

ADVANCED LOGIC DESIGN

CSEE 4280

Spring Semester, 2018

Location: Driftmier Engineering Building Room 209

Time: Monday 01:25 - 2:15 p.m. (Lectures and Labs)

Friday 01:25 - 4:25 p.m. (Labs)

Instructor

Prof. Leidong Mao, 220 Riverbend Road Room 166, Phone: 706-542-1871

E-mail: mao@uga.edu

Course website: <https://www.elc.uga.edu>

Overview

Introduction to a basic understanding of how microprocessors work. Students will learn the tools and techniques necessary to construct a 4-bit microprocessor on a FPGA board.

Prerequisites

CSEE 4230 and CSEE 4270

Syllabus

CPU Datapath Design

CPU Controller Design

CPU Memory Design

Implementation of CPU design using Xilinx and FPGA

Textbooks

No textbook is required. Handouts will be provided.

Grade Evaluation

The overall course grade will be a weighted average of labs, as follows:

Lab projects	90%
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Attendance	10%
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- **90-100 A**
- **85-90 A-**
- **80-85 B+**
- **75-80 B**
- **70-75 B-**
- **65-70 C+**
- **60-65 C**
- **55-60 C-**
- **50-55 D**
- **0-50 F**

Class Attendance (Required)

Attending class regularly is essential and will be regularly checked. The responsibility of

promptly making up work missed on account of absences rests entirely with the student. Be forewarned that each class is built on material covered in the previous class, so you may find yourself lost as a result of an absence. In addition, if you are late for class, you will more than likely find yourself unable to catch up, so be in class on time. If you KNOW ahead of time that you will have to miss a class, PLEASE let me know in advance. If you miss a class for unforeseen circumstances, please contact me as soon as possible so we're all on the same page. **A student who incurs 4 or more unexcused absences may be withdrawn from the class at the discretion of the instructor.**

Engineering Professionalism Policy

Engineers make great contributions to society. Engineering is a very satisfying profession that provides many rewards but is demanding and requires hard work. The engineering profession is governed by a code of ethics. Engineering faculty at UGA expect students to act in a professional manner at all times and develop the work ethics required for a successful engineering career. Engineering students at UGA are responsible for maintaining the highest standards of professionalism and professional practice. **Use of cell phones or other digital devices during lectures will not be tolerated.** If a student is asked to leave due to unprofessional behavior they will be counted absent.

Out of the Classroom Meetings with Instructor

Meetings with the course instructor can be arranged as needed. In order to develop professional skills, **students are required to contact the instructor by email and set a date and time for the meeting.** If you make an appointment and must cancel, it is expected that you contact the instructor in a reasonable amount of time. It is the student's responsibility to seek assistance if they are experiencing trouble understanding the materials presented in this course.

Questions and Help

The lecture notes, handouts and homework sets will be posted online at the course website: <https://www.elc.uga.edu>. Students are encouraged to email the instructor with brief questions at any time; he will respond as promptly as he can. The instructor's office locates at Riverbend South Room 166 (220 Riverbend Road), you may come for questions and help as many as you wish by appointments.

UGA Student Honor Code

The University of Georgia seeks to promote and ensure academic honesty and personal integrity among students and other members of the University Community. All students agree to abide by the Student Honor Code by signing the UGA Admission Application. This code provides, "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." All academic work must meet the standards contained in this Code and in A Culture of Honesty. Students are responsible for informing themselves of those standards before performing any academic work. Links for more detailed information can be found at: <http://www.uga.edu/honesty/>.