagnosis and repair of manual/electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific.

Prerequisite(s): AUMT 1407; Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1407 Automotive Electrical Systems 4 Credits (2 Lec, 6 Lab)**

This course is an overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of, charging and starting systems, and electrical accessories. Emphasis on electrical principles, schematic diagrams, and service manuals. May be taught manufacturer specific.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1410 Automotive Brake Systems 4 Credits (2 Lec, 6 Lab)**

This course is the study of the operation and repair of drum/disc type brake systems. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes. May be taught manufacturer specific.

Prerequisite(s): AUMT 2421; Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1416 Automotive Suspension and Steering 4 Credits (2 Lec, 6 Lab)**

This course is the study of the diagnosis and repair of automotive suspension and steering systems including electronically controlled systems. Includes component repair, alignment procedures, and tire and wheel service. May be taught manufacturer specific.

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1419 Automotive Engine Repair 4 Credits (2 Lec, 6 Lab)**

This course is the study of the fundamentals of engine operation, diagnosis and repair. Emphasis on identification, inspection, measurements, dis-assembly, repair, and reassembly of the engine. May be taught manufacturer specific.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

## **AUMT 1445 Automotive Climate Control Systems 4 Credits (2 Lec, 6 Lab)**

This course is a study of the diagnosis and repair of manual/electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific.

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 6

Course Type: Technical

## **AUMT 1471 Manufacturers Maintenance and Pre-Delivery 4 Credits (2 Lec, 6 Lab)**

This course provides an overview of manufacturers specific automotive quick services and new/used vehicle preparation. Topics include vehicle inspections, preparing estimates, changing fluids and filters, proper hazardous waste disposal, minor electrical repairs and road-testing techniques using manufacturers information systems, forms, and maintenance/repair procedures. Students will learn how to inspect and evaluate vehicle systems to determine if advanced levels of repairs are needed. They also learn how to identify and operate necessary equipment and tools.

Prerequisite(s): Reading level 7, Writing level 6, Math level 6

Course Type: Technical

**AUMT 2188 Internship - Automotive Technology 1 Credit (0 Lec, 6 Lab)**

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4 and department chair/program coordinator approval.

Course Type: Technical

**AUMT 2288 Internship - Automotive Technology 2 Credits (0 Lec, 12 Lab)**

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4 and department chair/program coordinator approval.

Course Type: Technical

**AUMT 2289 Internship Automotive Technology 2 Credits (0 Lec, 12 Lab)**

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4 and department chair/program coordinator approval.

Course Type: Technical

**AUMT 2313 Automotive Drivetrain and Axles 3 Credits (2 Lec, 4 Lab)**

This is a study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials with emphasis on diagnosis and repair. May be taught manufacturer specific.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

**AUMT 2388 Internship - Automotive Technology 3 Credits (0 Lec, 15 Lab)**

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Prerequisite(s): Reading level 7, Writing level 6, Math level 6 and department chair/program coordinator approval.

Course Type: Technical

**AUMT 2413 Manual Drivetrain and Axles 4 Credits (2 Lec, 6 Lab)**

This is a study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials with emphasis on diagnosis and repair. May be taught manufacturer specific.

Prerequisite(s): AUMT 1407; Reading level 7, Writing level 6, Math level 4

Course Type: Technical

**AUMT 2417 Automotive Engine Performance Analysis I 4 Credits (2 Lec, 6 Lab)**

This course is the study of the theory, operation, diagnosis of drivability concerns, and repair of ignition, and fuel delivery systems. Includes use of current engine performance diagnostic equipment. May be taught with manufacturer specific.

Prerequisite(s): AUMT 2421; Reading level 7, Writing level 6, Math level 4

Course Type: Technical

**AUMT 2421 Automotive Electrical Diagnosis and Repair 4 Credits (2 Lec, 6 Lab)**

This is a course in repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. This course may be taught with manufacturer-specific focus.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

**AUMT 2425 Automotive Automatic Transmission and Transaxles 4 Credits (2 Lec, 6 Lab)**

This course is a study of the operation, hydraulic circuits and electronic controls of modern automatic transmissions and transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and repair techniques. May be taught manufacturer specific.

