SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0302
SEMESTER: Departmental Syllabus
COURSE TITLE: Troubleshooting Techniques
COURSE NUMBER: ELET0245
CREDIT HOURS: 2
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
TELEPHONE: Departmental Syllabus
EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITE (S): None

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC TEC bookstore, http://www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:
Students study all areas of electrical trouble shooting including evaluating customer complaints, observing system operations, formulating a plan, reading and interpreting schematics.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. Concepts of meter operations.
II. Becoming familiar with multi meters, ammeter, megohm meter, and other measuring instruments
III. Interpretation of wiring diagrams and schematics 
IV. Troubleshooting general electric circuits
V. Troubleshooting motor circuits

EXPECTED LEARNER OUTCOMES:

Upon completion of the course:

1. The student should be able to know terms associated with troubleshooting techniques.
2. The student should be able to demonstrate use of multi meters and megohm meters.
3. The student should be able to evaluate complaints based on complaints and reports.
4. The student should be able to demonstrate ability to formulate and carry out plan for corrective action.
5. The student should be able to troubleshoot motor controllers, proximity controls, limits switches, state timers, pneumatic timers, and motion detectors.

COURSE COMPETENCIES:

The student should be able to know terms associated with troubleshooting techniques.
1. The student will be able to explain lock-out and tag-out.
2. The student will be able to explain megger a motor.
3. The student will be able to explain continuity test.
4. The student will be able to explain glow-tecter.
5. The student will be able to explain grounded and bonding.

The student should be able to demonstrate use of multi meters and megohm meters.
6. The student will be able to explain readings on a multi meter.
7. The student will be able to explain reading on a megohm meter.

The student should be able to evaluate complaints based on complaints and reports.
8. The student will be able to analyze the facts before acting.
9. The student will be able to determine power problem.
10. The student will be able to determine control circuit problem.

The student should be able to demonstrate ability to formulate and carry out plan for corrective action.
11. The student will be able to write a report on corrective action
12. The student will be able to analyze sequential plan of action
The student should be able to troubleshoot motor controllers, proximity controls, limits switches, state timers, pneumatic timers, and motion detectors.

13. The student will be able to test for open switches.
14. The student will be able to test for broken wires
15. The student will be able to test for shorts and grounds.
16. The student will be able to test for voltage.

ASSESSMENT OF LEARNER OUTCOME:
Student progress is evaluated by means that include, but limited to exams, written assignments, and class participation.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome anytime.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center at (913) 288-7670 V/TDD.