Area of Interest: Transportation

Automotive Service Technician (GM-ASEP) - Apprenticeship

College Certificate

Program Code: 0568S01FWO

32 Weeks

Ottawa Campus

Our Program

Fulfill the in-class requirements for your Automotive Service Technician (GM) Apprenticeship.

The Automotive Service Technician (GM-ASEP) Apprenticeship program has been designed by General Motors (GM) to prepare Automotive Service Technician apprentices for a career with GM dealerships.

Applicants to the Automotive Service Technician GM program must:

- be currently employed in the trade by General Motors
- be formally registered as apprentices with the Ministry of Labour, Training and Skills Development (MLTSD)
- have a valid Offer of Classroom Training from the Ministry of Labour, Training and Skills Development (MLTSD) that includes your Ministry Client ID and approved Class Number

Graduates are required to pass the Federal Red Seal Examination to qualify for a Certificate of Qualification in the Automotive Services Technician trade.

If you are not an apprentice but may want to become one, visit https://www.earnwhileyoulearn.ca/ for detailed information.

For Registered Apprentices: Over a two-year period, apprentices alternate between formal in-class training and hands-on work terms. During the work terms, apprentices are onsite at GM dealerships where they can apply their theoretical and practical skills while working on vehicles for real customers.

Classroom instructors are trained by GM and know the latest trends in technology. General Motors provides apprentices with the opportunity to work on new vehicles, training components and various aids. Apprentices learn about electrical systems, air conditioning systems, fuel systems, drivelines, engine mechanicals, power trains, steering and suspensions, brakes, options and accessories, computer-operated and assisted systems, truck components and systems, and body and trim. Apprentices also develop the ability to identify and analyze problems and to apply the appropriate solutions.

SUCCESS FACTORS

This program is well-suited for apprentices who:

- Enjoy a hands-on approach to learning about the automotive industry.
- Have strong observational and analytical skills.
- Enjoy working as a member of a team.

Employment

Apprentices are employed by General Motors dealerships as a prerequisite to training.

Program of Study

Level: 01	Courses	Hours
AST8613	Work Practices 1	32.0
AST8614	Engine Systems 1	40.0
AST8615	Drive Train Systems 1	32.0
AST8616	Electrical/Electronics and Emissions Systems 1	96.0
AST8618	Suspension/Steering and Brake Systems 1	40.0
Level: 02	**Courses**	**Hours**
AST8623	Work Practices 2	32.0
AST8624	Engine Systems 2	40.0
AST8625	Drive Train Systems 2	32.0
AST8626	Electrical/Electronics and Emission Systems 2	96.0
AST8628	Suspension/Steering and Brake Systems 2	40.0
Level: 03	**Courses**	**Hours**
AST8632	Electrical/Electronics and Emission Systems 3	96.0
AST8633	Work Practices 3	32.0
AST8634	Engine Systems 3	32.0
AST8635	Drive Train Systems 3	40.0
AST8638	Suspension/Steering and Brake Systems 3	40.0
Level: 04	**Courses**	**Hours**
AST8643	Work Practices 4	32.0
AST8644	Engine Systems 4	32.0
AST8645	Drive Train Systems 4	40.0
AST8648	Suspension/Steering and Brake Systems 4	40.0
AST8649	Electrical/Electronics and Emission Systems 4	96.0

Fees for the 2024/2025 Academic Year

Tuition Fees: $400 per level.

Incidental Fee: $150 per level.

Information Technology Fee: $43.86 per level.

Students are responsible for supplies, including textbooks, safety footwear, and parking and locker fees, if applicable.

Admission Requirements for the 2025/2026 Academic Year

Program Eligibility

- General Motors requires that the applicants be Grade 12 graduates, or equivalent, with a broad-based education covering English, mathematics, and the sciences.

- Trainees must be sponsored by a General Motors dealer.

- Interested potential applicants should contact a local GM dealer or the (GM-ASEP) coordinator at the College.

