

EE 2110 Course Syllabus – University of Texas at Dallas

Course Information: EE 2110 – Introduction to Digital Systems Lab; Spring, 2010

Class Schedule: Note: All labs meet in ECSS 4.622 (the “New Building”).

Section 001 – M, 11:30 AM-2:30 PM

Section 002 – M, 2:30-5:30 PM

Section 003 – T, 2:30-5:30 PM

Section 004 – R, 2:30-5:30 PM

Section 501 – M, 5:30-8:30 PM

Instructor: Dr. Nathan Dodge Tel: (972) 883-2951 email: dodge@utdallas.edu

Office: ECSN 4.916 **Office Hours:** TR, 3:30-5:30 PM and by appointment

Instructors Website: <http://www.utd.edu/~dodge/>

NOTE: I DO NOT USE WEBCT! NOT AT ALL! NOT EVER! TO GET INFORMATION ABOUT EE 2310 YOU MUST GO TO THE WEBSITE LISTED ABOVE.

Course Co-requisite: EE 2310. Technical skills required in the laboratory exercises will be acquired in the classroom course.

Course Description: This course includes experiments with combinational and sequential digital logic, hands-on assembly of an IBM-style PC, and assembly language programming. Brief laboratory descriptions are found on the EE 2110 schedule (next page). Most lab exercises will be completed in 2 to 2 ½ hours or less (although some sessions may take the entire 3-hour period). Laboratory sessions will begin the week of Monday, January 25.

Student Learning Objectives/Outcomes: By the end of EE 2110 and the co-requisite classroom course, EE 2310, the student should have a firm basic knowledge of:

- | | |
|--|---------------------------------------|
| a. Binary and hexadecimal numbers | c. Basic combinational logic circuits |
| b. Fundamentals of Boolean Algebra and digital logic gates | d. Sequential logic circuits |
| | e. Assembly language programming |

The student should also have a good overview knowledge of modern computer organization.

Required Textbooks and Materials: None. All material (including this syllabus) is available on-line. To obtain all EE 2110 course material, go to the instructor’s web site at <http://www.utdallas.edu/~dodge/> and click on “EE 2110.” See also “Course and Instructor Policies,” below.

EE 2110 Laboratory Class Schedule, Spring, 2010

<u>Week Number</u>	<u>Lab Dates</u>	<u>Laboratory Number</u>	<u>Topic</u>
1	January 12-14	---	No labs this week.
2	January 19-21	---	No labs this week.
3	January 26-28	---	Introductory meeting – course overview and discussion of syllabus.
4	February 2-4	---	No labs this week.
5	February 9-11	1	Introduction to laboratory equipment; combinational logic. ¹
6	February 16-18	2	Adder circuits.
7	February 23-25	3	Bistable circuits: Flip-flops, latches, shift registers, and counters.
8	March 2-4	4	A complex logic circuit.
9	March 9-11	---	No labs this week.
10	March 16-18	---	SPRING BREAK!!!
11	March 23-25	5	Programming project number 1; machine instructions and writing a simple program.
12	March 30-April 1	6	Programming project number 2; writing a program involving a repetitive loop.
13	April 6-8	7	Programming project number 3; a complex loop.
14	April 13-15	8	Programming project 4; a recursive loop.
15	April 20-22	---	No labs this week.
16	April 27-29	---	No labs this week.
17	May 3	---	Semester ends.

Lab Routine: Make sure that you arrive in class promptly. The teaching assistant (TA) is authorized to take up to 10 points off your lab grade if you are late.

1. Minus 10 points off your first lab grade if you are not present for this intro.
2. Read lab before coming to class and become familiar with the procedure.
3. The TA may give a brief overview in some cases, discussing the lab theory and the procedure.
4. When you are told to proceed, you and your partner may do so at your own pace.
5. Refer to the TA when you have questions about the procedure or digital circuit arrangement.
6. When you are finished, clean up your work area, notify the TA. You may leave when the TA has inspected your workbench.

Grading Policy: Grading will be on the following basis:

Correctness and detail of experimental work	--	40 %
Answers to questions	--	20%
<u>Neatness and organization of report</u>	--	<u>40%</u>
Total	--	100 %

Grade ranges for EE 2110 are: A+: 97-100; A: 93-96; A-: 90-92; B+: 87-89; B: 83-86; B-: 80-82; C+: 77-79; C: 73-76; C-: 70-72; D+: 67-69; D: 63-66; D-: 60-62; F: below 60.

Course & Instructor Policies:

Laboratory exercise outlines, instructions for the lab report format, and a copy of this syllabus are available on-line at the instructor's faculty home page (address shown above). All on-line material is in Adobe Acrobat® (.pdf) format. You will need Adobe Acrobat Reader 6.0 or 7.0 to read pdf files. It may be downloaded from the UTD software web site (whose web address is: <http://www.utdallas.edu/ir/local/index.html>), or from the Adobe website (<http://www.adobe.com/products/acrobat/readstep2.html>).

Exams: There are no exams in this laboratory course.

Homework:

Lab reports are always due the next session after the lab is completed. Late lab reports are NOT accepted. If a student has an extraordinary reason for being unable to submit a lab report on time, the report may be accepted late if the student arranges the date with the TA in advance, or with appropriate documentation of the problem. Lab reports will be returned about a week after they are turned in.

Class attendance:

Lab class attendance is often taken when lab reports are turned in. You cannot use your lab partner's data to do your report – you must attend the lab yourself to get credit for your report! Points can be deducted for tardiness by your TA.

Lab citizenship, etc.:

Proper lab deportment for engineering students is taken for granted. When you enter the lab, speak quietly if you are carrying on a conversation. **MAKE SURE YOU TURN OFF YOUR CELL PHONE.** Do not listen in mp3 players, Ipods, etc., in class. Students found playing computer games in lab will be criticized, ridiculed, and possible have points taken off their next lab report grade!

Field Trip Policies and Off-campus Instruction and Course Activities: No off-campus activities in this course.

Student Conduct & Discipline:

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of*

Regents, The University of Texas System, Part 1, Chapter VI, Section 3, and in Title V, Rules on Student Services and Activities of the university's Handbook of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity:

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use:

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class:

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures:

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the

respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy:

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Disability Services:

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:

The University of Texas at Dallas, SU 22

PO Box 830688

Richardson, Texas 75083-0688

(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days:

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

These descriptions and timelines are subject to change at the discretion of the instructor.