EE 1202 Course Syllabus – University of Texas at Dallas

Course: EE 1202 – Introduction to Electrical Engineering II, Spring 2016
Class Schedule and Meeting Rooms:
Section 001 – Thursday, 11:30 - 12:45 PM, JSOM 12.210
Section 003 – Thursday, 2:30 - 3:45 PM, JSOM 2.106

Instructor:
Dr. Amir Khoobroo
Email: axk144831@utdallas.edu **Website: www.elearning.utdallas.edu**
Office: ECSN 4.208 **Office Hours: Thursday 1:00PM-2:15PM**
Teaching Assistant:
Maziyar Baran-Pouyan **mxb112230@utdallas.edu**
Elahe Rezaie **exr150830@utdallas.edu**
Vahid Qaradaghi **vxq130030@utdallas.edu**
Mahdi Bidmeshki **mxb100220@utdallas.edu**

Course Pre-requisite: None.

Course Description:

This course is mainly focused on an introduction to the Computer Engineering area of the Electrical Engineering department. Designed around the central theme of a computer, it aspires to provide the necessary foundation for designing a simple processor and understanding how computers compute. Starting with data representation in digital form, it goes on to provide students with the ability to design a circuit for a given algorithmic information processing task. For this purpose, Boolean functions and combinational design are covered, followed by sequential logic design through Finite State Machines. Finally, the two parts are fused through the introduction of basic processor design principles. On the side, a touch of Electrical Engineering concepts would also be presented.

Student Learning Objectives/Outcomes:

The course aims at developing engineering skills in the design and analysis of digital logic components and circuits, making students thoroughly familiar with the basics of gate-level circuit design using simple logic gates and building up to more complex systems, and providing hands-on experience and exposure to circuit design using state-of-the-art computer aided design tools and programmable logic devices.

EE 1202 includes a 1¼ hour weekly lecture plus six fundamentals laboratories stressing laboratory practices and equipment familiarization, as described above. EE1202 may be taken by freshmen considering Computer Engineering as a major, as well as others with a serious interest in technology.

Required Materials:

The course does not follow a particular textbook. The lecture slides presented in class will be made available on E-learning after each class session.

References (Optional):

1- *Principles of Digital Design*, by Daniel D. Gajski, Prentice Hall, 1997.
2- *Introduction to Digital Systems*, by Milos D. Ercegovac, Tomas Lang, and Jaime H. Moreno, John Wiley & Sons Inc., 1999.

3- *Contemporary Logic Design* (2nd edition), by Randy Katz and Gaetano Boriello, Prentice-Hall, 2003.

EE 1202 Class Schedule, Sections 001 and 003, Spring 2016:

Class Number	Class Dates	Topic
1	January 14	**Lecture #0: Course overview and discussion of syllabus.**
2	January 21	**Lecture #1**
3	January 28	**Lecture #2**
4	February 04	**Lecture #3; Lab #1 will be assigned (DUE 02/11/2016)**
5	February 11	**Lecture #4; Lab #2 will be assigned (DUE 02/25/2016)**
6	February 18	**Lecture #5; Lab #3 will be assigned (DUE 03/03/2016)**
7	February 25	**Review for Test 1**
8	March 03	**Test 1**
9	March 10	**Lecture on Electrical Engineering**
--	March 17	**Spring Break! No class!**
10	March 24	**Lecture #6**
11	March 31	**Lecture #7; Lab #4 will be assigned (DUE 04/07/2016)**
12	April 07	**Lecture #8; Lab #5 will be assigned (DUE 04/21/2016)**
13	April 14	**Lecture #9; Lab #6 will be assigned (DUE 04/28/2016)**
14	April 21	**Review for Test 2**
15	April 28	**Test 2**

NOTE: Some class lectures dates may be subject to change.

Lab Routine:

There will be six lab assignments during the course of the semester. In the labs, you will be designing, simulating, and implementing your own Processor on an FPGA board using Xilinx ISE, a Microsoft Windows based software package. The first lab will familiarize you with the tools. The teaching assistants will be available during office hours to answer any questions you may have regarding Xilinx ISE. Details about the lab will be provided as the semester progresses.

Grading Policy:

Exam #1:	(~25%)
Exam #2:	(~25%)
Homework:	(~10%)
Lab Assignments:	(~30%)
Attendance:	(~10%)
IEEE bonus:	(10%)

Total:	**110 %**

Grade ranges for EE 1202 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:

Students will work as two-person partnerships in labs. Both team members need to be present to demonstrate the work to one of the Teaching Assistants and answer questions, in order to get graded. Please find a lab partner as soon after class #1 as possible. If you do not have a lab partner, tell the instructor at the beginning of the second class.

Most lab exercises will be completed in about 2 hours, although some sessions may take more. For each lab, you need to demonstrate your correctly working simulations of the circuits to one of the Teaching Assistants during their posted Lab Hours. You can use your own computer or on the computers in the **ECSN 3.1 (3.108/ 3.110/ 3.118/ 3.120 rooms)** labs, to do the labs, but you have to physically go to the lab to get your work graded. The Teaching Assistants will make a note of the team consistency, which should remain the same throughout the semester.

NOTE: PARTNERS WILL BOTH EARN THE SAME LAB GRADE ON EACH LAB. Make sure both teammates are well prepared and knowledgeable when presenting your lab results.

Exams:

There will be two non-cumulative examinations for this course. The first will cover approximately 60% of the course material while the second will cover the remaining 40%. Both exams will be administered during regular class meeting times.

Homework:

Two or three homework problem sets will be assigned during the course of the semester.

Class attendance:

Class attendance is **Mandatory** and is taken occasionally. You are responsible for all the material covered in the class. Since the course does not follow a textbook, make sure you don't miss any lectures.

Lab citizenship, etc.:

Proper lab deportment for engineering students is taken for granted. When you enter class, speak quietly if you are carrying on a conversation. **MAKE SURE YOU TURN OFF YOUR CELL PHONE.** Do not listen to mp3 players, IPODs, etc., in class. Do NOT use your computer in class, or you will be criticized, ridiculed, and possibly have points taken off your next report or homework 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 deal

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.