Department:
Automotive Technology

Course Description:
This course is designed for the study of automotive electrical and electronic systems. It is a practical look at electricity and electronics. Topics include the completing work orders, describing basic electrical relationships, identifying electrical system faults and describing basic circuit characteristics through a variety of classroom and shop learning and assessment activities.

Course Competencies:
1. Describe the relationship between voltage, ohms, and amperage.
2. Perform basic electrical circuit repairs.
3. Identify electrical system faults.
4. Identify basic wiring diagram symbols, components, and legend information.
5. Perform basic electrical circuit measurements using a DVOM.
6. Describe basic circuit characteristics of series, parallel, and series parallel circuits.

Course Content:
Electrical and Electronic Systems
a. Electrical Fundamentals & Systems
b. Electrical Circuits and Ohm’s Law
c. Series, Parallel, and Series-Parallel Circuits
d. Digital Meters and Scope Usage
e. Automotive Wiring and Wire Repair
f. Wiring Schematics and Troubleshooting
g. Capacitance and Magnetism
Learning Assessments:

Assessments may include: Quizzes, tests, project work, demonstrated competence, instructor observation, weekly assignments and/or written papers.

Instructional Materials:


Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

On-Campus Students: At enrollment, any on campus student may complete a form that will allow them to self-identify any disability.

Off-Campus Regional Students: Self-identify your disability and accommodation needs with the Regional Coordinator and/or instructor, preferably prior to the first class meeting.

Online Students: Self-identify your disability and accommodation needs by contacting the Disabilities Coordinator. Students must provide their own programs to allow accessibility on their home computer.

Any student may also identify their disability by completing an online form located on the HCC homepage under Students Services/Resources/Disabilities. Questions should be directed to the Disabilities Coordinator.