AMF - AUTOMOTIVE (FORD)

AMF101 Automotive Service Theory - Ford ASSET
Credits 2 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Automotive Technology - Ford ASSET program. Concurrent registration in AMF102 is required.
This is an introductory course where students study basic shop practices and basic vehicle services and systems. Shop practice topics include shop safety, service manuals usage, precision measurement, shop tools and equipment. Basic vehicle services include oil changes, fluid inspections, vehicle inspections, tire and wheel information, TPMS systems and safety inspection.
Additional Course Fee: $35.00

AMF102 Automotive Service Lab - Ford ASSET
Credit 1 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Automotive Technology - Ford ASSET program. Concurrent registration in AMF101 is required.
This is an introductory course where students perform fundamental shop practices and fundamental vehicle services. Shop practice topics include shop safety, service manuals usage, online training procedures, techniques of precision measurement, shop tools and equipment, and fasteners. Basic vehicle services include oil changes, fluid inspections, vehicle inspections, tire and wheel information, safety inspection, multi-point inspection and new car delivery inspection.
Additional Course Fee: $35.00

AMF110 Internal Combustion Engine Theory - Ford ASSET
Credits 3 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF111 or instructor consent is required.
In this course students study the complete analysis of construction, working principles and proper service procedures for modern internal combustion engines. In addition, instruction is given in engine measurements, cooling systems, lubrication systems and fault diagnosis.
Additional Course Fee: $5.00

AMF111 Internal Combustion Engine Lab - Ford ASSET
Credits 2 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF110 is required.
In this course students explore the proper disassembly, cleaning, evaluation and re-assembly of an internal combustion engine. This includes cylinder heads, cylinder blocks, crankshafts and camshafts. Students use various precision measuring instruments to evaluate condition and clearances, and validate specification on assigned engine assemblies.
Additional Course Fee: $35.00

AMF116 Fundamental Brakes and Suspension Theory - Ford ASSET
Credits 2 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Automotive Technology - Ford ASSET program. Concurrent enrollment in AMF117 is required.
This course is the study of the basic theory and operation of automotive brakes, steering and suspension systems components. Students study base brake drum and caliper service and repair procedures, basic wheel alignment procedures and tire and wheel balancing. Emphasis is on system component function, identification and repair processes.
Additional Course Fee: $5.00

AMF117 Fundamental Brakes and Suspension Lab - Ford ASSET
Credits 2 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Automotive Technology - Ford ASSET program or instructor consent. Concurrent enrollment in AMF116 is required.
Students perform basic inspections, removal, replacement and repair of automotive braking, steering and suspension system components. Emphasis is on suspension and steering system inspections, tire and wheel service, basic wheel alignment, and disc and drum brake system service.
Additional Course Fee: $35.00

AMF118 Electrical Systems Theory - Ford ASSET
Credits 3 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF119 is required.
In this course students study the basic principles of electricity such as voltage, amperage, resistance, series/parallel circuits, Ohms Law, induction and measuring techniques. In addition, the theories and components commonly found in automotive battery, charging, starting, lighting and accessory systems, along with an introduction to computer-controlled electrical systems and components, are covered.
Additional Course Fee: $5.00

AMF119 Electrical Systems Lab - Ford ASSET
Credits 2 Summer - even years/Fall - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF118 is required.
This course is the study of basic electrical system operation, testing and diagnosis. Students use various pieces of electrical testing equipment to measure and interpret voltage, resistance and amperage measurements on series, parallel and series/parallel circuits. In addition, students test, service and diagnose battery, charging, starting, lighting and accessory systems of the automobile. An introduction to computer-controlled electrical systems and components is also covered.
Additional Course Fee: $35.00

AMF132 Automotive Electronics Theory - Ford ASSET
Credits 3 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF133 or instructor consent is required. In this course students explore electrical and electronic circuit theory, operation and diagnostics. The application of electrical components in complex circuits, with the corresponding methods of diagnosis and repair, is covered. This course includes instruction on the basics of semiconductors such as diodes, LEDs and transistors. Emphasis is on learning to use diagnostic tools such as DMMs, scantools and oscilloscopes.
Additional Course Fee: $5.00

