

SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

AUTO 508

COURSE TITLE

SERVICE ADVISOR I

TYPE COURSE

NON FEE

VOCATIONAL

CATALOG COURSE DESCRIPTION

This course provides the student with the basic automotive technology knowledge and skills required for employment as a service advisor for both small and large independent garages and dealerships. Students will learn the different automotive parts, components, major assemblies, vehicle systems and how they function and the required maintenance. Topics also include safety, work ethics, service facilities and federal, state and local laws as they apply to the automotive industry. (FT)

LECTURE/LABORATORY HOURS

150

ADVISORIES

Valid California Driver's License required to operate vehicles in class and for employment.

RECOMMENDED SKILL LEVEL

Eighth grade reading level, ability to communicate effectively in the English language and knowledge of general math.

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1. Social Responsibility
SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2. Effective Communication
SDCE students demonstrate effective communication skills.
3. Critical Thinking
SDCE students critically process information, make decisions, and solve problems independently or cooperatively.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

4. Personal and Professional Development

SDCE students pursue short term and life-long learning goals, mastering necessary skills and using resource management and self-advocacy skills to cope with changing situations in their lives.

COURSE GOALS

1. Gain a basic understanding of the automotive systems, major assemblies, components and parts.
2. Understand the functions and service requirements for a part, component, and major assembly of a vehicle within its automotive system.
3. Understand the importance of practicing safety measures, ethical behavior, and a professional attitude in an automotive repair environment.
4. Understand how and why federal, state and local agencies protect the environment, work sites and individuals.
5. Understand the difference between Original Equipment Manufacturer (OEM), recyclable (used) and remanufactured/rebuilt/reconditioned parts.

COURSE OBJECTIVES

1. Identify the automotive parts, components, major assemblies, and the vehicle system it belongs to.
2. Explain the function and service requirements of a part, component, and major assembly of a vehicle within its automotive system.
3. Analyze and explain the different options and when to use them in the replacement of repair parts.
4. Describe the safety practices, ethical behavior and professionalism that should be used in the work environment of an automotive repair facility.
5. Explain the rules and regulations for federal, state, and local agency guidelines that are set to protect the environment, individual, and the work site.

SECTION II

COURSE CONTENT AND SCOPE

1. Vehicle Systems Including Hybrid/Alternate Fuel Vehicles
 - 1.1. Major components
 - 1.1.1. Engine
 - 1.1.2. Fuel systems
 - 1.1.2.1. Carburation
 - 1.1.2.2. Throttle body injection
 - 1.1.2.3. Indirect fuel injection
 - 1.1.2.4. Direct fuel injection
 - 1.1.3. Air induction systems
 - 1.1.4. Ignition systems
 - 1.1.5. Exhaust systems

COURSE CONTENT AND SCOPE (CONTINUED)

- 1.1.6. Emissions control systems
 - 1.1.6.1. Evaporation control
 - 1.1.6.2. Air Injection systems
 - 1.1.6.3. Catalytic converter
 - 1.1.6.4. Thermostatic air cleaner
 - 1.1.6.5. Exhaust gas recirculation
- 1.2. Component function
 - 1.2.1. Engine
 - 1.2.2. Fuel systems
 - 1.2.3. Air intake system
 - 1.2.4. Ignition systems
 - 1.2.5. Exhaust systems
 - 1.2.6. Emissions control systems
 - 1.2.6.1. Positive crankcase ventilation
 - 1.2.6.2. Evaporative emissions
 - 1.2.6.3. Exhaust gas recirculation
 - 1.2.6.4. Air injection system
 - 1.2.6.5. Pulse air system
 - 1.2.6.6. Thermostatic air cleaner
 - 1.2.6.7. Diesel particular filter
 - 1.2.7. Powertrain
 - 1.2.7.1. Steering
 - 1.2.8. Suspension
 - 1.2.9. Automatic transmissions
 - 1.2.10. Manual transmissions
 - 1.2.11. Brakes
 - 1.2.12. Heating
 - 1.2.14. Engine cooling
 - 1.2.15. Air conditioning
 - 1.2.16. Electrical/Electronic systems
 - 1.2.17. Restraint systems
 - 1.2.18. Fasteners and materials
- 1.3. Component service requirements
 - 1.3.1. Engine
 - 1.3.2. Fuel
 - 1.3.3. Intake
 - 1.3.4. Ignition
 - 1.3.5. Exhaust
 - 1.3.6. Emissions control systems
 - 1.3.7. Suspension
 - 1.3.8. Steering
 - 1.3.10. Automatic transmissions
 - 1.3.11. Manual transmissions
 - 1.3.12. Brakes
 - 1.3.13. Heating
 - 1.3.14. Air conditioning
 - 1.3.15. Engine cooling