Prerequisite(s): AUMT 1407; Reading level 7, Writing level 6, Math level 4

Course Type: Technical

**AUMT 2434 Automotive Engine Performance Analysis II 4 Credits (2 Lec, 6 Lab)**

This course is the study of the diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems. Includes use of advanced engine performance diagnostic equipment. May be taught manufacturer specific.

Prerequisite(s): Reading level 7, Writing level 6, Math level 4

Course Type: Technical

**AUMT 19009 Intro to Auto Maintenance 0 Credits**

**AUMT 41005 Introduction to Automotive Tec 4.8-16 Credits**

**AUMT 41007 Automotive Electrical Systems 4.8-16 Credits**

**AUMT 41009 Scan Tools Familiarization 0.7-11.2 Credits**

**AUMT 41010 Brakes 4.8-16 Credits**

**AUMT 41016 Suspension and Steering 9.6-16 Credits**

**AUMT 41017 Intermittent Electronic Diagno 0.7-11.2 Credits**

**AUMT 41019 Automotive Engine Repair 4.8-16 Credits**

**AUMT 41022 Front and Rear Suspension - Op 4.8-12.8 Credits**

**AUMT 41024 Service Attendant 0.7-3.2 Credits**

**AUMT 41025 Electrical/Electronic Circuits 4.8-12.8 Credits**

**AUMT 41029 Front and Rear Drive Engine Re 6.4-12.8 Credits**

**AUMT 41030 Disc/Drum Brake Systems 4.8-12.8 Credits**

**AUMT 41033 Inspection and Service of Engi 4.8-8 Credits**

**AUMT 41034 Automatic Transmission on Car 0.7-4.8 Credits**

**AUMT 41035 Engine Systems Operation and D 4.8-12.8 Credits**

**AUMT 41036 Electrical Accessories 0.7-4.8 Credits**

**AUMT 41045 Automotive Heating and Air Con 4.8-16 Credits**

**AUMT 41046 Auto Heating/AC Control System 0.7-8 Credits**

**AUMT 41048 Alternative Fuels Driveability 0.7-4.8 Credits**

**AUMT 41050 Alternative Fuels Vehicle Tech 0.7-4.8 Credits**

**AUMT 41051 Power Assist/Anti Lock Brake S 0.7-4.8 Credits**

**AUMT 41052 Rear Wheel Drive Clutches--Man 4.8-12.8 Credits**

**AUMT 41055 Operation and Diagnosis of Ign 4.8-12.8 Credits**

**AUMT 41056 Driveability/Diagnosis--Carbur 4.8-8 Credits**

**AUMT 41058 Driveability/Diagnosis--Fuel I 4.8-8 Credits**

**AUMT 41059 Advanced Scope Diagnosis 0.7-4.8 Credits**

**AUMT 41091 Special Topics in Auto/Automot 0.7-11.2 Credits**

**AUMT 42000 Engine Repair Cert Assessment 0.8 Credits**

**AUMT 42011 Automotive Electronic Controls 3.2-9.6 Credits**

**AUMT 42013 Manual Drive Train and Axles 4.8-16 Credits**

**AUMT 42017 Engine Performance Analysis I 4.8-16 Credits**

**AUMT 42021 Automotive Electrical Lighting 4.8-16 Credits**

**AUMT 42025 Automatic Transmission and Tra 4.8-16 Credits**

**AUMT 42026 Automatic Transmission Major S 0.7-4.8 Credits**

**AUMT 42027 Automatic Transmission Major S 0.7-4.8 Credits**

**AUMT 42029 Auto Adv Engine Performance Di 0.7-4 Credits**

**AUMT 42031 Advanced Engine Performance Di 0.7-3.2 Credits**

**AUMT 42032 Automatic Transmission and Tra 4.8-16 Credits**

**AUMT 42033 Automotive Engine Repair Updat 0.7-3.2 Credits**

**AUMT 42034 Engine Performance Analysis II 4.8-16 Credits**

**AUMT 42035 Automotive Service Excellence 0.8-6.4 Credits**

**AUMT 42036 Automotive Electronic Fuel Sys 0.7-3.2 Credits**

**AUMT 42037 Automotive Electronics 6.4-17.6 Credits**

**AUMT 42039 Automotive Electrical/Electron 0.7-3.2 Credits**

**AUMT 42040 Automotive Alternative Fuels 9.6-16 Credits**

**AUMT 55001 Entertainment Systems 1.6 Credits**

A study of current automotive fuel systems to include tools and test equipment in conjunction with diagnosis, service and repair.

