PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

INTRODUCTION TO ELECTRICAL ENGINEERING TECHNOLOGY
EET 1001

Class Hours: 0.0  Credit Hours: 1.0
Lab Hours: 3.0  Revised: Spring 2011

Note: This course is not intended for transfer credit.

Catalog Course Description:

Emphasis on introduction to electronic equipment, components, and software, focusing on the application of the multimeter, oscilloscope, function generator, power supply, and circuit simulation software. Practical soldering techniques are introduced and practiced. Discussion includes modern electronic systems, such as a microcontroller and a variety of electronic sensors, and an introduction to robotics.

Entry Level Standards:

The student needs only an interest in electronics.

Prerequisites:

None

Textbook(s) and Other Course Materials:

Textbook:
None required. Student will be required to purchase Electronic Trainer Kit to be constructed as part of the course. Approximate cost: $50.00.
Tools required:
Needle nose pliers, wire cutters, wire strippers, phillips and slotted screwdrivers, and soldering iron - Approximate cost: $40.00.
Reference:
How to Solder by Hewlett Packard

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>How to Solder and Construct the Trainer</td>
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</table>
| 2    | Introduction to Professional Ethics  
Construction of Digital/Analog Trainer |
| 3    | Introduction to Schematics and Symbols  
Construction of Digital/Analog Trainer |
| 4    | Introduction to Engineering Prefixes/Units  
Construction of Digital/Analog Trainer |
| 5    | Resistors and Color Code  
Construction of Digital/Analog Trainer |
II. Course Goals*

A. The course will guide students toward effective use of proper measurement techniques using multimeters. I, II

B. The course will guide students toward effective use of oscilloscope operation. I, II

C. The course will guide students toward effective soldering techniques. II

D. The course will extend student knowledge of Windows Programs. II, III

E. The course will extend student knowledge of word processing basics. II, III

F. The course will guide students toward effective understand schematic layout software. I, II, III

G. The course will expand student understanding the importance of Professional Ethics, time management, and quality work habits. III, IV

H. The course will guide students toward how to assemble a technical report. II, III,

*Roman numerals after course goals reference goals of the Engineering Technology program (Career Program Goals and General Education Goals are listed http://www.pstcc.edu/departments/curriculum_and_instruction/syllabi/ )

III. Expected Student Learning Outcomes*

The student will be able to:

1. Take resistance measurements using a multimeter. A
2. Take voltage measurements using a multimeter. A
3. Take current measurements using a multimeter. A
4. Make DC voltage measurements using an oscilloscope. B
5. Make AC voltage measurements using an oscilloscope. B
6. Make frequency measurements using an oscilloscope. B
7. Solder components on a printed circuit board neatly. C
8. Desolder and replace components on a printed circuit board. C
9. Use word processing to write a report. E, H
10. Use word processing with text files. E, H
11. Draw a schematic using available software. F
12. View any file in any directory of either floppy or hard drive. D
13. Copy files from any directory to any other directory. D
14. Delete files in any directory. D
15. View a directory and identify executable programs. D

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures: 35% of grade
   
   20% - Quiz and lab grades will be averaged to provide 20% of final grade.
   15% - Comprehensive exam will provide 15% of final grade.

B. Laboratory Expectations: 65% of grade
   
   40% - Completion of the Trainer will provide 40% of the final grade.
   25% - Completion of the Trainer Lab Report will provide 25% of the final grade. This report will be graded on content, grammar, spelling, and form. Students may cooperate and assist each other in the construction of the Trainer. All tests and the lab report are individual work and must be done by each student without assistance. Each week the student could be given a grade based on mastery of lab practices. This could be combined with test to determine the grade.

C. Field Work:
   
   N/A

D. Other Evaluation Methods:
   
   N/A

E. Grading Scale:
V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of the Learning Division, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of the Learning Division.

Attendance for Lab: Attendance is required to all lab sessions unless excused by the instructor. Students missing more than four unexcused sessions will receive an “F” and no credit will be received. Students tardy past half an hour will be considered absent.

B. Academic and Classroom Misconduct:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

• Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
• Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
• Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one’s own work.
• Taking an exam for another student.
• Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
• Any of the above occurring within the Web or distance learning environment.

C. Accommodations for Disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.