COURSE CONTENT AND SCOPE (CONTINUED)

- 1.3.16. Electrical/Electronic systems
- 1.3.17. Restraint systems
- 1.3.18. Fasteners
- 1.3.19. Materials
- 2. Original Equipment Manufacturing (OEM) and Aftermarket Parts Identification and Source Determination
 - 2.1. Different types of parts and components available
 - 2.2. Function
 - 2.3. Repair or replacement
 - 2.4. Component/part availability and alternative/optional
 - 2.1.2. Recyclable (used)
 - 2.1.3. Remanufactured/rebuilt/reconditioned
 - 2.1.4. Aftermarket
 - 2.1.5. Alternative/optional OEM
- 3. Facilities Orientation
 - 3.1. Safety equipment
 - 3.1.1. Types
 - 3.1.2. Locations
 - 3.2. Common types of injuries
 - 3.2.1. Burns
 - 3.2.2. Asbestos hazards
 - 3.2.3. Chemical hazards
 - 3.2.4. Traffic hazards
- 4. Fire Safety
 - 4.1. Fire extinguishers
 - 4.2. ABC
- 5. Ethics
 - 5.1. Personal
 - 5.2. Environmental
 - 5.3. Business
- 6. Federal, State and Local Agencies that Protect the Environment and Work Site
 - 6.1. Occupational Safety & Health Administration (OSHA)
 - 6.2. Environmental Protection Agency (EPA)
 - 6.3. Air Quality Management District (AQMD)
 - 6.4. Bureau Automotive Repair (BAR)
 - 6.5. Other agencies
- 7. National Automotive Technicians Education Foundation (NATEF) Standards

APPROPRIATE READINGS

Industry Related Manuals, Publications, & Websites such as:

www.napatraining.com

www.acdelcotraining.com

www.identifix.com

WRITING ASSIGNMENTS

Typical writing assignments may include but are not limited to:

1. Completing assigned reports.
2. Providing written answers to assigned questions.
3. Completing repair orders.

OUTSIDE ASSIGNMENTS

Students are expected to spend a minimum of two hours per day outside of class in practice and preparation for each day in class. Appropriate assignments may include, but are not be limited to:

1. Appropriate readings.
2. Preparing research reports.
3. Preparing appropriate writing assignments.
4. Studying as needed to perform successfully in class.

APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Students will research and analyze OEM versus aftermarket parts and components. Students must select and use appropriate methods and materials needed to complete laboratory assignments.

EVALUATION

A student's grade will be based on multiple measures of performance. The assessment will measure development of independent critical thinking skills and will include evaluation of the student's ability to:

1. Perform the task, as required, to NATEF standards.
2. Apply theory to laboratory assignments.
3. Perform on written, oral, or practical examinations.
4. Contribute to class discussions.
5. Maintain attendance per current policy.

Satisfactory completion of the course may require completion of a culminating activity, which may include, but is not limited to, one of the following:

1. Written report.
2. Classroom presentation.
3. Research project.
4. Industry involvement.

Upon successful completion of each individual course a Certificate of Course Completion will be issued. Upon successful completion of all courses included in the program a Certificate of Program completion will be issued.

METHOD OF INSTRUCTION

Classroom lectures, demonstrations, laboratory, audio-visual presentations, computer assisted instruction, group and individual instruction. Field trips, job shadowing and intern/externships may be utilized. This course or sections of this course, may be offered through distance education.

TEXTS AND SUPPLIES

The Service Consultant, Working in an Automotive Facility, Ronald & William Garner,
Delmar Cengage Learning, current edition

Becoming an Automotive Service Advisor, Roger Weissman, Delmar Cengage Learning
current edition

Other Resources: California Bureau of Auto Repair

PREPARED BY: Bernie Rodriguez DATE: October, 2016

REVISED BY: _____ DATE: _____

Instructors must meet all requirements stated in Policy 3100 (Student Rights, Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog