

Area of Interest: Apprenticeships

Automotive Service Technician (Apprenticeship)

College Certificate

24 Weeks

Ottawa Campus

Academic Year: 2021/2022

Program Code: 0529S01FWO

Our Program

Become a journey person in the Automotive Service industry.

The Automotive Service Technician Algonquin College Certificate program is designed for registered apprentices who will be invited to register by the Ministry of Labour, Training and Skills Development (MLTSD).

Automotive Service Technician is a compulsory trade in Ontario. A Certificate of Qualification is required. To work outside of Ontario, a Red Seal Endorsement (RSE) is required.

If you are considering a future as an automotive service technician or a mechanic, you can find a career in independent garages, auto repair facilities, fleet servicing or automobile dealerships. You may also be able to find employment with the government, vehicle salvage facilities and insurance companies.

Applicants to the Automotive Service Technician program must:

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

To learn more about apprenticeships, visit <http://www.earnwhileyoulearn.ca/> for detailed information.

For Registered Apprentices:

This program fulfills the in-class requirements for your apprenticeship. It is divided into three levels (Beginner, Intermediate, Advanced) where you alternate between going to class for 8 weeks and honing your skills through working in the field for 8 - 12 months.

During your labs, you learn about:

- electrical systems
- air conditioning systems
- drivelines
- fuel systems

All faculty are industry professionals who will teach you the latest trends in technology, engine mechanicals and power trains.

At the end of this program, you qualify to write the Red Seal Endorsement (RSE) exam, which is recognized across Canada.

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

Graduates may be employed as apprentice technicians in the automotive service trade. Opportunities may exist in small garages, automobile dealerships, equipment supply firms and government.

Program of Study

Level: 01	Courses	Hours
AST8801	Work Practices	32.0
AST8803	Electrical, Electronics and Emission Systems I	96.0
AST8804	Drive Train Systems I	32.0
AST8806	Engine Systems I	40.0
AST8807	Suspension, Steering and Brake Systems I	40.0
Level: 02	Courses	Hours
AST8310	Air Conditioning Systems	32.0
AST8312	Electrical, Electronics and Emission Systems II	96.0
AST8313	Drive Train Systems II	32.0
AST8314	Suspension, Steering and Brake Systems II	40.0
AST8316	Engine Systems II	40.0
Level: 03	Courses	Hours
AST8320	Work Practices III	32.0
AST8324	Suspension, Steering and Brake Systems III	40.0
AST8325	Electrical, Electronics and Emission Systems III	96.0
AST8326	Engine Systems III	40.0
AST8327	Drive Train Systems III	32.0

Fees for the 2021/2022 Academic Year

Tuition Fees: \$400 per level.

Incidental Fee: \$150 per level.

Information Technology Fee: \$43.86 per level.

Algonquin College recommends that students purchase their textbooks. Students are responsible for supplies, including textbooks, safety footwear, safety glasses, and parking and locker fees, if applicable.

Admission Requirements for the 2022/2023 Academic Year

Program Eligibility

- Applicants must be formally registered as apprentices and be released by their sponsor to attend the College.
- Eligibility is determined by the Ministry of Labour, Training and Skills Development.

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Application Information**AUTOMOTIVE SERVICE TECHNICIAN (APPRENTICESHIP)**
Program Code 0529S01FWO

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

<http://www.ontario.ca/page/start-apprenticeship>

Telephone: 613-731-7100
Toll-free: 1-877-221-1220

Additional Information

For our post-secondary Automotive Program, please check our website for the Motive Power Technician Program.

For more information, please contact one of the following program coordinators:

- Martin Restoule, 613-727-4723 ext. 5153, <mailto:restoum@algonquincollege.com>
- Jason Dmuchalsky, 613-727-4723 ext. 6553, <mailto:dmuchaj@algonquincollege.com>

Course Descriptions**AST8310 Air Conditioning Systems**

Apprentices review the theory and applications of heating and ventilation systems, air conditioning fundamentals, and repairer's rights and responsibilities.

Prerequisite(s): AST8801
Corerequisite(s): AST8312 and AST8313 and AST8314 and AST8316

AST8312 Electrical, Electronics and Emission Systems II

Apprentices review the theory and applications of electrical circuit calculations, diagnostic test equipment, cranking systems and control circuits, cranking system diagnostics and testing, electronic fundamentals, electronic ignition fundamentals, charging systems and control circuits, gasoline fuel injection fundamentals and emission control systems.