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Application Information

AUTOMOTIVE SERVICE TECHNICIAN (GM-ASEP) - Apprenticeship
Program Code 0568S01FWO

Registration for Apprenticeship programs takes place through the Ministry of Training Colleges and Universities. For further information, contact:

Ministry of Training Colleges and Universities
347 Preston Street, 3rd Floor, Suite 310
Ottawa, ON K1S 3H8

https://www.ontario.ca/page/start-apprenticeship
Telephone: 613-731-7100
Toll-free: 1-877-221-1220

Contact Information

Program Coordinator(s)

- Jason Dmuchalsky, mailto:dmuchaj@algonquincollege.com , 613-727-4723, ext. 6553

Course Descriptions

AST8613 Work Practices 1

This course supplies knowledge to identify and select safe work procedures, power and hand tools, fasteners and tightening procedures, bearings, seals and sealants, precision measuring tools, oxyacetylene heating, and cutting and to interpret electronic service manual layouts. These goals are accomplished through theory and practical labs.

Prerequisite(s): none
Corerequisite(s):AST8614 and AST8615 and AST8616 and AST8618

AST8614 Engine Systems 1

This course familiarizes apprentices with the operating theory of the internal combustion engine. The theory and applications of engine fundamentals, cylinder blocks and crankshaft assemblies. Emphasis is placed on theory and practical labs.

Prerequisite(s): none
Corerequisite(s):AST8613 and AST8615 and AST8616 and AST8618

AST8615 Drive Train Systems 1

This course familiarizes apprentices with the types and styles of automotive drivelines. The operating principles of clutches and standard transmissions are discussed in detail. Emphasis is placed on operation theory, with one-half of the class time spent in practical labs.

Prerequisite(s): none
Corerequisite(s):AST8613 and AST8614 and AST8616 and AST8618

AST8616 Electrical/Electronics and Emissions Systems 1

This course covers the theory and applications of electrical fundamentals, electrical/electronic diagnostic test equipment, electrical circuit calculations, applied electrical schematics, circuit repair and protection devices, electromagnetic device fundamentals, electronic fundamentals, fuel system fundamentals, intake and exhaust systems, emission control systems and hybrid systems. This course provides the basic introductory information which helps the apprentice understand a variety of fuel and electrical systems used on the motor vehicle. Equal time is spent on theory and lab.

Prerequisite(s): none
Corerequisite(s):AST8613 and AST8614 and AST8615 and AST8618

AST8618 Suspension/Steering and Brake Systems 1

This course familiarizes apprentices with the operating principles of suspension, steering and brake systems. Emphasis is placed on safety and testing procedures. One-half of class time is spent in practical labs.

Prerequisite(s): none
Corerequisite(s):AST8613 and AST8614 and AST8615 and AST8616

AST8623 Work Practices 2

This course covers operating and servicing procedures for automotive air conditioning systems. Emphasis is placed on safe operating procedures for charging, evacuation and recovery systems. This course also covers body Mechanical adjustments. Class time is divided between theory and practical labs.

Prerequisite(s): AST8613
Corerequisite(s):AST8624 and AST8625 and AST8626 and AST8628

AST8624 Engine Systems 2

In this course, apprentices identify disassembly and assembly procedures for Overhead Camshaft (OHC) internal combustion engines. Emphasis is placed on developing practical skills.

Prerequisite(s): AST8614
Corerequisite(s):AST8623 and AST8625 and AST8626 and AST8628

AST8625 Drive Train Systems 2

This course familiarizes apprentices with the types and styles of standard transmissions and transaxles. Introductory information relating to rear axles and drive shafts is covered. Equal time is spent on theory and lab.

Prerequisite(s): AST8615
Corerequisite(s):AST8623 and AST8624 and AST8626 and AST8628

AST8626 Electrical/Electronics and Emission Systems 2

This course provides electrical knowledge to identify, describe, and diagnose integrated electronic systems and accessories. Included is the theory and applications of electrical cranking systems and control circuits, cranking system diagnostics and testing, electronic fundamentals, charging systems and control. Class time is split equally between theory and practical labs.

Prerequisite(s): AST8616
Corerequisite(s):AST8623 and AST8624 and AST8625 and AST8628

AST8628 Suspension/Steering and Brake Systems 2

This course familiarizes apprentices with the servicing and adjustment procedures for suspension, steering and brake systems. Emphasis is placed on safety and testing procedures. One-half of class time is spent in practical labs.

