

## Basic Electrical Theory (ELPT 1311 6S1)

### CREDIT

3 Semester Credit Hours (2 hours lecture, 3 hours lab)

### MODE OF INSTRUCTION

Face to Face

### PREREQUISITE/CO-REQUISITE:

None

### COURSE DESCRIPTION

Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

### COURSE OBJECTIVES

Upon completion of this course, the student will be able to explain atomic structure and basic values such as voltage, current, resistance, and power; determine electrical values for combination circuits in direct current (DC) and alternating current (AC) containing resistance, inductance, and capacitance; summarize the principles of magnetism; calculate voltage drop based on conductor length, type of material, and size; and utilize electrical measuring instruments.

- The student will learn how to explain atomic structure and basic values such as voltage, current resistance and power.
- The student will learn how to determine electrical values for combination circuits in direct current (DC) and alternating current (AC) containing resistance, inductance and capacitance.
- The student will learn how to summarize the principles of magnetism.
- The student will learn how to calculate voltage drop based on conductor length, type of material and size.
- The student will learn how to utilize electrical measuring instruments.

### INSTRUCTOR CONTACT INFORMATION

Instructor: Jimmy Haire

Email: [jdhaire1@lit.edu](mailto:jdhaire1@lit.edu)

Office Phone: (409) 386-0225

Office Location: 1355 W MLK Jr Dr, Silsbee, TX 77656

Office Hours: Monday – Friday, 7:30 – 8:00 AM, 12:00 – 1:00 PM

Approved: **Initials/date**



**LAMAR INSTITUTE  
OF TECHNOLOGY**

## REQUIRED TEXTBOOK AND MATERIALS

None

## ATTENDANCE POLICY

- Class attendance is important to obtain the educational objectives of this course. Regular attendance and being on time for classes will have a positive effect on your academics and employment opportunities.
- Two absences will result 1 letter grade drop, three absences drop 2 letter grades.
- Four absences result in an F for the semester.

## DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

## COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Week 1	Power Systems		
Week 2		Week 2	
Week 3			Week 3
Week 4	Power System Exams		
Week 5	DC	Week 5	
Week 6			Week 6
Week 7	AC	Week 7	
Week 8			Week 8
Week 9	Single Phase		
Week 10		Week 10	
Week 11			Week 11
Week 12	Three Phase		
Week 13		Week 13	Week 14
Week 14			
Week 15	Practical		
Week 16	Comprehensive		

## COURSE EVALUATION

Final grades will be calculated according to the following criteria:

<b>Activity</b>	<b>Percentage</b>
Daily Grades	15%
Exam 1 – Power Systems	15%
Exam 2 - DC	20%
Exam 3 - AC	20%
Exam 4 – Three Phase	15%
Practical Exam	15%
<b>Total</b>	<b>100%</b>

## GRADE SCALE

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

## TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

## DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

## **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

## **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

## **ADDITIONAL COURSE POLICIES/INFORMATION**

1. No food, drinks in class.
2. Daily lab grades cannot be made up.
3. No make ups for Lab tests.
4. Any written test retake has an 80 points as the maximum grade.
5. LIT is a tobacco free campus- no tobacco products allowed
6. Students must follow safety rules and procedures at all times. Failure to follow safety rules will require disciplinary action not limited to expulsion from LIT.
7. Students must have and wear all required clothing including climbing boots at all times, and have PPE and tools for participation in class and Lab.
8. Turn off all Cell Phones during class, lab and when on the field. Ear buds and smart watches are to be put away during class, lab and when on the field. Unauthorized cell phone, ear bud, and/or smart watch use will result in a 0 for the daily grade.
9. Do not bring children to class.
10. Cheating of any kind will not be tolerated. Students caught cheating or helping someone to cheat can and will be removed from the class for the semester. Cheating can result from expulsion from LIT.
11. Internet Usage
  - a. Classroom computers have access to the internet.
  - b. Student usage of the internet will be monitored.
  - c. Proper usage of the internet will be allowed. Used for classroom research or as directed.
  - d. Any unauthorized use of the internet will not be tolerated.
  - e. Improper usage of the internet, such as profanity, pornography, gambling, etc... will result in disciplinary action not limited to expulsion from LIT.
12. Horseplay and fighting will not be tolerated. Participating in horseplay and/or fighting will require disciplinary action not limited to expulsion from LIT.