Digital Applications CETT 1415 6B1

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

MODE OF INSTRUCTION
Face to face

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
Office Phone: 409-247-4883
Office Location: PATC 209
Office Hours: MW 7:00am–11:00am, additional hours posted on instructor’s office door

REQUIRED TEXTBOOK AND MATERIALS

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. 7th day = F)

Approved: CH 08/17/2023
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

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<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>READINGS (Due on this Date)</th>
<th>ASSIGNMENTS (Due on this Date)</th>
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<tr>
<td>Week 1/2</td>
<td>Course introduction and policies</td>
<td>Class policies</td>
<td>Handouts</td>
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<tr>
<td>Week 3/4</td>
<td>Number Systems and Codes/Digital Electronic Signals and Switches</td>
<td>Chapters 1/2</td>
<td>Labs and As assigned</td>
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<tr>
<td>Week 4/5/6</td>
<td>Basic Logic Gates</td>
<td>Chapter 3</td>
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<td>Week 7</td>
<td>Boolean Algebra and Reducation Techniques</td>
<td>Chapter 5</td>
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<td>Week 8/9</td>
<td>Exclusive-OR and Exclusive-NOR Gates</td>
<td>Chapter 6</td>
<td>Labs and As assigned</td>
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<td>Week 10/11/12</td>
<td>Arithmetic Operations and Circuits</td>
<td>Chapter 7</td>
<td>Labs and As assigned</td>
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<td>Week 13/14/15</td>
<td>Code converters, Multiplexers and Demultiplexers</td>
<td>Chapter 8</td>
<td>Labs and As assigned</td>
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<td>Week 16</td>
<td>Final Project</td>
<td>Lecture</td>
<td>Labs and As assigned</td>
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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. 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. 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.**