



## Automotive Service Technician Apprenticeship Level 2 – ASTA2 Trades Training

### Program Outline

PROGRAM IMPLEMENTATION DATE: Pre 1992  
OUTLINE EFFECTIVE DATE: January 2023  
PROGRAM OUTLINE REVIEW DATE: September 2028

---

#### GENERAL PROGRAM DESCRIPTION:

This program covers the program competencies specified by the Industry Training Authority (ITA) for Level 2 of the four-level Automotive Service Technician Apprenticeship program. Apprentices will develop the skills, knowledge and technical training related to diagnosing and repairing cooling and lubricating systems, engine assemblies, manual transmissions, clutches and drive assemblies, as well as steering, suspension, and braking control systems. Safe work practices related to the automotive trade are reinforced throughout the program.

---

**Credential Granted:** Upon successful completion of the 7-week Automotive Service Technician program, students receive:

- Level 2 Technical Training credit for the Automotive Service Technician Apprenticeship program from the Industry Training Authority (ITA)

---

**Delivery:** This program can be delivered face to face or hybrid (online with face-to-face components).

**Time for this program:** 7 weeks

#### Structure of Instructional Hours:

Instructional Activity	Duration
Instructional Hours	28 hrs/wk
Directed Studies	2 hrs/wk
Hours per Week	30 hrs/wk
Total Program Hours	210 hrs

Type of Practicum	Duration
Theory	70%
Practical Skills	30%
<b>Total</b>	<b>100%</b>

**Program Outline Author or Contact:**

John White, Automotive RSE, PID

\_\_\_\_\_  
Signature

**APPROVAL SIGNATURES:**

Department Head

Joy Brown

E-mail: [jbrown3@cotr.bc.ca](mailto:jbrown3@cotr.bc.ca)

Dean of Trades and Technology

Dr. Jack Moes

E-mail: [jmoes@cotr.bc.ca](mailto:jmoes@cotr.bc.ca)

\_\_\_\_\_  
Department Head Signature

\_\_\_\_\_  
Dean Signature

EDCO

Valid from: January 2023 – September 2028

\_\_\_\_\_  
Education Council Approval Date

**PROGRAM PREREQUISITES AND TRANSFER CREDIT:**

**Prerequisites:** Sponsored Automotive Service Technician apprentice that has successfully completed Level 1 technical training or Automotive Service Technician Foundation program

**Flexible Assessment (FA):**

Credit can be awarded for this program through FA

Yes

No

**Prior Learning Credit:** Apprentices that have extensive work experience in a trade (in BC or elsewhere) but have never been certified must apply through the Industry Training Authority (ITA) to challenge the certification for advanced placement in a program. Refer to the ITA website (<http://www.itabc.ca/apply-apprenticeship/challenging-exams>) for details regarding the challenge procedure. Trade specific requirements can be found for each trade in the Trades Program Profiles on the ITA website.

**Prior Program Number:** N/A

## Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Program Outline Effective Date the following textbooks were in use (most current edition):

AST – Level 2: COTR Custom Package

Santini, K & VanGelder, K. (2019) *Automotive drivetrain & manual transmissions*. CDX, Jones & Bartlett Learning, Burlington, MA.

Halderman, J.D. (2017) *Automotive electricity and electronics*, (5<sup>th</sup> ed). Pearson Education.

Halderman, J.D., (2018) *Automotive engines: Theory and servicing*, (9<sup>th</sup> ed). Pearson Education: New York, NY.

Optional:

Erjavec, J., Restoule, M., Leroux, S., & Thompson, R. (2015) *Technology – A systems approach (+ supplement & Test Prep Kit)* (3<sup>rd</sup> Can ed).

Please see the instructor's syllabus or check COTR's online text calculator <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

---

## TECHNICAL TRAINING CONTENT AND PROGRAM COMPETENCIES:

### AMST 201 Diagnose and Repair Engine Systems

- Diagnose and repair cooling systems
- Diagnose and repair lubricating systems
- Diagnose and repair engine assembly
- Diagnose and repair accessory drive systems

### AMST 202 Diagnose and Repair Driveline Systems

- Diagnose and repair manual transmissions and transaxles
- Diagnose and repair clutches
- Diagnose and repair final drive assemblies

### AMST 203 Diagnose and Repair Electrical Systems and Components

- Diagnose and repair starting and charging systems and batteries
- Diagnose and repair lighting and wiper systems

### AMST 204 Diagnose and Repair Steering and Suspension, Braking, Control Systems, Tires, Wheels, Hubs and Wheel Bearings

- Diagnose and repair steering and control systems
- Diagnose and repair suspension and control systems
- Diagnose and repair braking and control systems

The program competencies and technical training content delivered in this program follow the Industry Training Authority Program Outline for this trade.

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

---

<b>AUTOMOTIVE SERVICE TECHNICIAN LEVEL 2</b>			
<b>COTR COURSE</b>	<b>SUBJECT COMPETENCIES</b>	<b>THEORY WEIGHTING</b>	<b>PRACTICAL WEIGHTING</b>
AMST 201	Diagnose and Repair Engine Systems	30%	30%
AMST 202	Diagnose and Repair Driveline Systems	30%	30%
AMST 203	Diagnose and Repair Electrical Systems and Components	20%	20%
AMST 204	Diagnose and Repair Steering, Suspension, Braking, Control Systems, Tires, Wheels, Hubs and Wheel Bearings	20%	20%
	Total	100%	100%
<b>In-school theory &amp; practical subject competency weighting</b>		70%	30%
<b>Final in-school percentage score</b>		<b>IN-SCHOOL %</b>	
<b>In-school Percentage Score</b> Combined theory and practical subject competency multiplied by		<b>80%</b>	
<b>Standardized Level Exam Percentage Score</b> The exam score is multiplied by		<b>20%</b>	
<b>Final Percentage Score</b>		<b>FINAL %</b>	

**Pass Requirements:**

**In order to pass this program, students are required to**

- achieve a minimum overall 70% final percentage score

**SAFETY:**

WorkSafeBC regulations apply to all trades programs. Students are expected to follow all safe work practices and have high regard for the safety of others as well as of themselves. Students are responsible to wear personal protective equipment (PPE) as directed. At a minimum, students must provide and wear approved safety footwear and eyewear at all times in the shop. Additional PPE may be required for specific tasks. Students are expected to wear clothing suitable for working safely in the shop.

**STUDENTS MUST PROVIDE THEIR OWN:**

- steel-toed leather work boots
  - safety glasses
  - coveralls
  - gloves
  - pens, pencils, three-ring binder
  - calculator
  - paper
  - multimeter
- 

**EXAM POLICY:**

Students must attend all required scheduled tests and exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled test or exam without approval will be given a grade of “0” for the exam.

---

**PROGRAM GRADE:**

Program grades are assigned as follows:

<b>COM</b>	Completed to defined standard $\geq 70\%$
<b>NCG</b>	No Credit Granted $< 70\%$

Successful completion of the in-school training for each level is defined as a final score of 70% or greater. (ITA website)

---

**ACADEMIC POLICIES:**

See [www.cotr.bc.ca/policies](http://www.cotr.bc.ca/policies) for general college policies related to program activities, including grade appeals, cheating and plagiarism.

---

**PROGRAM CHANGES:**

Information contained in program outlines is correct at the time of publication. Content of the program is revised on an ongoing basis to ensure relevance to changing educational, employment, and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add material to programs.