

Course Title: INT 110 Fundamentals of Electricity

Course Instructor(s): Jeyasingh Nithianandam

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 test 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 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.

The Fall semester of 2015 started with a HCC staff decision to try out a new adjunct instructor Jeyasingh Nithianandam who had applied for a full-time advanced manufacturing position. As the semester progressed we received e-mails and concerns from students in the course over the course content and presentation. Upon investigation the TCS director Dan Vogel met with the instructor and indicated a need to follow the supplied syllabus and use the teaching resources provided by HCC. Upon further evaluation it was decided that program coordinator and lead instructor Tony Valente would teach the final three classes as a co-instructor. Due to the circumstances surrounding the semester, testing results will not be used in determining students average performance.

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.

No follow-up required at this time.

Budget Justification

Update textbook to include changes in technology

Update lab equipment to keep pace with changes in technology

No textbook changes or increase in budget required at this time.