

**COURSE OUTLINE****Course:** 17777 CONSUMER AUTOMOTIVE**Total Course Hours:** 180.00**CBEDS Title:** CONSUMER AUTOMOTIVE**CBEDS #:** 1777**Job Title(s):**

Automotive technician, mechanics helper, technician trainee and lube technician.

**Prerequisites:**

None

**Course Description:**

This course provides entry-level training in automotive service and awareness, repair, diagnosis, and maintenance. Students use a combination hand tools, power tools, specialty tools, and diagnostic equipment in their lab tasks. Successful students complete the program with basic understanding of an in-demand job skill or a useful and valuable foundation for further study or training. Integrated throughout the course are Academic and CTE standards, which include safety, communication, technology, ethics, career planning and other employability skills.

Hours	
Class	OJT

**Occupational Competencies**

1-7 on the Course Outline are generic to all BVROP courses and include the BVROP Student Outcomes

3.00	3.00	<b>1</b>	<b><u>ORIENTATION</u></b>	<ul style="list-style-type: none"> <li>A Identifies and discusses course objectives and competencies.</li> <li>B Discusses ROP Student Outcomes.</li> <li>C Explains class attendance and behavior objectives.</li> </ul>
3.00	3.00	<b>2</b>	<b><u>HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT</u></b>	<ul style="list-style-type: none"> <li>A Describes accident procedure.</li> <li>B Demonstrates appropriate safety practices (e.g. bending, lifting, etc.).</li> <li>C Demonstrates knowledge of classroom procedures and drills (e.g. earthquake, fire and emergency).</li> </ul>
3.00	3.00	<b>3</b>	<b><u>ETHICS AND LEGAL RESPONSIBILITIES</u></b>	<ul style="list-style-type: none"> <li>A Defines sexual harassment and discusses tactics for handling harassment situations.</li> <li>B Applies appropriate workplace behavior and standards.</li> </ul>
3.00	3.00	<b>4</b>	<b><u>LEADERSHIP AND TEAMWORK</u></b>	<ul style="list-style-type: none"> <li>A Describes the characteristics and benefits of teamwork and leadership.</li> <li>B Demonstrates ability to make appropriate decisions.</li> <li>C Works well with others and gives/takes constructive criticism.</li> </ul>
15.00	15.00	<b>5</b>	<b><u>CAREER PLANNING</u></b>	<ul style="list-style-type: none"> <li>A Prepares a finished, professional portfolio showing the best work that has been completed during the class.</li> <li>B Locates job opportunities through the use of want-ads and placement agencies.</li> <li>C Visits at least one facility related to area of training and observes jobs performed.</li> <li>D Completes a job application correctly.</li> <li>E Prepares for and critiques a simulated employment interview.</li> <li>F Discusses employee benefits and rights as related to the specific occupational job area including gender equity and equal opportunity.</li> <li>G Identifies acceptable procedures to leave a job.</li> <li>H Applies for a scholarship.</li> <li>I Completes a professional resume.</li> <li>J Demonstrates appropriate personal grooming and dress.</li> </ul>

Hours	
Class	OJT

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| 3.00 | 3.00 |
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- 6 COMMUNICATION**
- A Uses effective workplace conversation.
  - B Reads and interprets written information and directions.
  - C Practices various forms of written communication appropriate to the occupation.
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| 5.00 | 5.00 |
|------|------|
- 7 STUDENT OUTCOMES**
- A Demonstrates Occupational Specific, Communication and Critical Thinking Skills
  - B Demonstrates Responsible Work Ethics
  - C Demonstrates Career/Employment Literacy
  - D Demonstrates Effective Use of Technology
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|------|------|
| 3.00 | 3.00 |
|------|------|
- 8 INTRODUCTION AND HOW CARS WORK**
- A Identifies people that impacted the development of the automobile
  - B Describes how cars work and classifications of each
  - C Locates engine identification and size/displacement
  - D Locates vehicle identification and determines the year and engine size
  - E Explains common fuels and designs
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| 2.00 | 2.00 |
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- 9 BUYING AN AUTOMOBILE**
- A Explains purpose of buying, determines needs, wants and their relation to a purchase
  - B Explains steps in the purchase of a vehicle
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| 2.00 | 2.00 |
|------|------|
- 10 AUTOMOTIVE EXPENSES**
- A Explains car payments
  - B Describes insurance coverage and state requirements
  - C Explains fuel expenses
  - D Explains license and registration cost
  - E Explains maintenance and repair budget
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| 2.00 | 2.00 |
|------|------|
- 11 REPAIR FACILITIES**
- A Describes key characteristics of a quality repair facility
  - B Describes facility types
  - C Explains estimates and repair orders
  - D Explains warranty considerations
  - E Communicates effectively with a technician
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|------|------|
| 6.00 | 6.00 |
|------|------|
- 12 SAFETY AROUND THE AUTOMOBILE**
- A Explains laboratory safety when working with a vehicle
  - B Describes OSHA
  - C Identifies safety equipment in the auto shop
  - D Identifies fire extinguishers types and uses
  - E Describes automotive lifts functions and types
  - F Demonstrates lifting a vehicle safely
  - G Demonstrates using jacks and jack stands
  - H Explains safety around airbags summary

Hours	
Class	OJT

4.00	4.00
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**13 BASIC TOOLS**

- A Identifies common hand tools
- B Identifies lifting tools
- C Demonstrates the use of a tire machine
- D Demonstrates the use of measuring tools
- E Identifies electric operated power tools
- F Demonstrates oil change and lube tools
- G Identifies cutting and grinding tools
- H Demonstrates the use of inspection tools
- I Identifies cleaning supplies used in the auto shop
- J Explains specialty tools
- K Demonstrates the use of vehicle service manuals