**AUMT 55002 HVAC System Operations 0.8 Credits**

A study of heating and air conditioning control systems. Topics include vacuum and electric switches and motors, manual and electronic controls.

**AUMT 55003 HVAC Certification 0.8 Credits**

A study of current refrigerants and retrofit systems, computer controlled air conditioning systems, and current compressor design. Utilization of test and recovery equipment to diagnose and service air conditioning systems of late model vehicles.

**AUMT 55004 Rear Axle 1.6 Credits**

A study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials with emphasis on the diagnosis and repair of transmissions/transaxles and drive lines. May be taught with manufacturer specific instructions.

**AUMT 55005 GM SIR 0.8 Credits**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**AUMT 55006 Auto Electrical System 12.8 Credits**

Get an overview of your vehicle's automotive electrical system. Learn to test, diagnose and repair batteries and electrical accessories. (AUMT 1407)

**AUMT 55007 Introduction to Automotive Technology 9.6 Credits**

Prerequisite(s): Reading level 4. Textbook Required. This is an introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, professional responsibilities, and basic automotive maintenance. (AUMT 1305)

**AUMT 55008 Automotive Engine Repair 9.6 Credits**

Prerequisite(s): AUMT 2434, Reading level 7, Writing level 6, Math level 6. Textbook required. Learn the fundamentals of engine operation, diagnosis and repair. Emphasis will be given to overhauling, disassembly, repair and reassembly of selected engines. (AUMT 1419)

**AUMT 55009 Auto Transmission and Transaxle 12.8 Credits**

Prerequisite(s): Reading level 7, Writing level 6, Math level 6. Textbook required. This is a study of the operation, hydraulic circuits and electronic controls of modern automatic transmissions/transaxles. It covers diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and repair techniques. (AUMT 2425)

**AUMT 55010 Automotive Heating and Air Conditioning 9.6 Credits**

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 6. Textbook required. Theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of systems malfunctions. It covers EPA guidelines for refrigerant handling and new refrigerant replacements. (AUMT 1345)

**AUMT 55011 Rear Axle Controls 1.6 Credits**

A study of automotive clutches, clutch operation devices, manual transmissions/ transaxles, and differentials with emphasis on the diagnosis and repair of transmissions/ transaxles and drive lines. May be taught with manufacturer specific instructions.

**AUMT 55012 Electronic Suspension Systems 0.8 Credits**

Addresses information on current steering and suspension to include electronic and computerized test equipment used in conjunction with diagnosis, service, and repair of these systems.

**AUMT 55013 Global Electrical Systems 1.6 Credits**

Advanced concepts of current electrical/electronic systems to include electronic and computerized test equipment used in conjunction with diagnosis, service, and repair of these systems.

**AUMT 55014 GM Powertrain 1.6 Credits**

A study of current automotive fuel systems to include tools and test equipment in conjunction with diagnosis, service, and repair.

**AUMT 55015 Brake Systems 0.8 Credits**

A study of current brake systems to include electronic and computerized test equipment in conjunction with diagnosis, service, and repair of these systems.

