

Course Title: INT-110 Fundamentals of Electricity

Course Instructor(s): Anthony Valente, William Bailey

Programs: Industrial Technology, Alternative Energy Technology

Expected Learning Outcomes

- Students will understand and be able to describe electron theory.
- Students will be able to describe the characteristics and differences between conductors and insulators.
- Students will be able to explain the concepts of current flow, AC/DC circuits and Ohms law.
- Students will be able to recognize standard schematic symbols for common electrical and electronic components.
- Students will be able to explain the operation and application of common components such as AC and DC motors, relays, switches, power supplies, overload devices and lighting.
- Students will be able to recognize and use common test equipment to evaluate electrical circuits.
- Students will be able to trouble-shoot basic electrical circuits using schematic diagrams.
- Students will be able to identify hazards of electrical circuits and be able to work safely.

Assessment

Assessments will include:
2 written tests and a final exam
Classroom lab exercises and assignments
A final assignment in circuit design

Validation

1. Comparison of final exam results with national average skills in the electrical, Industrial, commercial, and energy field of work.
2. The evaluation of student performance and ability to transfer knowledge to next level of class in the program.
3. Consult Advisory Committee participants as to performance of interns and hired students based on ability and knowledge gained.

Results

The results of the testing and final examination will show the level of retention of the classroom materials.

The results of the lab exercises and assignments will show the ability of the student to transfer textbook information to hands-on applications.

The results of the Advisory Committee input will allow us to place a rate of success in our database for ongoing improvement to the course and advise us of changes in technology and industry standards.

Internships will measure the student outcomes in a real world environment through feedback from internship supervisor.

Final grades for Fall 2013 indicate a class average of 85%. Students were successful at performing hands on classroom assignments.

Follow-up

The data will be evaluated to improve teaching techniques

The data will be evaluated to help us remain up to date with technology changes.

Develop additional hands on activities to include control panel prints, wiring and organization.

Budget Justification

Update textbook to include changes in technology

Update classroom equipment to keep pace with changes in technology

Teaching supply budget is sufficient to handle the changes at this time.