Prerequisite(s): AST8803
Corerequisite(s): AST8310 and AST8313 and AST8314 and AST8316

AST8313 Drive Train Systems II

Apprentices review the theory and applications of front and rear wheel drive drivelines, transfer cases, torque converter assemblies, automatic transmission, and transaxle fundamentals and construction.

Prerequisite(s): AST8804
Corerequisite(s): AST8310 and AST8312 and AST8314 and AST8316

AST8314 Suspension, Steering and Brake Systems II

Apprentices review the theory and applications of suspension system fundamentals and servicing, manual and power assisted steering systems, alignment fundamentals, alignment equipment and hydraulic brake servicing.

Prerequisite(s): AST8807

Corequisite(s): AST8310 and AST8312 and AST8313 and AST8316

AST8316 Engine Systems II

Apprentices review the theory and applications of valve trains and camshafts, cylinder heads, turbochargers and superchargers.

Prerequisite(s): AST8806

Corequisite(s): AST8310 and AST8312 and AST8313 and AST8314

AST8320 Work Practices III

Apprentices review the theory, applications and diagnosis of air conditioning systems, and body and trim.

Prerequisite(s): none

Corequisite(s): none

AST8324 Suspension, Steering and Brake Systems III

Apprentices review the theory, application and diagnosis of power assisted brakes, anti-lock brakes, electronic braking, tire pressure monitoring systems, electronic suspension systems, vehicle pre-alignment and alignment.

Prerequisite(s): AST8314

Corequisite(s): AST8320 and AST8325 and AST8326 and AST8327

AST8325 Electrical, Electronics and Emission Systems III

Apprentices review the theory, application and diagnosis of computer fundamentals, supplemental restraint systems, distributorless ignition systems, computer controlled charging systems, power accessories and electrical options, gasoline fuel injection, diesel electronic fuel injection fundamentals, emissions controls and hybrid systems.

Prerequisite(s): AST8312

Corequisite(s): AST8320 and AST8324 and AST8326 and AST8327

AST8326 Engine Systems III

Apprentices review the theory, application and diagnosis of engine cooling systems, accessory drive belts and pulleys, lubrication systems, component failure analysis, and engine replacement and start-up preparation.

Prerequisite(s): AST8316

Corequisite(s): AST8320 and AST8324 and AST8325 and AST8327

AST8327 Drive Train Systems III

Apprentices review the theory, application and diagnosis of automatic transmission and transaxle pumps hydraulic systems and operations, electronic controls, transfer cases, four-wheel and all-wheel drive systems, alternate and hybrid drivelines.

Prerequisite(s): AST8313

Corequisite(s): AST8320 and AST8324 and AST8325 and AST8326

AST8801 Work Practices

Apprentices review the theory and applications of fasteners and tightening procedures, bearings, seals and sealants, precision measuring tools, oxyacetylene heating and cutting, hoists and lifting equipment and applied computer skills.

Prerequisite(s): none

Corequisite(s): AST8803 and AST8804 and AST8806 and AST8807

AST8803 Electrical, Electronics and Emission Systems I

Apprentices review the theory and applications of electrical fundamentals, electrical/electronic diagnostic test equipment, battery fundamentals, 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.

Prerequisite(s): none

Corequisite(s): AST8801 and AST8804 and AST8806 and AST8807

AST8804 Drive Train Systems I

Apprentices review the theory and applications of clutches and flywheel assemblies, basic gear theory, manual transmission and transaxle fundamentals, manual transmission, and transaxle service and diagnostics.

Prerequisite(s): none

Corequisite(s): AST8801 and AST8803 and AST8806 and AST8807

AST8806 Engine Systems I

Apprentices review the theory and applications of engine fundamentals, cylinder blocks and crankshaft assemblies.

Prerequisite(s): none

Corequisite(s): AST8801 and AST8803 and AST8804 and AST8807

AST8807 Suspension, Steering and Brake Systems I

Apprentices review the theory and applications of suspension systems, frames, steering systems, tires, rims and hydraulic brake fundamentals.

Prerequisite(s): none

Corequisite(s): AST8801 and AST8803 and AST8804 and AST8806