AMF133 Automotive Electronics Lab - Ford ASSET
Credit 1 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF132 or instructor consent is required. In this course students explore and perform service, repair and diagnostic procedures on modern electrical, electronic and computer control systems as found on late model automobiles. Emphasis is on learning to use digital multimeters, scantools, oscilloscopes and other electrical diagnostic equipment.
Additional Course Fee: $35.00

AMF134 Ford Electric/Hybrid Vehicle Theory
Credit 1 Winter - even years/Spring - odd years

Registration Requirement: Concurrent enrollment in AMF135 is required. In this course students study the basic theory principles of Ford hybrid vehicle operation. Students learn safety fundamentals, voltage, amperage and testing fundamental as related to hybrid vehicles.
Additional Course Fee: $5.00

AMF135 Ford Electric/Hybrid Vehicle Lab
Credit 1 Winter - even years/Spring - odd years

Registration Requirement: Concurrent enrollment in AMF134 is required. In this course students conduct hands-on lab activities in regard to principles of Ford hybrid vehicle operation. Lab activities enhance students' safety fundamentals while diagnosing hybrid vehicles. Students conduct various diagnostic tests on Ford hybrid vehicles.
Additional Course Fee: $35.00

AMF136 Advanced Brake Systems Theory - Ford ASSET
Credits 3 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF137 or instructor consent is required. In this course students study the theory and operation of the service, repair and diagnostic procedures applicable to disc and drum base braking and anti-lock braking systems used on modern automobiles.
Additional Course Fee: $5.00

AMF137 Advanced Brake Systems Lab - Ford ASSET
Credit 1 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF136 or instructor consent is required. In this course students remove, replace, diagnose, service and repair disc and drum base brake and anti-lock braking systems on late-model automobiles.
Additional Course Fee: $35.00

AMF152 Automatic Transmission Theory - Ford ASSET
Credits 3 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF153 or instructor consent is required. In this course students study the principles and theory of hydraulically and electrically operated transmissions, transaxles and torque converters. Emphasis is on determining how each component functions and works together within the assembly. The details of electronic controls and the hydraulic to electronic interaction are discussed.
Additional Course Fee: $5.00

AMF153 Automatic Transmission Lab - Ford ASSET
Credits 3 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF152 or instructor consent is required. In this course students explore the function, operation, overhaul, repair, test procedures and diagnostic process of automatic transmission and transaxles commonly used in modern automobiles. Emphasis is on completely disassembling, inspecting and reassembling all components including gears, pumps, hydraulic control valves and differentials. Students perform various tests and diagnostic procedures on automatic transmission equipped vehicles.
Additional Course Fee: $35.00

AMF156 Manual Drive Train and Axles Theory - Ford ASSET
Credits 3 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF157 or instructor consent is required. A theory course covering the function, operation and design of the power train components such as clutches, transmissions, transaxles, drive axles, drive lines, u-joints, standard and locking differentials and four-wheel drive components.
Additional Course Fee: $5.00

AMF157 Manual Drive Train and Axles Lab - Ford ASSET
Credit 1 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF156 or instructor consent is required. This is a lab class covering the diagnosis, service and repair of the power train components such as clutches, transmissions, transaxles, drive axles, drivelines, u-joints, standard and locking differentials and four-wheel drive components. Safety and safety instruction is conducted throughout this course.
Additional Course Fee: $35.00

AMF170 Automotive Project - Ford ASSET
Credit 1 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent.
In this course students study, research, present, write and discuss new automotive technologies, various diagnostic techniques and advanced automotive systems related to engines, basic electrical, brakes, automotive electronics and engine performance. In addition, students are required to participate in approved service projects, automotive marketing/recruitment events, automotive skill contests and/or other approved activities.

AMF171 Ford e-Learning Fundamentals 1
Credit 1 Fall - even years/Winter - even years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent.
This is an e-learning on line course where students study fundamental vehicle services and systems studied during the dealership experience. Students reinforce topics covered during the terms on campus. This course utilizes an online learning and assessment system to achieve proficiency relevant to future coursework and employment.
Additional Course Fee: $50.00

AMF172 Ford e-Learning Fundamentals 2
Credit 1 Summer - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent.
This is an e-learning on line course where students study fundamental vehicle services and systems studied during the dealership experience. Students reinforce topics covered during the terms on campus. This course utilizes an online learning and assessment system to achieve proficiency relevant to future coursework and employment.
Additional Course Fee: $50.00

