

El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	<u>Electrical Technology</u>								
COURSE RUBRIC AND NUMBER	<u>ELPT 1341</u>								
COURSE TITLE	<u>Motor Control</u>								
COURSE CREDIT HOURS	<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-top: 1px solid black; padding: 2px 10px;">3</td> <td style="border-top: 1px solid black; padding: 2px 10px;">2</td> <td style="border-top: 1px solid black; padding: 2px 10px;">:</td> <td style="border-top: 1px solid black; padding: 2px 10px;">2</td> </tr> <tr> <td style="padding: 2px 10px;">Credits</td> <td style="padding: 2px 10px;">Lec</td> <td style="padding: 2px 10px;"></td> <td style="padding: 2px 10px;">Lab</td> </tr> </table>	3	2	:	2	Credits	Lec		Lab
3	2	:	2						
Credits	Lec		Lab						

I. Catalog Description

Studies the operating principles of solid-state and conventional controls along with their practical applications. Includes topics on braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations. Introduces starting and stopping circuits and variable frequency drives. **(2:2). Lab fee.**

II. Course Objectives

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

- A. Calculate full load current for a motor using a motor table.
- B. Calculate the correct motor overload for a motor.
- C. Diagram a simple start/stop circuit.
- D. Create a simple circuit using pushbuttons, relays and lights.
- E. Design a relay holding circuit.
- F. Build a motor forward-reverse circuit from a schematic.
- G. Build a motor control circuit incorporating timers.
- H. Identify NEC requirements.
- I. Calculate power factor given resistance, inductance, and capacity and voltage drop.
- J. Draw motor control circuits from a ladder logic diagram.
- K. Calculate the size of branch circuits, feeders, and equipment for motors.

III. THECB Learning Outcomes (WECM)

- 1. Identify practical applications of jogging and plugging.
- 2. Describe the types of motor braking and their operating principles.
- 3. Explain different starting methods for large motors.
- 4. Demonstrate proper troubleshooting methods on circuits using wiring and schematic diagrams.

IV. Evaluation

The knowledge and skills stated in the objectives must be demonstrated by the students in the form of test and lab assignments in order to complete the course.

Grade Scale:

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

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.