**AUMT 55016 Automotive-Beginning 9 Credits**

An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance.

**AUMT 55017 Automotive-Beginning 7.8 Credits**

An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance.

**AUMT 55018 Automotive-Intermediate 5.85 Credits**

Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, and disassembly, repair, and reassembly of the engine.

**AUMT 55019 Noise, Vibration & Harshness 0.8 Credits**

A study of diagnostic procedures using scopes, analyzers, and testers with electronic engine controls, under drive conditions.

**AUMT 55020 Duramax 1.6 Credits**

Advanced concepts of information on current automotive engine performance systems to include tools and test equipment in conjunction with diagnosis, service, and repair.

**AUMT 55021 Electrical/Electronics Terminals and Connectors 0.8 Credits**

Advanced concepts of current electrical/electronic systems to include electronic and computerized test equipment used in conjunction with diagnosis, service and repair of these systems.

**AUMT 55022 Automotive Brake Systems 9.6 Credits**

Prerequisite(s): AUMT 1407, Reading level 7, Writing level 6, Math level 6. Textbook Required. This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual and anti-lock brake systems, and parking brakes. This course may be taught manufacturer specific. (AUMT 1310)

**AUMT 55023 Automotive Electronic Controls 9.6 Credits**

Prerequisite(s): Reading level 4. Textbook required A study of electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. (AUMT 2311)

**AUMT 55024 Engine Machining 12.8 Credits**

An in-depth study of precision engine rebuilding, cylinder reconditioning, and crack repair. Machines and equipment necessary to complete an engine repair will be utilized. (AUMT 2455)

**AUMT 55025 Automatic Transmission/Transaxle Diagnostics 1.6 Credits**

This course will assist in developing the knowledge and skills needed to properly diagnose transmission faults and their effects on transmission operation.

**AUMT 55026 Waterleak and Windnoise Management 0.8 Credits**

This course is hands-on training for body service technicians. Topics covered are proven diagnostic procedures, test equipment and methods, and the tools for adjustment and sealing operations.

**AUMT 55027 TAEVT Educational Forum 0.8 Credits**

This course will improve the technician's understanding of emergency vehicle and repair. This course is set to meet the Texas Association of Emergency Vehicle Technician's Continuing Education Unit requirements.

**AUMT 55028 Auto Electrical Diagnosis & Repair 9.6 Credits**

Repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. (AUMT 2321)

**AUMT 55029 Engine Mechanical Diagnostics and Measure 1.6 Credits**

Advanced concepts of information on current automotive engine performance systems to include tools and test equipment in conjunction with diagnosis, service, and repair.

**AUMT 55030 Manual Gearbox Service 1.6 Credits**

For all GM transmission Service Technicians, this two day hands-on course provides an in depth unit repair of front and rear wheel drive manual gearboxes. The internal components will be described and also identified for the technician. There will also be an introduction to special tools and usage to perform repairs efficiently. Upon completion of this course, the technician will be able to perform Manual Gearbox system diagnostic and repair procedures.

**AUMT 55031 Engine Repair Cert Assessment 0.8 Credits**

Service technician training is structured around a standard, performance based curriculum. The curriculum provides a blended approach to training. It divides training between training time in the dealership and various training locations. In the dealership the service technician acquires component, systems, and diagnostic knowledge. The service technician can practice and demonstrate the application of skills at various training locations. The capstone of this standard curriculum is GM MasterTechnician Certification (MTC) in each automotive or body service area.

**AUMT 55032 GM Chassis Control Systems 0.8 Credits**

This course consisting of a WBT and Hands-On components will cover suspension component identification, operation, and diagnosis of various chassis systems such as independent and non-independent, tire pressure monitoring systems, level control systems, active suspension systems, and serial data communications. Alignment angles and how they affect overall handling will also be covered in this course.

