



BASIC ELECTRICAL THEORY

ELPT 1411

INSTRUCTOR: Pete Barreraz **Office Phone:** 335-6495 **Cell Phone:**413-4927 **Office Hours:** As Posted

COURSE NUMBER ELPT 1411

CREDIT HOURS: 4 (3/3)

PREREQUISITE: NONE

CATALOGUE DESCRIPTION:

An overview of the theory and practice of electrical circuits including calculations as applied to alternating and direct current. Provides a comprehensive, content-filled introduction to basic electrical theory, circuit fundamentals, and practical wiring techniques.

TEXTBOOK: *Instructors Handouts* **LAB MANUAL :** *Instructors Handouts*

- SUPPLIES:**
1. Calculator
 2. Digital VOM meter
 3. Other

LEARNING OUTCOMES:

After completing this course, the student should be able to demonstrate competency in:

- The effective and efficient use of various meters; including volt, amp, and ohm meters
- The use and understanding of power supplies, breadboards and other equipment
- The use and understanding of a wide range of electrical circuits

COURSE REQUIREMENTS:

- Complete all scheduled homework
- Complete all scheduled labs
- Complete written\lab tests
- Complete a written\lab final test

METHODS OF EVALUATION:

GRADING SCALE	
POINTS	GRADE
90-100	A
80-89	B
70-79	C
65-69	D
0-64	F

WEIGHT OF COURSE REQUIREMENTS	
AREA	GRADE WEIGHT
LAB ASSIGNMENTS	25%
TESTS	25%
FINAL TEST	25%
PROFESSIONALISM	25%
TOTAL	100%

ATTENDANCE POLICY\PROFESSIONALISM POLICY

Attendance is the greatest predictor of your success. Your attendance at EVERY ONE of the classes and labs is important and expected. A substantial grade penalty will be assessed to late work; including homework, lab assignments, and test. The "Professionalism Grade" will be determined by such factors as attendance, tardiness, class participation, and other classroom factors.

SYLLABUS CHART

Lesson #	Topic	Specific Topic	Labs\ Tasks\Info
1	Intro Syllabus Review	safety	<input type="checkbox"/> safety <input type="checkbox"/> LAB
2	RESISTORS	<input type="checkbox"/> Electron Theory	<input type="checkbox"/> LAB
3		<input type="checkbox"/> RESISTANCE IN SERIES	<input type="checkbox"/> Lesson Questions <input type="checkbox"/> LAB
4	SERIES CIRCUITS	<input type="checkbox"/> Series Circuits <input type="checkbox"/> OHMS LAW	Ohms Law Chart <input type="checkbox"/> LAB
5		<input type="checkbox"/> Parallel Circuits	<input type="checkbox"/> Lesson Questions <input type="checkbox"/> LAB
6		<input type="checkbox"/> OHMS LAW	<input type="checkbox"/> LAB
7		<input type="checkbox"/> VOLTAGE DROP <input type="checkbox"/> METERS	<input type="checkbox"/> Lesson Questions <input type="checkbox"/> LAB 7.1
8		<input type="checkbox"/> ANALOG METERS	<input type="checkbox"/> LAB 8.1
9		<input type="checkbox"/> Solve for unknown resistor values using meter readings	<input type="checkbox"/> LAB 9.1
10		<input type="checkbox"/> Fuses and Switches	<input type="checkbox"/> LAB 10.1
T E S T 1			
11	PARALLEL CIRCUITS	<input type="checkbox"/> Series-PARALLEL CIRCUITS Basic Concepts	<input type="checkbox"/> LAB 11.1
12		<input type="checkbox"/> SERIES-PARALLEL CIRCUITS	<input type="checkbox"/> LAB 12.1
13		ELECTRICAL ENERGY AND POWER	<input type="checkbox"/> LAB 13.1
14		BATTERIES	<input type="checkbox"/> LAB 14.1
15	CONDUCTORS	<input type="checkbox"/> ELECTRICAL CONDUCTORS WIRE SIZES 3 AND 4 WAY SWITCHES CONDUIT BENDING	<input type="checkbox"/> LAB 15.1
16	VOLTAGE DROP	<input type="checkbox"/> Solve for voltage drops using NEC 310-16 and Table 8	<input type="checkbox"/> Lab 16.1 <input type="checkbox"/> Questions
FINAL			

Special Needs

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this

or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

Learning Resource Center (Library)

The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog \(print books, videos, e-books\)](#) and [databases \(journal and magazine articles\)](#). [Research guides](#) covering specific subject areas, [tutorials](#), and the "Ask a Librarian " service provide additional help.

Student E-mail

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Student Portal

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Technical Support

For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

Important School Policies

For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).