El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Electrical Technology**
COURSE RUBRIC AND NUMBER	**ELPT 1419**
COURSE TITLE	**Fundamentals of Electricity I**
COURSE CREDIT HOURS	**4 (Credits) 2 (Lec) : 4 (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. Navigate the National Electrical Code (NEC).
B. Introduction to various wiring methods and materials.
C. Distinguish conductor color coding.
D. Introduction to grounding and bonding.
E. Size conduit using NEC Tables.
F. Identify proper wiring connections to electrical equipment (e.g., splicing and terminating).
G. Install basic wiring circuits (e.g., 3-way, 4-way switches, standard and GFCI receptacles).
H. Create a simple circuit using pushbuttons, control relays, and lights.
I. Identify name of tools, devices, fittings and associated equipment.
J. Demonstrate the correct use of a digital multimeter and other testing equipment.
K. Calculate voltage, current, and resistance using Ohm's Law.
L. Describe DC voltage.
M. Prepare materials for the day and perform duties as assigned by journeyman.
N. Assist with punch list.
O. Maintain material and tool inventory.

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.

VII. Title IX and Sex Discrimination

Title 9 (20 U.S.C. 1681 & 34 C.F.R. Part 106) states the following "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Violence Against Women Act (VAWA) prohibits stalking, date violence, sexual violence, and domestic violence for all students, employees and visitors (male and female). If you have any concerns related to discrimination, harassment, or assault (of any type) you can contact the Assistant to the Vice President for Student and Enrollment Services at 915-831-2655. Employees can call the Manager of Employee Relations at 915-831-6458. Reports of sexual assault/violence may also be reported to EPCC Police at 915-831-2200.