

COCONINO COMMUNITY COLLEGE

COURSE OUTLINE

Prepared by: Joseph M. Costion
Status: Permanent

Date: Sept. 2, 2004

A. Identification:

1. Subject Area: Automotive Technology
2. Course Number: AUT 112
3. Course Title: Automotive Electrical and Electronic Systems-Lighting and Accessories Systems Lab
4. Credit Hrs: 3
5. Catalog Description:
Emphasizes hands-on service of automotive and light truck lighting, gauge, horn, and other accessories systems. Prerequisites: AUT 111. One lecture. Three lab. May be taken for S/U credit.

B. Course Goals:

To provide students with hands-on applications in the service of automotive and light truck lighting, gauge, horn and other accessories systems.

C. Course Outcomes:

Students will:

1. Diagnose the cause of brighter than normal, intermittent, dim, or no light operation; determine necessary action.
2. Inspect, replace, and aim headlights and bulbs.
3. Inspect and diagnose incorrect turn signal or hazard light operation; perform necessary action.
4. Inspect and test gauges and gauge sending units for cause of intermittent, high, low, or no gauge readings; determine necessary action.
5. Inspect and test connectors, wires, and printed circuit boards of gauge circuits; determine necessary action.
6. Diagnose the cause of incorrect operation of warning devices and other driver information systems; determine necessary action.
7. Inspect and test sensors, connectors, and wires of electronic instrument circuits; determine necessary action.
8. Diagnose incorrect horn operation; perform necessary action.
9. Diagnose incorrect wiper operation; diagnose wiper speed control and park problems; perform necessary action.
10. Diagnose incorrect washer operation; perform necessary action.
11. Diagnose incorrect operation of motor-driven accessory circuits; determine necessary action.
12. Diagnose incorrect heated glass operation; determine necessary action.
13. Diagnose incorrect electric lock operation; determine necessary action.

14. Diagnose incorrect operation of cruise control systems; determine necessary action.
15. Diagnose supplemental restraint system (SRS) concerns; determine necessary action. (SAFETY Note: Follow manufacturer's safety procedures to prevent accidental deployment.)
16. Disarm and enable the airbag system for vehicle service.
17. Diagnose audio system static and weak, intermittent, or no radio reception; determine necessary action.
18. Remove and reinstall door panel.
19. Diagnose body electronic system circuits using a scan tool; determine necessary action.
20. Check for module communication errors using a scan tool.
21. Diagnose the cause of false, intermittent, or no operation of anti-theft system.

D. Course Content:

Will include:

1. Lighting Systems Diagnosis and Repair
2. Gauges, Warning Devices, and Driver Information Systems Diagnosis and Repair
3. Horn and Wiper/Washer Diagnosis and Repair
4. Accessories Diagnosis and Repair