**AUMT 55033 Auto Suspension & Steering Systems 9.6 Credits**

Prerequisite(s): AUMT 1407, Reading level 7, Writing level 6, Math level 6. Textbook required. The course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. It may be taught with manufacturer-specific focus. (AUMT 1316)

**AUMT 55034 GM Six Speed Automatic Transmission/Transaxle Servicing 1.6 Credits**

For GM transmission service Technicians, provides an introduction to 6T70/75 six speed front wheel drive Hydramatic Transaxle and the 6L80/90 six speed rear wheel drive Hydramatic transmission. Complete teardown and reassembly of each transmission is performed by the student.

**AUMT 55035 Toyota 623-Electrical Circuit Diagnosis 2.4 Credits**

The Toyota Electrical Circuit Diagnosis course is designed to familiarize technicians with electrical circuit theory and applying diagnostic techniques to isolate circuit malfunctions.

**AUMT 55036 Toyota 652-Body Electrical Diagnosis 2.4 Credits**

The Toyota Body Electrical Diagnosis (652) course is designed to familiarize the technician with electrical switches and relays, electrical diagnostic tools and the six-step diagnostic process.

**AUMT 55037 Front End Alignment 0.8 Credits**

Familiarizes technicians with Toyota suspension components, steering systems and handling systems.

**AUMT 55038 Toyota 752-Air Conditioning and Climate Control 1.6 Credits**

The Toyota Air Conditioning & Climate Control course is designed to familiarize technicians with safety and environmental concerns regarding refrigerants, air conditioning and climate control operation, system diagnosis and retrieval of Diagnostic Trouble Codes.

**AUMT 55039 Toyota 274-Automatic Transmission Diagnosis 2.4 Credits**

Designed to familiarize the technician with the operation of Toyota automatic transmissions including the stresses of operation, diagnosis and servicing of the torque convertor, planetary gear train and valve body. In addition, electrical control, preliminary checks, adjustments and shift lock mechanisms are also covered.

**AUMT 55040 Toyota 552-Brake Systems 1.6 Credits**

Covers the basic concepts of brake system operation, servicing techniques and troubleshooting.

**AUMT 55041 Toyota 302-Manual Transmissins and Transaxles 1.6 Credits**

Covers the principles of operation for the Toyota manual transmission/transaxle, servicing techniques, diagnosis and repair.

**AUMT 55042 Toyota 852-Engine Control Systems I 2.4 Credits**

Presents information on the essential principles, operation of Toyota engine control systems, component functions, diagnosis, use of applicable tools and servicing techniques.

**AUMT 55043 Toyota 256-Hybrids General Service and Maintenance 0.8 Credits**

Introduces the basic concepts of Toyota hybrid operation, diagnosis and repair techniques.

**AUMT 55044 Moveable Tops 1.6 Credits**

Students will be able to describe and apply the operation, preventive maintenance and repair techniques for moveable tops on vehicles.

**AUMT 55045 Automotive Drive Train and Axles 9.6 Credits**

A study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials with emphasis on diagnosis and repair. (AUMT 2313)

**AUMT 55046 Toyota Hybrid General Service & Maintenance 4 Credits**

Covers the functions and principles of Toyota hybrid automobiles, and procedures for their maintenance, problem diagnosis and repair. Critical importance of safety and hybrid-unique equipment are also covered.

**AUMT 55047 Automotive Hybrid Systems 3 Credits**

Students will cover the functions and principles of hybrid automobiles, procedures for their maintenance, diagnosis and repair. Safety and unique hybrid equipment are also covered.

**AUMT 55048 Electrical/Electronics Digital Multi Meter 0.8 Credits**

Students use electronic and computerized test equipment to diagnose, service, and repair electrical/electronic automotive systems.

**AUMT 55049 Global Diagnostic System and Multiple Diagnostic Interface 0.8 Credits**

Covers equipment and techniques used diagnose engine controls, ignition systems, fuel systems and emission control systems using latest GM diagnostic technologies.

