

**El Paso Community College**  
**Syllabus**  
**Part II**  
**Official Course Description**

<b>SUBJECT AREA</b>	<u>Engineering</u>
<b>COURSE RUBRIC AND NUMBER</b>	<u>ENGR 1470</u>
<b>COURSE TITLE</b>	<u>Introduction to Electrical Engineering</u>
<b>SUBJECT AREA</b>	<u>4      3      :</u> <b>Credits   Lec      Lab</b>

**I. Catalog Description**

Presents an introduction to mathematical and systems concepts that form the basis for electrical engineering. Includes an introduction to circuit components, voltage and current concepts. Also included are sinusoidal signal characteristics, basic filter responses and bandwidth concepts. **Corequisite: MATH 2413 with a grade of "C" or better. (3:3).**

**II. Course Objectives**

Upon satisfactory completion of this course, the student will be able

- A. Identify and describe the physical behavior of various electrical components.
- B. Analyze basic circuits consisting of series and parallel connections of resistors, inductors, and capacitors.
- C. Apply basic math concepts using complex numbers, various numbering systems, and their conversions, matrix algebra, etc.
- D. Analyze and design a basic logic circuit.
- E. Characterize a sinusoidal signal.
- F. Apply digital sampling concepts.
- G. Identify basic filter responses and bandwidth.
- H. Write MATLAB scripts for basic mathematics, digital filtering, plotting, etc.
- I. Apply engineering ethics.
- J. Discuss how the Electrical Engineering courses are threaded together.

### III. Evaluation

- A. The grade for this course will be based on performance on quizzes, labs, writing assignments, homework, three regular exams, and a comprehensive final exam. Every student is required to take the final exam at the end of the semester.
- B. The grade will be assigned based on the scale below:

Average Grade	Letter Grade
90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

### IV. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024)

### V. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information