

**AUTOMOTIVE SERVICE – (ASE)
GM ASEP, FORD ASSET, & TOYOTA T-TEN**

The mission of the Automotive Service program is to prepare students for successful employment or advancement in either the Ford, General Motors, or Toyota automotive technology field through various instructional methods including theory classes, practical laboratory, shop experiences, and cooperative education work experience with area dealerships.

The Ford Motor Company Automotive Student Service Educational Training program (ASSET), the General Motors Automotive Service Education Program (ASEP), and the Toyota Technical Education Network (T-TEN) program are two-year automotive technology programs designed to provide students with the technical competence and professionalism expected of the incoming dealership technician. With a curricula designed by Ford, GM, and Toyota, the programs involve attending on-campus laboratory sessions and on-the-job work experiences through sponsoring dealerships.

This program consists of one A.A.S. degree for each of the product specific manufacturers. Curriculum Code 15.0803

**AUTOMOTIVE SERVICE
FORD ASSET
Associate in Applied Science Degree
76 Credit Hours**

Note: PSY 100 Orientation and WKO 107 Workplace Skills Preparation are required during the first semester of attendance for all students entering this program. The general education requirement for the A.A.S. degree is RDG 114 Critical Reading for College (Depending upon placement scores).

	Semester Hours
General Education Courses	24
Area I – Written Composition	3
• ENG 101 English Composition I	
Area II – Humanities & Fine Arts	6
• SPH 107 Fundamentals of Public Speaking	
• Humanities and Fine Arts Course	
Area III – Natural Science & Mathematics	12
• Two 1-hour PED activity courses	2
• PHY 120 Introduction to Physics	4
<i>Select one of the following courses:</i>	3
• CIS 130 Introduction to Information Systems	
• CIS 146 Microcomputer Applications	
<i>Select one of the following courses:</i>	3
• MTH 100 Intermediate College Algebra	
• MTH 110 Finite Mathematics	
Area IV – History, Social, & Behavioral Sciences	3
<i>Select one of the following courses:</i>	
• PSY 200 General Psychology	
• ECO 231 Principles of Macroeconomics	

Pre-Professional Courses	2
• PSY 100 Orientation	1
• WKO 107 Workplace Skills Preparation	1

Area V – Major Courses	50
• ASE 101 Fundamentals of AutomotiveTech	3
• ASE 110 Electrical and Electronic Systems I	3
• ASE 121 Braking Systems	3
• ASE 122 Suspension and Steering	3
• ASE 124 Engine Repair I	3
• ASE 130 Drive Train and Axles	3
• ASE 133 Motor Vehicle Air Conditioning	3
• ASE 150 Dealership Work Experience	2
• ASE 160 Dealership Work Experience	2
• ASE 210 Electrical and Electronics Systems II	3
• ASE 220 Engine Repair II	3
• ASE 224 Manual Transmission and Transaxle	3
• ASE 230 Automatic Transmission and Transaxle	3
• ASE 239 Engine Performance I	3
• ASE 244 Engine Performance II	3
• ASE 246 Automotive Emissions	3
• ASE 250 Dealership Work Experience	2
• ASE 260 Dealership Work Experience	2

**AUTOMOTIVE SERVICE
General Motors ASEP
Associate in Applied Science Degree
76 Credit Hours**

Note: PSY 100 Orientation and WKO 107 Workplace Skills Preparation are required during the first semester of attendance for all students entering this program. The general education requirement for the A.A.S. degree is RDG 114 Critical Reading for College (Depending upon placement scores).

	Semester Hours
General Education Courses	24
Area I – Written Composition	3
• ENG 101 English Composition I	
Area II – Humanities & Fine Arts	6
• SPH 107 Fundamentals of Public Speaking	
• Humanities and Fine Arts Course	
Area III – Natural Science & Mathematics	12
• Two 1-hour PED activity courses	2
• PHY 120 Introduction to Physics	4
<i>Select one of the following courses:</i>	3
• CIS 130 Introduction to Information Systems	
• CIS 146 Microcomputer Applications	
<i>Select one of the following courses:</i>	3
• MTH 100 Intermediate College Algebra	
• MTH 110 Finite Mathematics	
Area IV – History, Social, & Behavioral Sciences	3
<i>Select one of the following courses:</i>	
• PSY 200 General Psychology	
• ECO 231 Principles of Macroeconomics	

Pre-Professional Courses	2
• PSY 100 Orientation	1
• WKO 107 Workplace Skills Preparation	1

