# Digital System Design

**Course prefix:** ECE

**Course number:** 2020

**Section:** IE3

**CRN**
83091

**Instructor first name:**  Placeholder

**Instructor last name:**  Placeholder

**Semester:** Fall

**Academic year:** 2026

**Course description:** Computer system and digital design principles. Switch and gate design, Boolean algebra, number systems, arithmetic, storage elements. Datapath, memory organization, instruction set architecture, assembly language. Credit not allowed for both ECE 2020 and ECE 2030.

**Academic honesty/integrity statement:**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards.  For information on Georgia Tech's Academic Honor Code, please visit: http://www.catalog.gatech.edu/policies/honor-code/ or http://www.catalog.gatech.edu/rules/18/. Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations. During anytime throughout the semester you have question involving the Academic Honor Code, please contact your instructor or a first-year program faculty member.

## Collaboration & Group Work

You are encouraged to work with classmates on in-class problem solving and to study with others outside of class. Collaboration on homework assignments is acceptable, and you should keep in mind that the effort you put into these assignments will be reflected in what you gain from them.  Discussion of the material in laboratory assignments is appropriate; however, all work submitted in reports must be prepared independently.

## STUDENT-FACULTY EXPECTATIONS AGREEMENT

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See http://www.catalog.gatech.edu/rules/22/ for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, we encourage you to remain committed to the ideals of Georgia Tech while in this class.

We expect students to arrive prepared for class, to participate in class activities and discussions, and to utilize office hours for additional help when needed.

In return, students should expect instructors to arrive prepared for class, to engage them in activities and discussions that further their understanding of course material, and to be available during office hours.

Students should expect to spend 6-9 hours per week outside of the classroom and laboratory to excel in this course. This includes time spent reading the textbook, watching videos as assigned, working problems, and writing laboratory reports. Students are encouraged to develop a pattern of preparing for class, attending class, and then reviewing after each class period.

**Core IMPACTS statement(s) (if applicable):**

**This is a Core IMPACTS course that is part of the STEM area.**

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I ask scientific questions or use data, mathematics, or technology to understand the universe?