3.00	3.00
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**14 AUTO CARE AND CLEANING**

- A Describes automotive finishes
- B Demonstrates and explains exterior care and cleaning
- C Explains and demonstrates interior care and cleaning
- D Explains engine compartment cleaning
- E Explains finish repair
- F Demonstrates the lubrication of parts to prevent squeaks and creaks

2.00	2.00
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**15 FLUID LEVEL CHECK**

- A Identifies types of fluids used in automobiles
- B Analyzes fluid condition
- C Performs basic fluid checks of the vehicle

6.00	6.00
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**16 ELECTRICAL SYSTEM**

- A Explains electrical terms, voltage, current & resistance
- B Explains rating and performs services and tests on a battery
- C Identifies components, services and performs tests on the starting system
- D Identifies components, services and performs tests on the charging system
- E Identifies types, services and tests fuses
- F Identifies types, services and tests lights
- G Locates, identifies and explains computer system
- H Identifies different types of drive belts

2.00	2.00
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**17 LUBRICATION SYSTEM**

- A Explains purpose of engine oil
- B Explains advantages and disadvantages of synthetic oil
- C Describes types and the importance of oil filters
- D Explains oil service and viscosity rating
- E Demonstrates proper procedure for changing oil and filter

4.00	4.00
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**18 FUEL SYSTEM**

- A Explains fuel system purpose
- B Describes fuel system components
- C Demonstrates the replacement of an air filter
- D Describes gasoline properties
- E Describes diesel properties
- F Describes how to refuel a vehicle
- G Explains ways to improve fuel economy
- H Explains cylinder deactivation
- I Explains how fuel is priced
- J Demonstrates replacement of a fuel filter
- K Explains different types of air filters

Hours	
Class	OJT

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| 3.00 | 3.00 | <p><b>19 <u>COOLING SYSTEM AND CLIMATE CONTROL</u></b></p> <ul style="list-style-type: none"> <li>A Explains purpose and function of a cooling system</li> <li>B Identifies components and demonstrates services and tests of the cooling system</li> <li>C Explains coolant properties</li> <li>D Describes how coolant flows through the engine</li> <li>E Demonstrates how to replace a cabin air filter</li> <li>F Describes heater and air conditioning operation</li> </ul>  |
| 2.00 | 2.00 | <p><b>20 <u>IGNITION SYSTEM</u></b></p> <ul style="list-style-type: none"> <li>A Explains ignition system purpose</li> <li>B Identifies ignition system components</li> <li>C Demonstrates service procedure and tests of the ignition system</li> </ul>   |
| 3.00 | 3.00 | <p><b>21 <u>SUSPENSION, STEERING AND TIRES</u></b></p> <ul style="list-style-type: none"> <li>A Explains suspension system purpose and function</li> <li>B Identifies and inspects suspension components</li> <li>C Describes steering system purpose and function</li> <li>D Identifies and inspects steering system components</li> <li>E Describes the classifications and types of suspension systems</li> <li>F Demonstrates tire inspection, tire care and maintenance</li> <li>G Identifies different types of tread wear and their causes</li> </ul> |
| 3.00 | 3.00 | <p><b>22 <u>BRAKING SYSTEM</u></b></p> <ul style="list-style-type: none"> <li>A Describes braking system purpose and principles</li> <li>B Describes types of brake systems</li> <li>C Identifies, services and tests braking system components</li> <li>D Explains brake fluid</li> <li>E Describes the advantage of antilock brakes</li> <li>F Describes how the parking brakes work</li> <li>G Performs basic inspection of the braking system</li> </ul>   |
| 2.00 | 2.00 | <p><b>23 <u>DRIVETRAIN</u></b></p> <ul style="list-style-type: none"> <li>A Explains purpose of the drivetrain</li> <li>B Demonstrates transmission fluid inspection and check</li> <li>C Identifies drivetrain components</li> <li>D Identifies and describes drivetrain systems</li> </ul>   |
| 1.00 | 1.00 | <p><b>24 <u>EXHAUST AND EMISSION SYSTEM</u></b></p> <ul style="list-style-type: none"> <li>A Explains purpos of the drivetrain</li> <li>B Identifies and describes exhaust components</li> <li>C Identifies and describes emission components</li> <li>D Describes emission testing</li> <li>E Demonstrates inspection of exhaust and emission systems</li> </ul>  |
| 3.00 | 3.00 | <p><b>25 <u>ALTERNATIVE FUELS AND DESIGNS</u></b></p> <ul style="list-style-type: none"> <li>A Identifies differences in automotive design, depending on fuel used</li> <li>B Explains the advantages and disadvantages between vehicle types</li> <li>C Explains and compares petrobased and biobased fuels</li> <li>D Explains and calculates the payback period on an alternative fueled vehicle</li> </ul>   |
| 1.00 | 1.00 | <p><b>26 <u>AUTOMOTIVE ACCESSORIES</u></b></p> <ul style="list-style-type: none"> <li>A Describes interior accessories</li> <li>B Explains different accessory functions</li> <li>C Demonstrates estimating the costof selected accessories</li> </ul>   |

Hours	
Class	OJT

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1.00	1.00	<b>27 EMERGENCIES</b>
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- A** Describes diagnosing common automobile problems
- B** Describes common problems and makes a decision about what needs to be done
- C** Describes how to prepare for roadside emergencies
- D** Demonstrates how to jump start a vehicle
- E** Demonstrates how to replace a headlight

**TOTAL HOURS**

Class	OJT	Course
<b>90.00</b>	<b>90.00</b>	<b>180.00</b>