



BAKER COLLEGE
STUDENT LEARNING OUTCOMES

AST 2410A Electrical/Electronic Systems II
4 Semester Hours

Student Learning Outcomes & Enabling Objectives

1. Demonstrate general electrical system diagnosis techniques.
 - a. Diagnose the cause(s) of excessive key-off battery drain (parasitic draw); determine needed action. P-1
 - b. Check electrical/electronic circuit waveforms; interpret readings and determine needed repairs. P-2
 - c. Repair data bus wiring harness. P-1
2. Demonstrate starting system diagnosis and repair techniques.
 - a. Demonstrate knowledge of an automatic idle-stop/start-stop system. P-2
3. Demonstrate lighting systems diagnosis and repair techniques.
 - a. Diagnose (troubleshoot) the causes of brighter-than-normal, intermittent, dim, or no light operation; determine needed action. P-1
 - b. Inspect interior exterior lamps and sockets including headlights and auxiliary lights (fog lights/driving lights); replace as needed. P-1
 - c. Aim headlights properly. P-2
 - d. Identify system voltage and safety precautions associated with high-intensity discharge headlights. P-2
4. Demonstrate instrument cluster and driver information systems diagnosis and repair techniques.
 - a. Inspect and test gauges and gauge sending units for causes of abnormal readings; determine needed action. P-2
 - b. Diagnose (troubleshoot) the causes of incorrect operation of warning devices and other driver information systems; determine as required. P-2
 - c. Reset maintenance indicators as required. P-2

5. Demonstrate body electrical systems diagnosis and repair.
 - a. Diagnose operation of comfort and convenience accessories and related circuits (such as: power window, power seats, pedal height, power locks, truck locks, remote start, moon roof, sun roof, sun shade, remote keyless entry, voice activation, steering wheel controls, back-up camera, park assist, cruise control, and auto dimming headlamps); determine needed repairs. P-2
 - b. Diagnosis operation of security/anti-theft systems and related circuits (such as: theft deterrent, door locks, remote keyless entry, remote start, and starter/fuel disable); determine needed repairs. P-2
 - c. Diagnose operation of entertainment and related circuits (such as: radio, DVD, remote CD changer, navigation, amplifiers, speakers, antennas, and voice-activated accessories); determine needed repairs. P-3
 - d. Diagnose operation of safety systems and related circuits (such as: horn, airbags, seat belt pretensioners, occupancy classification, wipers, washers, speed control/collision avoidance, heads-up display, park assist, and back-up camera); determine needed repairs. P-1
 - e. Diagnose body electronic systems circuits using a scan tool; check for module communication errors (data communication bus systems); determine needed action. P-2
 - f. Describe the process for software transfer, software updates, or reprogramming of electronic modules. P-2

Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

These SLOs are not approved for experiential credit.

Effective: Fall 2018