

COURSE OUTLINE

Course: 12714 Automotive Service Technician - II

Articulation: MSJC AUME 119 Automotive Brake Technology, MSJC AUME 120 Automotive Suspension-Steer

Academic Credit:

Job Title(s):

O'NET	JOB TITLE
49-3023.02	Automotive Specialty Technician
49-3093.00	Tire Repair and Changer
49-3023.00	Automotive Service Technicians and Mechanics
17-3027.01	Automotive Engineering Technicians
49-2096.00	Electronic Equipment Installers and Repairers, Motor Vehicles

Course Description:

This course is designed to further enhance student skills for entry-level employment in the automobile service industry and focuses on brakes and suspension.

Hours:

Classroom	180	Classroom	180
Community Site (CC)	<u>0</u>	Coop VocEd (CVE)	<u>0</u>
Total:	180	Total:	180

Prerequisites:

AST Level I

Date of Last Revision: August 31, 2018

Additional Course Information:

- 1 **Suggested CDE Course Code: Transportation Sector - Systems Diagnostics, Service, and Repair Pathway-221 - 8531 Intermediate Systems Diagnostics, Service, and Repair-Course (Concentrator)**
6/26/18-Auto Serv Tech Series Courses are the same as the Maint. and Light Repair series in course content and competencies. Difference between the two is that an instructor must be AST certified to teach the courses with the title of AST.

Hours		
Class	CC	CVE
540	300	

Occupational Competencies

540	300	
-----	-----	--

1 INTRODUCTION

- A Identifies the personal qualifications, interests, aptitudes, knowledge, and skills of successful automotive technician assistants and helpers.
- B Demonstrates an understanding of personal, professional, and educational requirements of this career field.
- C Demonstrates knowledge of policies, procedures, and regulations related to workplace health and safety.

--	--	--

2 UNDERSTANDING THE MATERIAL SAFETY DATA SHEETS (MSDS)

- A Practices safe working habits in the automotive shop/lab.
- B Locates, reads, and understands Material Safety Data Sheets (MSDSs) in automotive shop/lab.
- C Follows fire prevention and control procedures.
- D Practices appropriate clean up and maintenance skills.
- E Demonstrates safe handling of hazardous waste materials and appropriate disposal methods.

--	--	--

3 AUTOMOTIVE SERVICES

- A Engine.
- B Cooling.
- C Exhaust.
- D Lubrication.
- E Drive Train.
- F Electrical/Electronic.
- G Fuel.
- H Ignition.

--	--	--

4 HAND TOOLS

- A Practices safe working habits in the shop.
- B Demonstrates proper use of hand tools, power tools, and equipment.
- C Demonstrates proper use of measuring instruments.
- D Demonstrates tool and inventory control.
- E Practices appropriate clean up and maintenance skills.

--	--	--

5 POWER TOOLS

- A Practices safe working habits in the shop.
- B Demonstrates proper use of hand tools, power tools, and equipment.
- C Demonstrates tool and inventory control.
- D Practices appropriate clean up and maintenance skills.
- E Uses tools and machines safely and appropriately. Follows directions.

--	--	--

6 FASTENERS AND SEALANTS

- A Practices safe working habits in the shop.
- B Identifies and utilizes appropriate securing fasteners and sealants.
- C Uses service reference materials.
- D Practices appropriate clean up and maintenance skills.
- E Follows directions.

Hours		
Class	CC	CVE

--	--	--

7 SHOP AND PERSONAL SAFETY

- A Utilize safe procedures for handling of tools and equipment. Identify and use proper placement of floor jacks and jack stands. Identify and use proper procedures for safe lift operation.
- B Utilize proper ventilation procedures for working within the lab/shop area. Identify marked safety areas.
- C Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment.
- D Identify the location and use of eye wash stations. Identify the location of the posted evacuation routes. Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities.

- E Identify and wear appropriate clothing for lab/shop activities. Secure hair and jewelry for lab/shop activities.
- F Demonstrate awareness of the safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high voltage circuits.
- G Demonstrate awareness of the safety aspects of high voltage circuits (such as high intensity discharge (HID) lamps, ignition systems, injection systems, etc.). Locate and demonstrate knowledge of material safety data sheets (MSDS).

--	--	--

8 LIFTING EQUIPMENT

- A Demonstrates safe use of a hoist.
- B Demonstrates safe use of floor jacks, safety stands, and wheel chocks.
- C Uses tools and equipment safely and appropriately.
- D Follows directions.

--	--	--

9 SUSPENSION AND STEERING

- A General Suspension and Steering Systems.
- B Steering Systems Diagnosis and Repair.
- C Suspension Systems Diagnosis and Repair.
- D Related Suspension and Steering Service.
- E Wheel Alignment Diagnosis, Adjustment, and Repair.
- F Wheels and Tires Diagnosis and Repair.

--	--	--

10 BRAKES

- A General Brake Systems Diagnosis.
- B Hydraulic System Diagnosis and Repair.
- C Drum Brake Diagnosis and Repair.
- D Disc Brake Diagnosis and Repair.
- E Power-Assist Units Diagnosis and Repair.
- F Miscellaneous (Wheel Bearings, Parking Brakes, Electrical, Etc.) Diagnosis and Repair.
- G Electronic Brake, Traction and Stability Control Systems Diagnosis and Repair.
- H Demonstrates an understanding of regenerative braking systems.

--	--	--

11 CAREER PLANNING

- A Identifies personal qualifications, interests, aptitudes, information and skills necessary to succeed in this career field.
- B Demonstrates understanding of the importance of ethics, values, and laws as related to the work place.
- C Develops a career plan that is designed to reflect career interest, pathways, and post-secondary educational options.
- D Identifies important strategies for self-promotion in the hiring process such as job applications, resume writing, interviewing skills and preparation of a portfolio.

Hours		
Class	CC	CVE

--	--	--

12 WORK READINESS

- A** Demonstrate basic math, written and verbal language skills appropriate to the workplace.
- B** Demonstrate competency in the 21st Century Soft & Interpersonal Skills
- C** Demonstrates the ability to problem solve and think critically.
- D** Demonstrates Dependability, Reliability, and Flexibility.
- E** Demonstrates time management, organizational, and customer service skills.
- F** Consistently act in an honest and ethical manner.
- G** Demonstrate the ability to both work cooperatively and independently.
- H** Demonstrates articulate verbal communication skills.
- I** Demonstrates a willingness to accept constructive feedback.

--	--	--

13 INTEGRATED MATHEMATICAL COMPONENTS; INTEGRATED LANGUAGE ARTS COMPONENTS

- A** Demonstrate effective integrated math applications appropriate and commensurate with employment in this industry sector.
- B** Demonstrate effective integrated Language Arts applications appropriate and commensurate with employment in this industry sector.