

# Digital Applications CETT 1415 1A1

## CREDIT

4 Semester Credit Hours (3 hours lecture, 4 hours lab)

## MODE OF INSTRUCTION

Hybrid

## PREREQUISITE/CO-REQUISITE:

Prerequisite CETT 1403 & CETT 1405

## COURSE DESCRIPTION

This covers digital techniques and numbering systems, digital logic circuits, digital integrated circuits, decoders, encoders, multiplexers, demultiplexers.

## COURSE OBJECTIVES

Demonstrate a working knowledge of digital quantities with emphasis on combinational and sequential design.

Construct and troubleshoot combination and sequential circuits.

Use Boolean algebra to describe the logic of a combinational designed circuit.

Describe De Morgan's Laws and apply them to a logic circuit

## INSTRUCTOR CONTACT INFORMATION

Instructor: Minus Hargrave

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

Office Phone: 409-247-4883

Office Location: PATC 209

Office Hours: T/R 11:00am–1:00pm, additional hours posted on instructor's office door

## REQUIRED TEXTBOOK AND MATERIALS

Digital Electronics 9<sup>th</sup> Edition by William Kleitz, Pearson/Prentice Hall

## ATTENDANCE POLICY

If you are not here that day then you are absent. There are no excused absences.

**If you miss MORE THAN 20% of classes you will receive an F for the semester.**

**(Example: 30 days of class = 6 days. 7<sup>th</sup> day = F)**

Approved: **CH 01/20/2023**



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## 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 1/2	Course introduction and policies	Class policies	Handouts
Week 3/4	Number Systems and Codes/Digital Electronic Signals and Switches	Chapters 1/2	Labs and As assigned
Week 4/5/6	Basic Logic Gates	Chapter 3	Labs and As assigned
Week 7	Boolean Algebra and Reduction Techniques	Chapter 5	Labs and As assigned
Week 8/9	Exclusive-OR and Exclusive-NOR Gates	Chapter 6	Labs and As assigned
Week 10/11/12	Arithmetic Operations and Circuits	Chapter 7	Labs and As assigned
Week 13/14/15	Code converters, Multiplexers, and Demultiplexers	Chapter 8	Labs and As assigned
Week 16	Final Project	Lecture	Labs and As assigned

## COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Classwork 20% of total grade
- Labwork 20% of total grade
- Quizzes 25% of total grade
- Exams 35% of total grade

## 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

### TURNED IN WORK RULES

1. All work will be folded lengthwise with content (sheet # 1) on inside.
2. **Name, course and section number, and date** will go on outside. **DO NOT WRITE NAME ON THE INSIDE.**
3. All assignments will be stapled **separately** and turned in separately. (NOT all stapled together.)
4. Multiple choice letter answers are to go in the blank next to the question number.
5. All work will be done in **PENCIL**. **WORK DONE IN INK WILL NOT BE ACCEPTED.**
6. Name and answers must be **legible**.