Instructor: Colleen Bailey PhD, NTDP B252, Colleen.Bailey@unt.edu

Office Hours: Th 11:00 AM to 1:00 PM or by appointment

Lecture: MW 1:00 PM to 2:20 PM; NTDP B217

TA: Ananda Rohit Daita, Office TDB, anandarohitdaita@my.unt.edu, M 10:00 AM to 12:00 PM and Th 1:00 PM to 3:00 PM

Prerequisite: MATH 1710 Calculus I

Course Description: Digital computers and digital information processing systems; Boolean algebra, principles and methodology of logic design; machine language programming; register transfer logic; microprocessor hardware, software and interfacing; fundamentals of circuits and systems; computer organization and control; memory systems, arithmetic unit design.


Course Outline: (tentative)

- Topic 1 ................. An Introduction to Digital and Analog Systems
- Topic 2 ...................... Number Systems and Codes
- Topic 3 ........ Boolean Algebra, Switching Functions, and Canonical Forms
- Topic 5 ............... Top-down Modular Design of Combinational Logic
- Topic 6 .............. Sequential Circuit Elements - Latches and Flip-Flops
- Topic 7 ......... Modular Sequential Logic - Counters and Shift Registers
- Topic 8 ......... Analysis and Design of Synchronous Sequential Circuits
- Topic 9 ......... Analysis and Design of Asynchronous Sequential Circuits
- Topic 10 ...................... Digital Logic Testing

Grading:
Homework 10%
Exam 1 25%
Exam 2 25%
Final 35%
Project 5%

Course Objectives: To understand analyze digital systems and the logical blocks that comprise them.
**Blackboard:** Course material and grades will be maintained on the course Blackboard site. You should check this page often to keep current on important information. [https://learn.unt.edu](https://learn.unt.edu)

**Rights and Responsibilities:**

- Students aware of an authorized absence from a scheduled class or exam (religious observance, military service, official university function, etc.) should notify the instructor as soon as possible according to UNT Policy 15.2.5.

- Students with disabilities should inform the instructor of their needs at the beginning of the semester according to UNT Policy 18.1.14 in order to receive proper attention and accommodations.

- Cheating and academic dishonesty will not be tolerated. Any student found to have participated in academic dishonesty will receive an F in the class, and may be subject to further disciplinary action. Acts of academic dishonesty include: academic fraud (e.g. changing solutions to appeal a grade), copying or allowing one’s work to be copied, fabrication/falsification, plagiarism, sabotage of others’ work, substitution (e.g. taking an exam for someone else). For more details, see UNT Policy 18.1.16.

- Letter grades will not be assigned until the end of the term, after the final exam has been graded. Any letter grade assignment posted before the end of the class should be regarded as tentative and subject to change.