

SYLLABUS
ELPT 1319
FUNDAMENTALS OF ELECTRICITY I

INDUSTRIAL AND COMMERCIAL ELECTRICITY
BRAZOSPORT COLLEGE

The Brazosport College District shall not discriminate against, or exclude from participation in any benefits or activities either on the staff or in the student body, any person on the grounds of sex, race, color, religion, national origin, age, or handicap.

COURSE EVALUATION

STUDENT EVALUATION

- A. Homework will account for no more than 10% of total grade.
- B. NCCER Exams will account for no more than 60% of total grade.
- C. Labs will account for no more than 5% of the total grade.
- D. Participation will account for no more than 5% of the total grade.
- E. Final exam will account for no more than 20% of total grade.

INSTRUCTOR EVALUATION

- A. Students will be given an opportunity to evaluate their instructor and the course content.
- B. The instructor will review and evaluate in terms of withdrawal rate.
- C. Final grades given will be reviewed in an effort to determine if a pattern of high or low grades exists.

DEPARTMENT EVALUATION OF COURSE

- A. Faculty & the Division Chair will review student grades & withdrawal trends.
- B. Faculty and the Division Chair will review the Course Competencies and Perspectives Assessment.

GENERAL GOALS/OBJECTIVES

The student will explain atomic structure and basic electrical values such as voltage, current, resistance, and power; calculate electrical values for series, parallel, and combination circuits; summarize the principles of magnetism; and utilize electrical measuring instruments.

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Office: L-202-D

COURSE DESCRIPTION

An introduction to basic direct current (DC) theory including electron theory and direct current applications. NCCER credit available. (3 SCH, 2 lecture, 2 lab)

TEXT AND REFERENCES

NCCER Contren Learning Series, Electrical Level 1 Trainee Guide 2014, Basic Electricity-Van Valkenburgh, Nooger & Neville, inc. Paperback, Published, Inc. 1992. ISBN: 13:978-0-13-256958-3

National Electric Code, 2017 published by National Fire Protection Association. ISBN:978-0-13-473820-8

"Required course materials are available at the Brazosport College bookstore, on campus or online at <http://www.brazosport.edu/bookstore>. A student of this institution is not under any obligation to purchase a textbook from the college bookstore. The same textbook is/may also be available from an independent retailer, including an online retailer."

Modules:

26101-17 Orientation to the Electrical Trade
26102-17 Electrical Safety
26103-17 Intro to Electrical Circuits
26104-17 Electrical Theory
26107-17 Hand Bending
26112-17 Electrical Test Equipment

STUDENTS WITH DISABILITIES

Brazosport College is committed to providing equal education opportunities to every student. Brazosport College offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software. Please contact the Special Populations Counselor at (979) 230-3236 for further information.

ACADEMIC HONESTY

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but

not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://www.brazosport.edu>. Click on the CATALOGS AND SCHEDULES link under STUDENTS.

Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication, and will, at a minimum, result in 0 for that assignment in this course. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services.

COURSE GOALS

The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives (Addendum A).

(* designates a CRUCIAL goal)

1. Demonstrate safe working procedures in a construction environment.
2. Identify the methods of hand bending EMT conduit.
3. Identify the methods of bending ridged conduit.
4. Define the units of measurements that are used to measure the Properties of electricity.
5. Explain how voltage, current, and resistance are related to each other.
6. Explain the basic characteristics of a series-parallel circuit.

STUDENT CONTRIBUTIONS

Each student will spend at least 4 hours per week preparing for class. The student will have an opportunity to evaluate the instructor.

COURSE EVALUATION

Student grades will be assigned according to the following criteria:

LABS 5%	PARTICIPATION 5%	HOMEWORK 10%
NCCER EXAMS 60%	FINAL EXAM 20%	

The student will be graded in accordance with established college policy. Grades of A through F will be assigned according to the chart below:

100-90 = A	89-80 = B	79-70 = C	69-60 = D	59-0 = F
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ATTENDANCE AND WITHDRAWAL POLICIES

The class meets for 2 lecture hours and 2 lab hours per week. Each student will spend at least 4 hours per week preparing for class.

