Syllabus

Welcome to Digital Systems. I look forward to working with you over the next 15 weeks. My goals for this class are to: 1) lay a solid foundation for your digital circuits class (CE/EE 3320) and 2) introduce you to computer architecture and how we "talk" to computers. When you have questions about the material we are covering, please come talk to me right away so you do not fall behind. I am here to help you succeed!

By the end of this course you should:
- ✓ be fluent in binary numbers and base conversion,
- ✓ be fluent in Boolean algebra and computational techniques,
- ✓ be able to read and write simple assembly language programs, and
- ✓ have an introductory understanding of computer organization and design.

- **Prerequisites:**
  A working knowledge of basic algebra. Knowledge of programming fundamentals is helpful but not required.

- **Instructor:** Diana Cogan
  - Email: diana.cogan@utdallas.edu   Course Website: http://elearning.utdallas.edu/
  - Office hours: Mon. & Wed. 2 – 4 pm in ECSN 3.312 OR by appointment.

- **Teaching Assistants:** on Lab syllabus

- **Meeting Times & Locations:**
  - Lecture section 001: Tuesday & Thursdays 10:00 – 11:15 am in ECSS 2.412.
    * Attendance will be taken at each class meeting. If you are ill, you may join virtually on BlackBoard Collaborate.
  - Lab sections (2310.301 & 302): Fridays in ECSN 2.120 – check your schedule for your time slot.

- **Required Materials:**
  - zyBooks <u>CE 2310/EE 2310: Introduction to Digital Systems</u>. To acquire access to this online text:
    1. Sign in or create an account at learn.zybooks.com
    2. Enter zyBook code: UTDALLASCE2310EE2310Fall2022
    3. Subscribe
  - <u>Personal computer</u> (NOT a tablet, Ipad or phone); minimum operating system: Windows 10, MacOSX 10.13+ or Chrome OS. <u>Webcam & audio capability and a reliable internet connection.</u> If you need assistance acquiring this equipment, please go to OIT Tech Support: https://www.utdallas.edu/oit/helpdesk/.

- **Additional Resources (not required):**
  - <u>Fundamentals of Logic Design</u>, 7th ed. by Charles H. Roth, Jr. & Larry L. Kinney
  - <u>Computer Organization and Design</u>, 2nd ed. by Davis A. Patterson & John L. Hennessy

- **Course Evaluation:**   Grading scale:

Exams 1 & 2:	15% each
Cumulative Final Exam	20%
Lab:	25%
Reading and homework	25%

$90 \le A- < 93$	$93 \le A < 97$	$97 \le A+ \le 100$
$80 \le B- < 83$	$83 \le B < 87$	$87 \le B+ < 90$
$70 \le C- < 73$	$73 \le C < 77$	$77 \le C+ < 80$
$60 \le D- < 63$	$63 \le D < 67$	$67 \le D+ < 70$
$0 \le F < 60$		

  Notes: 1. Lab participation is mandatory. *If you do not attend at least 7 out of the 10 lab sessions, you will receive a failing grade in this course.* **2. Exams will be at the Testing Center.** *You must reserve a time slot during pre-specified testing time at least 3 days in advance of the test. Failure to make or keep your reservation will NOT qualify you for a make-up exam.*

- **Important Class Dates:**
  - *First Lecture:* August 23
  - *Test 1*: review in class, September 22; test at Testing Center, Friday & Saturday, September 23 & 24.
  - *Test 2*: review in class, October 27; test at Testing Center, Friday & Saturday, October 28 & 29.
  - *Final:* review in class, December 8; test at Testing Center, Saturday & Monday, December 10 & 12.

- **How to Succeed in this Class:**
  - o **Attend lectures;** take notes; practice **recalling** the material we cover - frequently.
  - o Attend all lab sessions and complete reading and homework assignments in a timely fashion. Rework reading activities and homework problems several times. Study with a friend and practice explaining concepts and problems to each other.
  - o See or email me when you have questions about lecture or homework. (*PLEASE include EE/CE 2310 in the subject line; email from your UTD address.*) If you have questions about lab, see or email one of the TAs assigned to your section.

