



## ATAP 3001: Auto Service Tech Appr Lvl 3

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### EFFECTIVE DATE

### DEPARTMENT

Automotive Tech Apprenticeship  
**DESCRIPTION**

Learners will describe advanced electrical and electronic principles, advanced wiring diagrams, computer control, multiplex and network systems, fuel types, and alternate fuels and carburetors. Advanced electrical test equipment will be used to perform advanced diagnostic procedures. In addition, learners will service fuel delivery and gasoline fuel injection components, describe and test engine management systems including input sensors and output actuators, analyze On Board Diagnostic System Data, service Pre and Post Combustion Systems, test OBD-II Evaporative Emission System, and perform exhaust gas analysis. Learners will also describe and service electronic ignition systems, new vehicle technology and hybrid systems as well as vehicle emissions and legislation.

### CREDITS

7.0

### YEAR OF STUDY

1st Year Post-secondary

### PREREQUISITES

None

### COREQUISITES

None

### COURSE LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

- Describe advanced electrical and electronic principles and advanced wiring diagrams
- Describe advanced diagnostic procedures using advanced electrical test equipment
- Describe computer control, multiplex and network systems
- Describe fuel types and alternate fuels
- Describe carburetors
- Service fuel delivery and gasoline fuel injection components
- Describe and service electronic ignition systems

- Describe and test engine management systems including input sensors and output actuators
- Analyze On Board Diagnostic System Data
- Describe new vehicle technology and hybrid systems
- Describe vehicle emissions and legislation
- Service Pre and Post Combustion Systems
- Test OBD-II Evaporative Emission System
- Perform exhaust gas analysis

## PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)

None

## HOURS

Lecture: 145

Other: 65

## INSTRUCTIONAL STRATEGIES

Instructional time is (approximately) 40% classroom and 60% practical activity. Classroom activities are lectures, demonstrations, audio-visual presentations and exercises. Practical experience takes place in an active shop setting. The extensive workshop experience provides reinforcement of theoretical concepts, develops hand skills, and familiarity with repair procedures, electronic equipment and standard safety procedures. All modules are designed to enable the student to work independently and in groups.

## GRADING SYSTEM

Percentages-ITA

## PASSING GRADE

70%

## EVALUATION PLAN

Type	Percentage	Assessment activity
Final Exam	40	Predetermined by ITA
Quizzes/Tests	40	Predetermined by ITA
Lab Work	20	Predetermined by ITA

## COURSE TOPICS

- Advanced wiring diagrams

- Advanced electrical test equipment
- Computer control, multiplex and network systems
- Fuel types and alternate fuels
- Carburetors
- Fuel delivery and gasoline fuel injection components
- Electronic ignition systems
- Test engine management systems
- On Board Diagnostic System Data
- Vehicle technology and hybrid systems
- Vehicle emissions and legislation
- Pre and Post Combustion Systems
- OBD-II Evaporative Emission System

## LEARNING RESOURCES

None

Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:  
<https://www.vcc.ca/about/governance--policies/policies/>.
- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

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### Broadway campus

1155 East Broadway  
Vancouver, B.C. Canada  
V5T 4V5

### Downtown campus

250 West Pender Street  
Vancouver, B.C. Canada  
V6B 1S9

### Annacis Island campus

1608 Cliveden Avenue  
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