

Revised
4-2-04

APPLICATION FOR NEW COURSE

1. Submitted by College of Lexington Community College Date 2/13/04
Department/Division offering course
Electrical Engineering Technology
2. Proposed designation and Bulletin description of this course:
 - (a) ET108 (b) Practical Electricity
Prefix and Number Title*
 - (c) 2 (d) 2 (1:2 ratio)
Lecture/Discussion hours per week Laboratory hours per week
 - (e) Not Applicable (f) 3
Studio hours per week Credits
 - (g) Course description:
Basic concepts of electricity, electronic components, and the electrical profession will be covered in this course. Topics will include the basic electrical properties, using meters and oscilloscopes, building prototype circuits, soldering, and the basics of managing an electrical project. Lecture: 2 hours, Laboratory: 2 hours.
 - (h) Prerequisites (if any):
None
 - (i) May be repeated to a maximum of Not Applicable (if applicable)
3. To be cross-listed as: Not Applicable
Prefix and Number Signature, Chair, cross-listing department
4. Effective Date: Spring 2005 (semester and year)
5. Course to be offered (a) X* (b) X* (c) X*
Fall Spring Summer
6. Will the course be offered each year? Yes, less frequently _____
(Explain if not annually):

*This course may be offered any semester as needed.

- Note: If the title is longer than 24 characters (including spaces), write a sensible title (not exceeding 24 characters) for use on transcripts:

7. Why is this course needed:

This course is being added to introduce students to Electrical Engineering Technology (EET). This will be a hands-on introductory course to allow students to develop practical and useful skills for life while looking at EET as a profession. The present introductory class in the EET program is ET 110. The level of difficulty and necessary level of theory in ET 110 has led to a high attrition in this class and consequently in the program.

8. (a) By whom will the course be taught? EET Faculty

(b) Are facilities for teaching the course now available? No Yes

If not, what plans have been made for providing them?

9. What enrollment may be reasonably anticipated? 24 per year

10. Will this course serve students in the Department primarily? No Yes

Will it be of service to a significant number of students outside the Department?
 No Yes If so, explain

Will the course serve as a University Studies Program course? No Yes

If yes, under what Area?

11. Check the category most applicable to this course:

traditional; offered in corresponding departments elsewhere;

relatively new, now being widely established

not yet to be found in many (or any) other universities

12. Is this course part of a proposed new program? No Yes If yes, which?

13. Will adding this course change the degree requirements in one or more programs?*

* Note: Approval of this course will constitute approval of the program change unless other program modifications are proposed.

No Yes If yes, explain the change(s).

EET Program students will be required to take this course.

14. Attach a list of the major teaching objectives of the proposed course and outline and/or reference list to be used.

Course Objectives:

- 1) Define the basic electrical properties of Voltage, Current, Resistance, Capacitance, Inductance, and Power.
- 2) Define Ohm's Law.
- 3) Apply Ohm's Law to series and parallel resistive electrical circuits
- 4) Solve for electrical circuit values using calculators and computer simulation software.
- 5) Perform electrical measurements using Digital Multimeters and Oscilloscopes.
- 6) Discuss the basic elements of the power distribution system.
- 7) Calculate the cost of electricity for a basic electrical system.
- 8) Identify electrical components.
- 9) Build electrical circuits according to a schematic.
- 10) Solder wires and components to circuit boards.
- 11) Explain the role of engineering technicians in industry.
- 12) List the steps involved in completing a project.
- 13) Schedule the completion of an electrical project.
- 14) Describe how to interview well for employment.

Outline:

- I. Basic Electrical concepts:
 - A. Charge
 - B. Voltage
 - C. Current
 - D. Resistance
 - E. Power
 - F. Capacitance
 - G. Inductance
- II. Computer Simulation of Circuits
 - A. Resistive DC and AC circuits
 - B. Resistive/Capacitive DC/AC Circuits
 - C. Resistive/Inductive DC/AC Circuits
- III. Usage of Electrical Measurement Devices
 - A. Digital Multi-Meters
 - B. Analog Oscilloscope
 - C. Digital Oscilloscopes
- IV. Measurement of Voltage
 - A. DC Voltage
 - B. AC Voltage
 - C. Peak-to Peak Voltage

- D. RMS Voltage
- V. Consumer Power Distribution
 - A. Transformers
 - B. Power
 - C. Killowatt hours
 - D. Utility bills
- VI. Construction of electrical circuits following a schematic
 - A. Identification of components
 - B. Component Specifications and Pin-outs
 - C. Usage of a prototype board
- VII. Schematic Diagrams
 - A. Block Diagrams
 - B. Wiring Diagrams
 - C. Schematic Diagrams
- VIII. Verification of Prototype circuits
 - A. Measurement of Voltage
 - B. Measurement of Current
- IX. Practical Soldering
 - A. Wires
 - B. PC Boards
 - C. Prototype boards
- X. The Electrical Profession
 - A. Resume
 - B. Interviewing Skills
 - C. Professional Presentations
- XI. Project Management
 - A. Time lines
 - B. Check points
 - C. What-if strategies
 - D. Progress reports

15. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

Notification of proposed revision has been forwarded to Carolyn O'Daniel at KCTCS (see attachment)

16. Within the Department, who should be contacted for further information about the proposed course?

Name Michael Binzer Phone Extension: 859-257-4872 x 4109

APPLICATION FOR NEW COURSE
Additional Information on CCS Forms

1. List of Experiments/Activities: (If laboratory or clinic is involved)
 - 1) Use of Digital Multi Meters
 - 2) Use of Oscilloscopes
 - 3) Use of a Digital Oscilloscope
 - 4) Soldering wires
 - 5) Soldering circuit boards
 - 6) Build a circuit on a prototype board
 - 7) Measure voltage and current in a prototyped circuit
 - 8) Plan and managing a project
 - 9) Moc-interview

2. For Inclusion on LCC General Education List:
 - A. Degree Area (AA/AS or AAS or both)

 - B. Competency Area

 - C. General Education Competency Statement (List and provide examples of implementation methods/activities)

 - D. Across the Curriculum Competencies (List and provide examples of implementation methods/activities)

3. For Inclusion on University Studies List: (A syllabus must be attached.)
 - A. Area

 - B. Description of Writing Component

If the new course is to be offered through distance education, the *Application for Offering a Course Using a Distance Education Format* form must also be submitted with this form.

Signatures of Approval:

Department Chair: Cindy Barber

Date: 3/1/04

President

~~Dean~~ of the College: [Signature]

Date: 4-21-04

Date of Notice to the Faculty: _____

Undergraduate Council: _____

Date: _____

Graduate Council: _____

Date: _____

Academic Council for the Med. Ctr: _____

Date: _____

Senate Council: _____ Date of Notice to Univ. Senate: _____
(Chair)

ACTION OTHER THAN APPROVAL: _____

Adopted: September, 1989