Prerequisite(s): AST8618
Corerequisite(s):AST8623 and AST8624 and AST8625 and AST8626

AST8632 Electrical/Electronics and Emission Systems 3

This course gives apprentices the opportunity to learn the terminology, construction, operating fundamentals, and diagnostic routines used in servicing General Motors computerized engine management systems and body electrical accessories.

Prerequisite(s): AST8623
Corerequisite(s):AST8633 and AST8634 and AST8635 and AST8638

AST8633 Work Practices 3

This course covers operating and servicing procedures for advanced air conditioning systems. Upon completion of this course, apprentices are able to diagnose current automatic temperature-controlled air conditioning systems, repair or replace electronic system components, and use elaborate on-board diagnostic methods. Class time is divided between theory and practical labs.

Prerequisite(s): AST8623
Corerequisite(s):AST8632 and AST8634 and AST8635 and AST8638

AST8634 Engine Systems 3

This course prepares apprentices to diagnose and repair internal combustion engines. Emphasis is placed on developing a diagnostic approach to problem solving. This course also covers cylinder heads and related components construction, and operations and adjustment procedures. One-half of class time is spent in practical labs.

Prerequisite(s): AST8624
Corerequisite(s):AST8632 and AST8633 and AST8635 and AST8638

AST8635 Drive Train Systems 3

In this course, the apprentice studies various types of torque converters and automatic transmissions. The fundamentals, operating principles and construction are discussed. Limited slip differentials are covered at this time. Equal time is spent on theory and lab.

Prerequisite(s): AST8625
Corerequisite(s):AST8632 and AST8633 and AST8634 and AST8638

AST8638 Suspension/Steering and Brake Systems 3

This course familiarizes the apprentice mechanic with an in-depth study of vehicle suspension and steering systems. The operation and service procedure for the basic anti-lock brake systems is covered. Equal time is spent on theory and lab.

Prerequisite(s): AST8628

Corerequisite(s):AST8632 and AST8633 and AST8634 and AST8635

AST8643 Work Practices 4

This course covers the disable and enable procedures on intermediate and high voltage Vehicles. The course also goes over the different types of intermediate and high voltages systems used by GM and other manufactures. The new VIP platform used by GM is also taught through theory and Lab.

Prerequisite(s): AST8633
Corerequisite(s):AST8644 and AST8645 and AST8648 and AST8649

AST8644 Engine Systems 4

This course prepares apprentices for in-depth diagnosis and repair of internal combustion engines. With the aid of advanced equipment and tools, emphasis is placed on repair or replacement procedures. One-half of class time is spent in practical labs.

Prerequisite(s): AST8634
Corerequisite(s):AST8643 and AST8645 and AST8648 and AST8649

AST8645 Drive Train Systems 4

This course emphasizes the fundamentals, construction and operation of electronically controlled transmissions. The theory of operation, fundamentals, and construction of the four wheel drive power train is covered. Equal time is spent on theory and lab.

Prerequisite(s): AST8635
Corerequisite(s):AST8643 and AST8644 and AST8648 and AST8649

AST8648 Suspension/Steering and Brake Systems 4

This course familiarizes apprentices with the operation and servicing procedures for steering systems components. Throughout the course, emphasis is placed on the use of wheel alignment equipment, wheel balancers, and advanced vibration analyzers, tire pressure monitoring systems and electronic suspension systems. Course time is divided equally between theory and practical labs.

Prerequisite(s): AST8638
Corerequisite(s):AST8643 and AST8644 and AST8645 and AST8649

AST8649 Electrical/Electronics and Emission Systems 4

This course is designed to provide apprentice mechanics with advanced diagnosis and test procedures involved in the repair of distributorless ignition and fuel delivery systems. Other topics covered include diesel electronic fuel delivery fundamentals and operations, fuel management and emission related components, and supplemental inflatable restraint (S.I.R.) operation, and repair processes and hybrid systems. Equal time is spent on theory and lab.

Prerequisite(s): AST8632
Corerequisite(s):AST8643 and AST8644 and AST8645 and AST8648