NC AU140: AUTOMOTIVE SAFETY AND INSPECTION

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2025
Credits:	0
Total Contact Hours:	54
Lecture Hours :	27
Lab Hours:	27
Hours Arranged:	0
Outside of Class Hours:	54
Total Student Learning Hours:	108
Strongly Recommended:	California's Driver's License; ENGL C1000; MATH 144.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Non-Credit Course

Catalog Course Description

Intended primarily for returning students and/or persons seeking a career change into the automotive service industry. This course is intended to be the beginning course in the Automotive Service and Repair Fast-Track curriculum. This course is focused on developing workplace skills that will allow a student to safely and competently perform a detailed multi-point inspection. Appropriate lab activities are included. 27 lecture hours, 27 lab hours.

Course Objectives

- Identify vehicle labels and identification numbers and interpret the content.
- Inspect belts and hoses and identify corrective action.
- Check battery conditions using visual inspection and electronic tester to recommend corrective action by interpreting the visual and electronic test results.
- Perform brake system inspections, including brake lining thickness, and component inspection to recommend corrective action based upon manufacturer's specification.
- Locate service information on electronic service information platforms common to the industry and interpret the results.
- Document services on repair orders using "Condition, Cause, and Remedy" form and meeting the guidelines provided by the California Bureau of Automotive repair.
- Inspect the fluid condition and level and identify corrective action based on manufacturer's specification or industry standards for the following vehicle fluids: Engine oil, Automatic transmission oil, Manual transmission oil, Differential oil, Transfer case oil, Engine Coolant.
- Inspect P/S and brake fluid level and condition.
- Identify tires wear and recommend corrective action, adjust tire pressure, perform tire rotations and tire-pressure monitoring system initialization according to manufacturer's specification.

Major Course Content

1. Industry Exposure
    a. Organizations
        i. Technician credentialing and licensing
        ii. Industry standards
    b. Careers
        i. Salary expectations
        ii. Pay structure
        iii. Skill and physical requirements
2. Service Equipment Usage, Procedures and Safety
    a. Hand Tools
    b. Vehicle Lifting Apparatus
    c. Pneumatic Tools
    d. Cleaning Equipment
    e. Precision Measuring Tools
    f. Hazardous Materials
    g. Fasteners
    h. Identification
    i. Sealants, gaskets, and seals
3. Service Literature and Vehicle Information
    a. Vehicle Identification Numbers
    b. Vehicle Labels
    c. Specifications
    d. Maintenance Schedules
    e. Technical Service Bulletins
    f. Safety Recalls and Special Service Campaigns
    g. Locate service information on electronic service information platforms.
    h. Document services on RO using CCR.
4. On vehicle inspection
    a. Inspect vehicle fluids:
        i. Engine oil
        ii. Automatic transmission oil
        iii. Manual transmission oil
        iv. Differential oil
        v. Transfer case oil
        vi. Engine coolant
        vii. Power steering
        viii. Brake fluid
    b. Change engine oil and filter
    c. Locate the procedures and perform service reminder resets.
    d. Tires
        i. Inspect tires for wear
        ii. Adjust tire pressure
        iii. Perform tire rotations
        iv. TPMS intialization
    e. Belt and Hoses
        i. Inspect belts and hoses for needed service.
        ii. Pressure test cooling system
    f. Check battery conditions using visual inspection and electronic tester
    g. Perform brake system inspection

i. Brake lining thickness
ii. Component inspection

Lab Content

1. Service Equipment Usage, Procedures and Safety
   a. Hand Tools
   b. Vehicle Lifting Apparatus
   c. Pneumatic Tools
   d. Cleaning Equipment
   e. Precision Measuring Tools
   f. Hazardous Materials
   g. Fasteners
   h. Identification
   i. Sealants, gaskets, and seals
2. Service Literature and Vehicle Information
   a. Vehicle Identification Numbers
   b. Vehicle Labels
   c. Specifications
   d. Maintenance Schedules
   e. Technical Service Bulletins
   f. Safety Recalls and Special Service Campaigns
   g. Locate service information on electronic service information platforms.
   h. Document services on RO using CCR.
3. On vehicle inspection
   a. Inspect vehicle fluids:
      i. Engine oil
      ii. Automatic transmission oil
      iii. Manual transmission oil
      iv. Differential oil
      v. Transfer case oil
      vi. Engine Coolant
      vii. Power steering
      viii. Brake fluid
   b. Change engine oil and filter
   c. Locate the procedures and perform service reminder resets.
   d. Tires
      i. Inspect tires for wear
      ii. Adjust tire pressure
      iii. Perform tire rotations
      iv. TPMS intialization
   e. Belt and Hoses
      i. Inspect belts and hoses for service.
      ii. Pressure test cooling system
   f. Check battery conditions using visual inspection and electronic tester
   g. Perform brake system inspection
      i. Brake lining thickness
      ii. Component inspection

Suggested Reading Other Than Required Textbook

Weekly industry-based technical articles from trade journals.

Learning Modules will include a glossary of automotive terms, a synopses of sub-system operation and component operation.

Examples of Required Writing Assignments

Students will be assigned industry based technical article evaluation from trade journals.

Examples of Outside Assignments

Student will use electronic service information to complete guided discovery based learning.
Students will be using tables, charts and graphs along with written text to explain how a automotive sub-system works, how to inspect it and/or how to bring it back into specification during service. For example inspecting brake rotor variation of parallelism or finding circuit Amperes when Voltage and Resistance is known.

Instruction Type(s)

Lab, Lecture, Online Education Lecture