SYLLABUS

COURSE # AND TITLE AUTE 113 Basic Electrical # OF CREDITS 4

CATALOG DESCRIPTION
Basic fundamentals of electrical theory, magnetism, current flow, Ohm's Law, series, parallel, and series-parallel circuit calculations. The use of basic meters and their application to circuit diagnosis will be taught. Safety is emphasized.

Semester Offered: Fall & Spring
Prerequisites:

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING
Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING
Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT
Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION
Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY
Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES
Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

GENERAL LEARNING OBJECTIVES
1. To prepare the student for competence in electricity and electronics as applied to automotive technology.
2. Completion of 100% of NATEF priority 1 tasks.
3. Completion of 85% of NATEF priority 2 tasks.
4. Completion of 75% of NATEF priority 3 tasks.

SPECIFIC LEARNING OUTCOMES
Upon successful completion of the course, the student will be able to…
1. Work with automotive electrical systems in a manner consistent with established safety procedures.
2. Demonstrate knowledge of electrical fundamentals by properly using an amp, volt, and ohm meter. (digital and analog.)
3. Diagnose circuits which have conditions such as: shorts, opens and grounds.
4. Inspect electrical connections and repair them using accepted manufacturer procedures.
5. Test specific gravity of a battery.
6. Perform a load test on a battery.
7. Properly charge a battery.
8. Perform a starter amp draw test.
9. Perform a voltage drop test on a starter system.
10. Perform a charging system output test.

11. Repair a no charge complaint.
12. Repair a starter.
13. Calculate unknowns in Ohm's Law, given two values and the type of circuit.
14. Demonstrate knowledge of the difference between DC and AC and list sources of each.
15. Test and locate malfunctions in electric circuits common to automotive systems.
16. Read schematic diagrams and sketch schematics of actual circuits.

Syllabus developed by _____ Date: _____

Syllabus reviewed by _____ Date: _____

A current syllabus must be on file in the dean’s office for every course being taught during a given semester.