- Attendance is critical since this class meets only once a week. Attendance will be taken each class period. If you miss a class, it is your responsibility to schedule any make-up test, homework, or lab with the instructor.
- Because many assignments are prepared during class time, absences may adversely affect the final grade in the class.
- Students will be dropped if they miss more than 3 classes before the drop date.
- Tardies and leaving early will count as one half of an absence.
- Students are also expected to take care of the equipment in the classroom. **PLEASE DO NOT BRING FOOD, DRINKS, OR UNAUTHORIZED PERSONS INTO THE CLASSROOM.**
- It is the student's responsibility to withdraw from a course if circumstances occur that could prevent the student from successfully completing that course. Students should notify instructor of decision to withdraw and must not assume the instructor will complete the paperwork for the student. The instructor will complete required paperwork only if the instructor decides to drop a student for cause. Failure to notify instructor of withdrawal could result in the student failing the course.

During class, cell phones and all electronic devices are to be turned off or set on “vibrate” mode for the entire class period. If you are expecting a call of an urgent nature, please inform me before class to make arrangements in handling the call.

COMPUTER USAGE

Computers are to be used for class assignments only. If you are doing internet searches, playing games, sending or receiving email, on facebook or twitter, you will be asked to leave immediately. You will be counted absent and receive a zero for any work assigned during the class period. This includes homework as well as in-class assignments.

ASSIGNMENTS AND MAKE-UP POLICY

Students are responsible for completing all reading and homework assignments prior to class. All assignments are due on the date assigned. No late work will be accepted unless the student has an excused absence. An excused absence is when the student notifies the instructor of his or her absence prior to class.

Please note that changes in the Texas Education Code state that students enrolling for the first time in a Texas public institution of higher education in the fall of 2007 or after, will not be permitted to withdraw from more than a total of six courses (no minimum number of credit hours on each course) in which the student is officially enrolled during the student's period of undergraduate study at all such institutions (this includes any course a transfer student has dropped at another institution of higher education). See <http://www.brazosport.cc.tx.us/CurStu.html> for more information.

ADDENDUM A PERFORMANCE OBJECTIVES

Module 26101-14 No Performance

Module 26102-14

Objective	Task
1	1. Perform a visual inspection on various types of ladders.
1	2. Set up a ladder properly to perform a task.
1	3. Properly don a harness.
3,4,5	4. Perform a hazard assessment of a job such as replacing the light in your classroom. Discuss the works to be performed and the hazards involved. Locate the closest phone to the work site & ensure that the local emergency telephone numbers are either posted at the phone or known by you & your partner(s). Plan an escape route from the location in the event of an accident.

Module 26103-14: No Performance

Module 26104-14: No Performance

Module 26107-14

Objective	Task
3	1. Make 90-degree bends, back-to-back bends, offsets, kicks, and saddle bends using a hand bender.
4	2. Cut, ream, and thread bender.

Module 26112-14

OBJECTIVE	TASK
1, 2	1. Under instructor supervision, measure the voltage in your classroom from line to neutral & neutral to ground.
1, 2	2. Under instructor supervision, use an ohmmeter to measure the value of various resistors.

CLASS SCHEDULE

The following is a tentative schedule for the course. The instructor reserves the right to make schedule changes based on the needs of the students in the class.