AMF173 Ford e-Learning Fundamentals 3
Credit 1 Fall - odd years/Winter - odd years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent.
This is an e-learning on line course where students study fundamental vehicle services and systems studied during the dealership experience. Students reinforce topics covered during the terms on campus. This course utilizes an online learning and assessment system to achieve proficiency relevant to future coursework and employment.
Additional Course Fee: $50.00

AMF174 Ford e-Learning Fundamentals 4
Credit 1 Summer - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent.
This is an e-learning on line course where students study fundamental vehicle services and systems studied during the dealership experience. Students reinforce topics covered during the terms on campus. This course utilizes an online learning and assessment system to achieve proficiency relevant to future coursework and employment.
Additional Course Fee: $50.00

AMF216 Engine Performance Theory - Ford ASSET
Credits 3 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF217 is required or instructor consent.
In this course students learn terminology, principles of operation, theory, diagnosis and testing procedures involving electronic fuel injection inputs and outputs, ignition systems, fuel delivery and introductory emissions devices. Basic techniques and procedures for the service and repair of electronic fuel injection systems, fuel delivery and related components are covered.
Additional Course Fee: $5.00

AMF217 Engine Performance Lab - Ford ASSET
Credits 2 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF216 or instructor consent is required.
In this course students learn basic techniques and procedures for the service and repair of engine performance related systems. Students learn and practice basic diagnostic skills with emphasis on developing the ability to analyze and diagnose the operation of all components directly related to engine performance as applied to the modern automobile engine, electronic fuel injection and ignition systems. Emphasis is placed on ignition systems and computer-controlled electronic fuel injection system inputs and outputs.
Additional Course Fee: $35.00

AMF251 Advanced Engine Performance Theory - Ford ASSET
Credits 3 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF252 or instructor consent is required.
In this course students study the terminology, principles of operation, theory, diagnosis and testing procedures involving electronic fuel injection inputs and outputs, emission and OBDII systems. Advanced methods, techniques and procedures for the service and repair of electronic fuel injection systems, emission systems and related components are covered.
Additional Course Fee: $5.00

AMF252 Advanced Engine Performance Lab - Ford ASSET
Credits 2 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF251 or instructor consent is required.
In this course students explore techniques and procedures for the service and repair of electronic fuel injection systems, ignition systems and related components. In addition, students learn and practice diagnostic skills with emphasis on developing the ability to analyze and diagnose the operation of all components directly related to OBDII engine performance electronics, emission and fuel delivery related systems.
Additional Course Fee: $35.00

AMF253 Advanced Steering and Suspension Theory - Ford ASSET
Credits 3 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF254 or instructor consent is required.
Theory of operation, service, repair and diagnostic procedures of the modern steering systems, suspension systems and alignments on late model Ford and Lincoln/Mercury cars and light trucks.
Additional Course Fee: $5.00

AMF254 Advanced Steering and Suspension Lab - Ford ASSET
Credit 1 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF253 or instructor consent is required. Instruction is given in the diagnosis, servicing and repair of automotive suspension systems, steering systems and alignments on late model Ford and Lincoln/Mercury cars and light trucks.
Additional Course Fee: $35.00

AMF256 Heating and Air Conditioning Theory - Ford ASSET
Credits 3 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF257 or instructor consent is required. Theory of operation, service, repair and diagnostic procedures of the modern heating, defrosting and air conditioning systems on late model Ford and Lincoln/Mercury cars and light trucks.
Additional Course Fee: $5.00

AMF257 Heating and Air Conditioning Lab - Ford ASSET
Credit 1 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF256 or instructor consent is required. Instruction is given in the diagnosis, troubleshooting, service and repair of the auto air conditioning, heating and defrosting systems on late model Ford and Lincoln cars and light trucks.
Additional Course Fee: $35.00

AMF258 Advanced Automotive Electronics Theory - Ford ASSET
Credits 3 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF259 or instructor consent is required. In this course students study the theory and operation of electrical and electronic systems with emphasis on computer-controlled systems, automotive computer operation and multiplexed vehicle communications. Students explore advanced procedures employed in the diagnosis of computer-controlled systems. This includes troubleshooting methods, test equipment usage and test result interpretation.
Additional Course Fee: $5.00