**AUMT 55050 Hybrid Technology 0.8 Credits**

Introduces the basic concepts of Toyota hybrid operation, diagnosis, and repair techniques.

**AUMT 55051 Body Electrical Accessory Systems 0.8 Credits**

This course allows the service technician to demonstrate their ability to diagnose different accessory system used in GM vehicles. This course is intended for experienced service technicians with competent electrical skills.

**AUMT 55052 Automotive Engine Performance Analysis I 12.8 Credits**

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 6. Textbook Required. Students will study the theory, operation, diagnosis of drivability concerns, and repair of ignition and fuel delivery systems. (AUMT 2417)

**AUMT 55053 Strategies for Efficient Diagnosis 0.8 Credits**

Students will study multiple approaches to diagnostic techniques and concepts on current automotive engine performance systems. Upon completion of this course, technicians will be able to: utilize new tools to reduce warranty waste dollars; utilize the Strategy Based Diagnostic process to diagnose and service vehicles.

**AUMT 55054 Automotive Alternative Fuels 9.6 Credits**

A study of the composition and use of various alternative automobile fuels including retrofit procedures and applications, emission standards, availability, and cost effectiveness. Overview of federal and state regulations concerning fuels. (AUMT 2357)

**AUMT 55055 Women and Automotive Maintenance 0.8 Credits**

Students will learn the basics in automotive inspection and maintenance procedures.

**AUMT 55056 Honda Express Service Training 5 Credits**

This is an introductory course designed to provide the student with the fundamentals of operation and maintenance procedures including researching vehicle service information. Students will learn basic automotive shop safety, tool and equipment use. Upon completion of the course, students should be able to safely and accurately perform A1 and B1 vehicle inspection and maintenance service with efficiency and 100% accuracy.

**AUMT 55057 eAssist System Diagnosis and Service 0.8 Credits**

This course covers eAssist systems and diagnosis.

**AUMT 55058 GM Safety Systems 1.6 Credits**

The course covers components, operation, diagnostic and service procedures for GM safety systems.

**AUMT 55059 GM Safety Systems - 8 hour 0.8 Credits**

This course is offered to technicians who have already taken the GM Supplemental Restraint Systems component and will be learning about the new GM Safety Systems.

**AUMT 55060 GM Engine Performance 1.6 Credits**

This ILT course component covers the operation, diagnostic, and service procedures for GM engine performance, including the air management, fuel, ignition, electronic control, and emission systems. In addition, it will cover the various types of diagnostic procedures used by technicians used to determine systems concerns. Upon completion of this course component technicians will be able to perform diagnostic procedures to determine air management concerns, perform diagnostic procedures to determine fuel concerns, perform diagnostic procedures to determine ignition control concerns, perform diagnostic procedures to determine electronic control concerns, and perform diagnostic procedures to determine emission control systems concerns. No prerequisites required.

**AUMT 55061 GM Front-Wheel Drive/Rear-Wheel Drive Operation 1.6 Credits**

This course consists of WBT and Hands-On components. The WBT will introduce technicians to the names and types on internal and external components, the clutch hydraulic system along and the steps of with the operation of the clutch hydraulic system, and the power flow of a Front-Wheel Drive (FWD) and Rear-Wheel Drive (RWD) manual transmission.

The WBT will also introduce some general diagnostic process for diagnosing FWD/RWD concerns. The Hands-On section of this course will fully immerse the students in the tear-down and reassembly of FWD and RWD manual transmissions, and answer a series of questions about each of the transmissions that they service.