WK	LECTURE/LABS	ASSIGNMENTS/HOMEWORK	DUE DATES
1	REVIEW SYLLABUS, COURSE OVERVIEW LECTURE - 26101	READ-MODULE 26101 & 26102 OHM'S LAW WORKSHEET #1 STUDY FOR 26101 UNIT EXAM	
2	LECTURE - 26102 LAB	STUDY FOR 26102 UNIT EXAM READ: MODULE 26112 BASIC ELECT. READ 1-1 THRU 1-28 SELFTEST PG. 1-12: 1,5,10 SELFTEST PG. 1-17: 1,2,3,4 SELFTEST PG. 1-28: 1,2,9 OHM'S LAW WORKSHEET #2	DUE-OHM'S LAW WORKSHEET #1
3	UNIT EXAM 26102 LECTURE 26112 LAB-	READ MODULE 26107 BASIC ELECT. READ 1-28 THRU 1-51 SELFTEST PG. 1-44: 1,3,4,8,10 SELFTEST PG. 1-51 1,3,11,12,13 OHM'S LAW WORKSHEET #3	B.ELECT. Homework due
4	LECTURE MOD. 26107 LAB	STUDY FOR 26107 UNIT EXAM READ MODULE 26103 BASIC ELECT. READ 1-52 THRU 1-82 SELFTEST PG. 1-72: 1,2,9,11,13 OHM'S LAW WORKSHEET #4	B.ELECT. Homework due
5	EXAM 26107 LECTURE 26103 LAB-STUB-UP CONDUIT	BASIC ELECT. READ 1-83 THRU 1-105 SELFTEST PG. 1-94: 7,10 SELFTEST PG. 1-105: 1,4,6 OHM'S LAW WORKSHEET # 5	B.ELECT. Homework due
6	LECTURE MODULE-26103 LAB: BACK-TO-BACK CONDUIT	STUDY FOR EXAM 26103 BASIC ELECT. READ 1-106 THRU 1-123 SELFTEST PG. 1-113 1,2,9 SELFTEST PG. 1-123: 1,2,3,4 OHM'S LAW WORKSHEET #6	B.ELECT. Homework due
7	EXAM 26103 LECTURE-26104 LAB	STUDY FOR 26103 EXAM BASIC ELECT. READ 2-32 THRU 2-58 SELFTEST PG. 2-46 1,2,3,5,6,10 OHM'S LAW WORKSHEET #7	B ELECT . Homework due
8	LECTURE-26104 LAB:	BASIC ELECT. READ 2-59 THRU 2-81 SELFTEST PG. 2-81 1A+1B; 2A+2B;3;4 OHM'S LAW WORKSHEET #8	B.ELECT. Homework due
9	MODULE-26104 LAB	BASIC ELECT. READ 2-82 THRU 2-87 SELFTEST PG 2-87: 1a+1b;2;4 OHM'S LAW WORKSHEET # 9	B.ELECT. Homework due
10	LECTURE MODULE 26104	MODULE 26104 OHM'S LAW WORKSHEET #10	B.ELECT. Homework due
11	LECTURE MODULE 26104		
12	LAB	STUDY FOR MODULE EXAM 26104	
13	UNIT EXAM MOD. 26104		
14	FINAL REVIEW	STUDY FINAL REVIEW NOTES	
15	FINAL		

**SYLLABUS ELPT 1319
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COURSE SYLLABUS AGREEMENT FORM

YEAR_____ **SEMESTER**_____

LAST/FIRST NAME (PRINT) _____

DATE_____ **INSTRUCTOR** _____

I have enrolled in ELPT 1319 - Fundamentals of Electricity and agree that I have received a copy of the course syllabus. I agree as a condition of enrollment and participation in the course that I have read the syllabus and will comply with the requirements. It is understood that during the semester the instructor may have to make adjustments to the weekly class schedule.

I understand that communication by email must be done using my brazosport email only._____initial

I understand that if I do not wear proper Personal Protection Equipment especially safety glasses, closed toe shoes, and gloves, during lab I will have to leave the classroom and will not earn a participation/lab. credit._____initial

I understand to obtain NCCER credit I must have the NCCER form completed by 3rd session. In addition, NCCER test must have a minimum grade of 70%. The performance requirement must be completed by the 10th session. You must show complete competence in this performance requirement to obtain credit. _____initial

I understand that while it is possible to re-test on a NCCER exam for NCCER credit. Only the 1st attempt will be accepted for the grade book._____initial

This course may have to be finished online. No refunds will be available._____initial

Proper Mask and glove wearing are required in class._____initial.

SIGNATURE

DATE