Area V – Major Courses	50
• ASE 101 Fundamentals of Automotive Tech	3
• ASE 110 Electrical and Electronic Systems I	3
• ASE 121 Braking Systems	3
• ASE 122 Suspension and Steering	3
• ASE 124 Engine Repair I	3
• ASE 130 Drive Train and Axles	3
• ASE 133 Motor Vehicle Air Conditioning	3
• ASE 150 Dealership Work Experience	2
• ASE 160 Dealership Work Experience	2
• ASE 210 Electrical and Electronics Systems II	3
• ASE 220 Engine Repair II	3
• ASE 224 Manual Transmission and Transaxle	3
• ASE 230 Automatic Transmission and Transaxle	3
• ASE 239 Engine Performance I	3
• ASE 244 Engine Performance II	3
• ASE 246 Automotive Emissions	3
• ASE 250 Dealership Work Experience	2
• ASE 260 Dealership Work Experience	2

Pre-Professional Courses	2
• PSY 100 Orientation	1
• WKO 107 Workplace Skills Preparation	1

Area V – Major Courses	50
• ASE 101 Fundamentals of Automotive Technology	3
• ASE 110 Electrical and Electronic Systems I	3
• ASE 121 Braking Systems	3
• ASE 122 Suspension and Steering	3
• ASE 124 Engine Repair I	3
• ASE 130 Drive Train and Axles	3
• ASE 133 Motor Vehicle Air Conditioning	3
• ASE 150 Dealership Work Experience	2
• ASE 160 Dealership Work Experience	2
• ASE 210 Electrical and Electronics Systems II	3
• ASE 220 Engine Repair II	3
• ASE 224 Manual Transmission and Transaxle	3
• ASE 230 Automatic Transmission and Transaxle	3
• ASE 239 Engine Performance I	3
• ASE 244 Engine Performance II	3
• ASE 246 Automotive Emissions	3
• ASE 250 Dealership Work Experience	2
• ASE 260 Dealership Work Experience	2

AUTOMOTIVE SERVICE
Toyota T-TEN
Associate in Applied Science Degree
76 Credit Hours

Note: PSY 100 Orientation and WKO 107 Workplace Skills Preparation are required during the first semester of attendance for all students entering this program. The general education requirement for the A.A.S. degree is RDG 114 Critical Reading for College (Depending upon placement scores).

	Semester Hours
General Education Courses	24
Area I – Written Composition	3
• ENG 101 English Composition I	
Area II – Humanities & Fine Arts	6
• SPH 107 Fundamentals of Public Speaking	
• Humanities and Fine Arts Course	
Area III – Natural Science & Mathematics	12
• Two 1-hour PED activity courses	2
• PHY 120 Introduction to Physics	4
<i>Select one of the following courses:</i>	3
• CIS 130 Introduction to Information Systems	
• CIS 146 Microcomputer Applications	
<i>Select one of the following courses:</i>	3
• MTH 100 Intermediate College Algebra	
• MTH 110 Finite Mathematics	
Area IV – History, Social, & Behavioral Sciences	3
<i>Select one of the following courses:</i>	
• PSY 200 General Psychology	
• ECO 231 Principles of Macroeconomics	

**To be admitted into one of the ASE programs a student must hold a valid driver's license and have a satisfactory driving record so that he/she is insurable under the dealership's automotive insurance carrier. The student must also secure a participating product specific dealership sponsor.*

AUTOMOTIVE SERVICE
Course Descriptions

ASE 101	FUND. OF AUTOMOTIVE TECHNOLOGY	3 HOURS
<i>Prerequisite: As required by program.</i>		
This course provides basic instruction in Fundamentals of Automotive Technology. CORE		
ASE 110	ELECTRICAL AND ELECTRONIC SYSTEMS I	3 HOURS
<i>Prerequisite: As required by program.</i>		
This is an introductory course in automotive electrical and electronic systems. Emphasis is placed on troubleshooting and repair of systems, subsystems, and components. CORE		
ASE 121	BRAKING SYSTEMS	3 HOURS
<i>Prerequisite: As required by program.</i>		
This course provides instruction in automotive technology or auto mechanics. Emphasis is placed on the practical application of brakes. CORE		
ASE 122	SUSPENSION AND STEERING	3 HOURS
<i>Prerequisite: As required by program.</i>		
This course provides instruction in automotive technology or auto mechanics. Emphasis is placed on the practical application of steering and suspension. CORE		
ASE 124	ENGINE REPAIR I	3 HOURS
<i>Prerequisite: As required by program.</i>		
This course provides instruction on the operation design, and superficial repair of automotive engines. Emphasis is placed on understanding the four stroke cycle, intake and exhaust		

manifolds and related parts, engine mechanical timing components, engine cooling and lubrication system principles and repairs, and basic fuel and ignition operation. CORE

ASE 130 DRIVE TRAIN AND AXLES 3 HOURS

Prerequisite: As required by program.