- **Course Policies:**
  - o Weekly reading assignments will be in zyBooks. Weekly homework assignments will be on eLearning. Prelabs will be turned in during lab.
  - o I will allow makeup work only for university sanctioned activities and extraordinary circumstances - such as a death in your family. You must provide documentation to verify all such activities and circumstances.
  - o You may dispute any graded work within one week of the return of that work.
  - o Copying on examinations is cheating and is prohibited. Any instances of cheating or plagiarism will be subject to disciplinary penalties according to the UT Dallas policy on scholastic dishonesty. The penalties include the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the integrity of the University, I will strictly enforce the policies on scholastic dishonesty. Read the policy at **http://www.utdallas.edu/deanofstudents/dishonesty/.**
  - o I will post announcements, homework assignments, lab assignments and complementary materials on eLearning. Check regularly so you do not miss anything!

- **Class Plan:**

#	Lecture Date	Topics Covered	Due this week Check dates	Laboratory/Recitation Friday
1	Aug. 23 & 25	Intro. to CE/EE 2310 & Combinational logic	Nothing due	Workshop (optional)
2	Aug. 30 & Sept. 1	Boolean algebra, equations, truth tables, timing	Reading1, HW 1	Prelab 1, Lab 1
3	Sept. 6 & 8	Base conversion, binary addition & subtraction	Reading 2, HW 2	Prelab 2, Lab 2
4	Sept. 13 & 15	K-maps, deMorgan and more Gates	Reading 3, HW 3	Lab 3
5	Sept. 20 & 22	Test Review; Muxes, Decoders, Encoders	Reading 4, HW 4	**Exam 1 at Testing Center**
6	Sept. 27 & 29	Adders & Subtractors		Prelab 4, Lab 4
7	Oct. 4 & 6	Comparators, Registers, Memory	Reading 5, HW 5	Prelab 5a, Lab 5a
8	Oct. 11 & 13	Information as Bits	Reading 6, HW 6	Prelab 5b, Lab 5b
9	Oct. 18 & 20	Floating & fixed-point arithmetic	Reading 7, HW 7	Make-up week
10	Oct. 25 & 27	Test Review; Shifters & binary multiplication	Reading 8, HW 8	**Exam 2 at Testing Center**
11	Nov. 1 & 3	MIPS – assembly language programming		Lab 6
12	Nov. 8 & 10	MIPS – assembly language programming	Reading 9, HW 9	Lab 7
13	Nov. 15 & 17	Processor design	Reading 10, HW 10	Lab 8
	Nov. 22 & 24	Fall Break / Thanksgiving; no class meetings	Reading 11, HW 11	No meeting
14	Nov. 29 & Dec. 1	Processor design	Reading 12, HW 12	Lab 9
15	Dec. 6 & 8	Test review	Reading 13, HW 13	---
		Final Exam at Testing Center		**Sat. & Mon., Dec. 10&12**

These descriptions and timelines are subject to change at my discretion (i.e. as necessary).

- **Steps for turning in assignments on eLearning:**
  1. Install a scanning app on your phone and use it to convert your assignment to a pdf.
  2. Do not use Safari (browser) to submit your Turnitin assignment. Firefox or Chrome are recommended.
  3. Submitting your assignment is a two-step process:
     a. Upload your file.
     b. Review the preview image of your document to make sure it is correct. If it is not, resubmit it.
     c. Click the *Confirm* button. If you do not click *Confirm*, your assignment will not be submitted.
  4. Make sure you get the email confirmation. If you do not receive an email confirmation, your assignment WAS NOT submitted successfully. Try again, making sure you are following steps 2 and 3 properly.
  5. For additional assistance, contact elearning@utdallas.edu.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

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Classroom Conduct Requirements Related to Public Health Measures

UT Dallas will follow the public health and safety guidelines put forth by the Centers for Disease Control and Prevention (CDC), the Texas Department of State Health Services (DSHS), and local public health agencies that are in effect at that time during the Fall 2021 semester to the extent allowed by state governance. Texas Governor Greg Abbott's Executive Order GA-38 prohibits us from mandating vaccines and face coverings for UT Dallas employees, students, and members of the public on campus. However, we strongly encourage all Comets to get vaccinated and wear face coverings as recommended by the CDC. Check the Comets United: Latest Updates webpage for the latest guidance on the University's public health measures. Comets are expected to carry out Student Safety protocols in adherence to the Comet Commitment. Unvaccinated Comets will be expected to complete the Required Daily Health Screening. Those students who do not comply will be referred to the Office of Community Standards and Conduct for disciplinary action under the Student Code of Conduct – UTSP5003.

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Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes. Faculty have the discretion to set an attendance policy for their in-person meetings, but the absences due to COVID-19 cannot be counted against a quarantined student.

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Class Participation

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

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Class Recordings

The instructor plans to record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

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Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

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Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

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UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.