**AUMT 55062 Theory of Eng Perf Analysis I 3.2 Credits**

Prerequisite(s): AUMT2421, Reading level 7, Writing level 6, Math level 6. Operation and diagnosis of basic engine dynamics including the study of the ignition system, fuel delivery systems, and the use of engine performance diagnostic equipment. (AUMT 2215)

**AUMT 55063 Theory of Eng Perf Analysis II 3.2 Credits**

Prerequisite(s): AUMT 2215, Reading level 7, Writing level 6, Math level 6. A study of the emission systems, computerized engine performance, and advanced ignition and fuel systems, including advanced engine performance diagnostic equipment. (AUMT 2231)

**AUMT 55064 Automotive Electrical Systems Lab 9.6 Credits**

Prerequisite(s): Reading level 7, Writing level 6, Math level 6. No Textbook Required. An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of, charging and starting systems, and electrical accessories. Emphasis on electrical principles schematic diagrams, and service manuals. (AUMT 1307)

Co-requisite(s): AUMT 1253.

**AUMT 55065 Automotive Performance Analysis I 12.8 Credits**

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 6.

Co-requisite(s): AUMT 2215. This is a course in repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. (AUMT 2317)

**AUMT 55066 Automotive Engine Performance Analysis Lab II 12.8 Credits**

Prerequisite(s): AUMT 2215 and 2317, Reading level 7, Writing level 6, Math level 6.

Co-requisite(s): AUMT 2231. This course is the study of the diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems. Includes use of advanced engine performance diagnostic equipment. (AUMT 2334)

**AUMT 55067 GM - Duramax 1.6 Credits**

Diagnose computerized engine controls, ignition systems, fuel systems, air induction systems, and emission control systems

**AUMT 55068 Auto Trans and Transaxles Lab 9.6 Credits**

Students will study automotive drivelines, diagnosis of clutches, transmissions and differentials; servicing constant velocity joints. (AUMT 2325)

**AUMT 55069 Theory of Automotive Dr Trn and Axle 3.2 Credits**

Prerequisite(s): AUMT 2421, Reading level 7, Writing level 6, Math level 6. A study of automotive clutches, clutch operation devices, manual transmission/transaxles, and differentials. Emphasis on theory of transmission/transaxle and drive line components. (AUMT 2209)

**AUMT 55070 Theory of Trans and Transaxle 3.2 Credits**

Prerequisite(s): AUMT2209 and 2313, Reading level 7, Writing level 6, Math level 6. Theory of operation, hydraulic principles, and electronic circuits of modern automatic transmissions and transaxles. Discussion of diagnosing and repair techniques. (AUMT 2223)

**AUMT 55071 Theory of Automotive Electrical Systems 3.2 Credits**

Prerequisite(s): Reading level 7, Writing level 6, Math level 6. This is a course in automotive electrical systems including operational theory, testing and diagnosis of batteries, charging and starting systems, and electrical accessories. Includes use of electrical schematic diagrams and services.

**AUMT 55072 Alternative Fuels Training for Fleet Professionals 0.8 Credits**

This course helps participants learn how to safely install CNG component to NFPA 52 code, provides information to help pass the CSA Fuel System Inspector exam, and learn to recognize unsafe vehicles that are maintained in your fleet. Participants will gain an understanding of regulations needed to install CNG components on a conversion, learn what documents to study to be compliant.

**AUMT 55073 Alternative Fuels Training for First Responders 0.8 Credits**

This course will train First Responders (Fire, Police, EMT, and Towing/cleanup personnel) on how to safely deal with incidents involving alternative fuel vehicles (AFV's), versus conventional gasoline/diesel powered vehicles.

**AUMT 55074 Alternative Fuels Training for Permitting and Code Enforcement Officials 0.8 Credits**

This one day course is designed to provide participants the ability to obtain a solid foundation of information about alternative fuels, alternative fueled vehicles and advanced technology vehicles. Participants also gain the ability to discuss different alternative fuel technologies and the proper and efficient manner of permitting and meeting the current permitting and codes for their: 1. Electric vehicle charging stations; 2. Liquefied Petroleum Gas (LPG) propane refilling stations; 3. Liquefied Natural Gas (LNG) refilling stations; 4. Hydrogen refueling stations.