This course provides basic instruction in automotive drive trains and axles. Emphasis is placed on the understanding and application of basic internal and external operation relating to proper operation and drivability. CORE

ASE 133 MOTOR VEHICLE AIR CONDITIONING 3 HOURS

Prerequisite: As required by program.

This course provides basic instruction in theory, operation, and repair of automotive heating and air conditioning systems. Emphasis is placed on the understanding and repair of vehicle air conditioning and heating systems, including but not limited to air management, electrical and vacuum controls, refrigerant recovery, and component replacement.

ASE 150 DEALERSHIP WORK EXP. 2 HOURS

Prerequisite: As required by program

At the end of each on-campus period, the student returns to the sponsoring dealership to complete this segment of the program working full-time under the supervision of the dealership student work coordinator. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. Although indicated as 10 contact hours, students generally work on a full-time basis (40 hours per week) at the dealership. An evaluation of the student's in dealership work performance is completed by the dealership supervisor.

ASE 160 DEALERSHIP WORK EXP. 2 HOURS

Prerequisite: As required by program

At the end of each on-campus period, the student returns to the sponsoring dealership to complete this segment of the program working full-time under the supervision of the dealership student work coordinator. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. Although indicated as 10 contact hours, students generally work on a full-time basis (40 hours per week) at the dealership. An evaluation of the student's in dealership work performance is completed by the dealership supervisor.

ASE 210 ELECTRICAL AND ELECTRONIC SYSTEMS II 3 HOURS

Prerequisite: As required by program.

This course provides instruction in advanced automotive electrical and electronic systems. Emphasis is placed on advanced troubleshooting and repair of electrical systems, subsystems, and components. CORE

ASE 220 ENGINE REPAIR II 3 HOURS

Prerequisite: As required by program.

This course provides in depth instruction concerning internal engine diagnosis, overhaul and repair, including but not necessarily limited to the replacement of timing chains, belts, and gears, as well as the replacement or reconditioning of valve train components as well as replacement of pistons, connecting rods, piston rings, bearings, lubrication system components, gaskets, and oil seals.

ASE 224 MANUAL TRANSMISSION AND TRANSAXLE 3 HOURS

Prerequisite: As required by program.

This course covers basic instruction in manual transmissions and transaxles. Emphasis is placed on the understanding and application of basic internal and external operation relating to proper operation and drivability.

ASE 230 AUTOMATIC TRANSMISSION AND TRANSAXLE 3 HOURS

Prerequisite: As required by program.

This course provides basic instruction in automatic transmissions and transaxles. Emphasis is placed on the comprehension of principles and power-flow of automatic transmissions and repairing or replacing internal and external components. CORE

ASE 239 ENGINE PERFORMANCE I 3 HOURS

Prerequisite: As required by program.

This course provides basic instruction in engine performance with emphasis on fuel and ignition systems relating to engine operation. CORE

ASE 244 ENGINE PERFORMANCE II 3 HOURS

Prerequisite: As required by program.

This course provides advanced instruction in engine performance. Emphasis is placed on engine management and computer controls of ignition, fuel, and emissions systems relating to engine performance and drivability. CORE

ASE 246 AUTOMOTIVE EMISSIONS 3 HOURS

Prerequisite: As required by program.

This is an introductory course in automotive emission systems. Emphasis is placed on troubleshooting and repair of systems, subsystems, and components.

ASE 250 DEALERSHIP WORK EXP. 2 HOURS

Prerequisite: As required by program

At the end of each on-campus period, the student returns to the sponsoring dealership to complete this segment of the program working full-time under the supervision of the dealership student work coordinator. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. Although indicated as 10 contact hours, students generally work on a full-time basis (40 hours per week) at the dealership. An evaluation of the student's in dealership work performance is completed by the dealership supervisor.

ASE 260 DEALERSHIP WORK EXP. 2 HOURS

Prerequisite: As required by program

At the end of each on-campus period, the student returns to the sponsoring dealership to complete this segment of the program working full-time under the supervision of the dealership student work coordinator. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. Although indicated as 10 contact hours, students generally work on a full-time basis (40 hours per week) at the dealership. An evaluation of the student's in dealership work performance is completed by the dealership supervisor.