AMF259 Advanced Automotive Electronics Lab - Ford ASSET
Credit 1 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF258 or instructor consent is required. In this course students explore and perform service, repair and diagnostic procedures on modern electrical systems, semiconductor circuits, computer control systems and vehicle multiplexing communication systems as found on late model automobiles. Emphasis is on diagnosing with the use of digital multimeters, oscilloscopes, scantools and other electronic diagnosing test equipment.
Additional Course Fee: $35.00

AMF270 Advanced Automotive Project - Ford ASSET
Credit 1 Winter - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. In this course students study, research, present, write and discuss new automotive technologies, various diagnostic techniques and advanced automotive systems related to engines, basic electrical, brakes, automotive electronics, engine performance, emissions, steering and suspension, air conditioning and automatic and standard transaxles. In addition, students are required to participate in approved service projects, automotive marketing/recruitment events, automotive skill contests and/or other approved activities.

AMF271 Ford Diesel Theory - Ford ASSET
Credit 1 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF272 or instructor consent is required. In this theory course, students explore the proper diagnosis and repair procedures of the 7.3L and 6.0L Ford diesel engine. Students also study fundamental diesel engine performance.
Additional Course Fee: $50.00

AMF272 Ford Diesel Lab - Ford ASSET
Credit 1 Winter - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. Concurrent enrollment in AMF271 or instructor consent is required. In this lab course, students explore the proper diagnosis and repair procedures of the 7.3L and 6.0L Ford diesel engine. Students also complete fundamental diesel engine performance lab activities.
Additional Course Fee: $50.00

AMF273 Advanced Ford Diesel Theory - Ford ASSET
Credit 1 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent. Concurrent enrollment in AMF274 is required. In this theory course, students explore the proper diagnosis and repair procedures of the 6.4L and 6.7L Ford diesel engine. Students also study advanced diesel engine performance.
Additional Course Fee: $50.00

AMF274 Advanced Ford Diesel Lab - Ford ASSET
Credit 1 Summer - odd years/Fall - even years

Registration Requirement: Acceptance into the Ford ASSET program or instructor consent. Concurrent enrollment in AMF273 is required. In this lab course, students explore the proper diagnosis and repair procedures of the 6.4L and 6.7L Ford diesel engine. Students also complete advanced diesel engine performance lab activities.
Additional Course Fee: $50.00

AMF281 Automotive Dealership Experience 1 - Ford ASSET
Credits 6 Fall - even years/Winter - even years

Registration Requirement: Acceptance into the Ford ASSET program. The student will be employed a minimum of 200 hours per term in a pre-assigned Ford or Lincoln dealership. Through agreement with the employer, a program instructor will coordinate the student's work experience with his/her college studies. The expectation in each dealership experience is for the student to complete increasingly complex tasks and work with increasing independence.
Additional Course Fee: $10.00

AMF282 Automotive Dealership Experience 2 - Ford ASSET
Credits 6 Summer - even years/Spring - odd years

Registration Requirement: Acceptance into the Ford ASSET program. The student will be employed a minimum of 200 hours per term in a pre-assigned Ford or Lincoln dealership. Through agreement with the employer, a program instructor will coordinate the student's work experience with his/her college studies. The expectation in each dealership experience is for the student to complete increasingly complex tasks and work with increasing independence.
Additional Course Fee: $10.00

AMF283 Automotive Dealership Experience 3 - Ford ASSET
Credits 6 Fall - odd years/Winter - odd years

Registration Requirement: Acceptance into the Ford ASSET program. The student will be employed a minimum of 200 hours per term in a pre-assigned Ford or Lincoln dealership. Through agreement with the employer, a program instructor will coordinate the student's work experience with his/her college studies. The expectation in each dealership experience is for the student to complete increasingly complex tasks and work with increasing independence.
Additional Course Fee: $10.00

AMF284 Automotive Dealership Experience 4 - Ford ASSET
Credits 6 Summer - odd years/Spring - even years

Registration Requirement: Acceptance into the Ford ASSET program. The student will be employed a minimum of 200 hours per term in a pre-assigned Ford or Lincoln dealership. Through agreement with the employer, a program instructor will coordinate the student's work experience with his/her college studies. The expectation in each dealership experience is for the student to complete increasingly complex tasks and work with increasing independence.
Additional Course Fee: $10.00

Course fees are subject to change. Additional section fees (web, hybrid, etc.) may apply.