

El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	<u>Electrical Technology</u>
COURSE RUBRIC AND NUMBER	<u>ELPT 1319</u>
COURSE TITLE	<u>Fundamentals of Electricity I</u>
COURSE CREDIT HOURS	<u>3 2 : 4</u> Credits Lec Lab

I. Catalog Description

Introduces basic direct current (DC) theory including electron theory and direct current applications. Introduces single and 3 phase circuits. Emphasizes commercial and industrial components and systems. **(2:4). Lab fee.**

II. Course Objectives

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

- A. Describe OSHA code compliance.
- B. Describe DC voltage.
- C. Calculate full volts, current, and resistance using Ohm's Law.
- D. Demonstrate basic wiring circuits.
- E. Create a simple circuit using pushbuttons, relays, and lights.
- F. Demonstrate the correct use of a digital multi meter and all associated materials and equipment.
- G. Maintain material and tool inventory.
- H. Demonstrate various wiring methods.
- I. Identify NEC requirements.
- J. Size and install wires.
- K. Identify wire insulation and usage.
- L. Run conduit e.g., EMT, IMC, PVC, flexible metal conduit, MC-Cable.
- M. Install cabling per residential code.

III. THECB Learning Outcomes (WECM)

- 1. Explain atomic structure and basic electrical values such as voltage, current, resistance, and power.
- 2. Calculate electrical values for series, parallel, and combination circuits.
- 3. Calculate voltage drop based on conductor length, type of material, and size.
- 4. Summarize the principles of magnetism; and utilize electrical measuring instruments.

IV. Evaluation

The students must demonstrate the knowledge and skills stated in the objective in order to complete the course. Letter grades will be arranged as follows:

Grade Scale:

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

Students should be able to compute their grade average anytime during the course. Missed assignments and make-up tests will be given at the discretion of the instructor.

V. 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).

VI. 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.