University of Texas at El Paso
EE 2369: Digital Systems Design I
Summer 2019

CRN: 31966  Class time: MTWRF 4:20PM-6:30PM  Classroom: PSCI 314

Instructor  Professor Miroslava Barúa  Phone  (915) 747-5720
Office  E320 (Engineering Bldg.)  E-mail miroslav@miners.utep.edu
Office Hours  Tuesday/ Thursday 3:00pm-4:00pm or by appt.

Required Course Materials

2. Use of @miners e-mail account, Blackboard and iClicker account for class resources, announcements and submitting certain assignments.

Course Description: In Digital Systems Design I you will learn about design and synthesis of digital systems using both combinational and sequential circuits

Prerequisite: EE 1305 or CS 1401 with a grade of “C” or better.

Co-requisite: EE 2169 (Lab for EE 2369). Hardware projects and software simulation projects are performed in this lab associated with our class. Student is responsible for completing the labs, and meeting with the Teaching Assistant at the formally scheduled time assigned to the section in which the student registered. Please note that the lab is 1 credit hour, and the grade for that lab is calculated separately from the grade in this class.

Students successfully completing EE 2369 will be able to:

1. Apply concepts of number systems to perform binary arithmetic and conversions
2. Analyze & synthesize digital circuits, both combinational & sequential
3. Design combinational circuits, such as binary adders, code converters, etc., by using logic gates
4. Design sequential circuits, such as counters, registers, etc., by using flip-flops and other hardware
5. Design, simulate or implement, and test digital circuits both hands-on (using physical devices) and with CAD tools
6. Solve engineering problems with the Algorithmic State Machines (ASM) technique
7. Design, simulate, and test digital circuitry using Verilog Hardware Description Language
8. Design, implement, and test digital circuitry by prototyping designs using the selected development system
Grading & Course Assignments

There will be no curving of grades in this course. Grading will be based on the standard scale:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90% - 100%</td>
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<tr>
<td>B</td>
<td>80% - 89%</td>
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<tr>
<td>C</td>
<td>70% - 79%</td>
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<tr>
<td>D</td>
<td>60% - 69%</td>
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<tr>
<td>F</td>
<td>Below 59%</td>
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Exams: There will be three exams (1, 2 and 3, all equally weighted) to assess your knowledge of the digital systems design techniques studied during each period of the course. All exams are closed book/closed notes and no calculators or other electronic devices are allowed. Refer to the associated document entitled “Important Dates” for estimated exam dates. Official exam dates will be announced in class and posted on Blackboard. You will be asked to provide your official UTEP ID to be allowed to take the exam. You should use your own class notes, homework problems, examples, reference materials, quizzes and handouts as your study guide for the exams. No make-up exams will be given. If there is an extenuating circumstance that can cause a student to miss one examination and the circumstance warrants an excused absence (by providing a medical excuse signed by physician or signed letter from boss on a company’s letterhead), a COMPREHENSIVE make-up exam may be given at the end of the semester to replace that missed exam. Be aware that inherently a comprehensive exam will be more difficult and will be worth 44% of your final grade.

Homework: A significant portion of your content mastery depends on completion of homework assignments, so make sure you understand and can solve all the problems by yourself. Remember to seek immediate assistance from the different resources (instructor, tutor, TA) if you need help and/or ask questions at the beginning of the next class session. You are responsible for doing the homework, even though it may or may not be collected. Homework assignments will include individual or group problem sets (Paper homework assignments) and reading assignments. All must be completed by the deadline. When collected, you must submit your handwritten homework at the beginning of the class by the due date. Late homework will only be accepted in the case of illness or an emergency; you are responsible for notifying me as soon as possible (before class) of the situation (illness or emergency) necessitating late submission of homework. Good homework presentation, including neatness and legibility, are expected and required. To receive full credit, all submitted work must be stapled and have Student’s Name, Assignment name, EE2369- Summer 2019, and Due date all on the right hand corner of the first page.

Quizzes: A significant portion of your grade will come from random quizzes that will assess your completion and understanding of all homework assignments as well as your basic understanding of the class topics (related to the material that has been covered in class and reading about the upcoming topics. Refer to the “Course Schedule” for the topic sequence). Quizzes are a major portion of your class grade so make sure to be well prepared for them on a timely manner. Quizzes will provide you with feedback. Quizzes may be given at the beginning of the class or at any point during the session. No make-up quiz will be given if you are late or absent.

Instructor Assessment: your active class participation will be assessed by collected work, by attendance, iClicker polling/questions, taking good class notes (NO taking pictures of the board), etc.
Extra credit: If needed. Extra credit may be assigned to the ENTIRE CLASS ONLY. No individual can request to present work for extra credit. When available, be ready to answer additional questions/challenge problems embedded on assignments, quizzes or exams that will count as extra credit.

Course Schedule and Important Dates:
This schedule will be available on Blackboard as a separate document highlighting topic sequence, key assignments, important dates and activities. Such document is subject to changes at the discretion of the instructor to adapt to the needs of the class.

Learning Environment
Prepare in advance: In order to be successful, each student must come to class prepared to participate. This means that you must read about the current and upcoming topics, understand your homework, and complete any other assignment BEFORE you arrive to the classroom. Coming to class late is unprofessional and is very disruptive to the class. If you are late to class, you are to come in quietly and take your seat but DO NOT attempt to turn in assignments.

Classroom Etiquette/ Student Conduct: You must be courteous, respectful and professional in the way you address others; either in person or in writing. Do not take pictures of the board during the class (it is very distracting and it interrupts the whole class).

E-mail Communication: For all your class related e-mails use the prefix “EE2369:” followed by the rest of the message’s subject description (Example: “EE2369: Question about homework”). Send all messages from your Miners account and include your name.

Course & University Policies
Mandatory Attendance: Attendance is the key to your academic success. If you miss a class session, you are responsible for obtaining notes, handouts, and assignments and for meeting the same deadlines as the rest of the class. If you have an excessive amount of absences from class it will impact your attendance/participation score or warrant being dropped from the course. If dropped, the grade that you receive will be a W until June 28th 2019, course drop deadline. After this date, the grade you receive will be an F, and only under exceptional circumstances a W.

Electronic Devices: Use professional discretion with electronic devices by shutting them off, or setting them to mute before coming to class. Do not use text messaging or web browser features while in class.

Center for Accommodations and Support Services (CASS):
Students requiring unique accommodations must contact the CASS office and provide their instructor with the proper documentation at the beginning of the semester. CASS office may be contacted at 747-5148, cass@utep.edu or go to Room 106 Union East Building

Scholastic Integrity/Academic Honesty:
Any form of academic dishonesty will not be tolerated. “Plagiarism” is the unattributed use of someone else’s work -- a classmate’s, a website’s, even a teacher’s from another course. In accordance with University regulations, scholastic dishonesty on a given assignment will be subject to disciplinary action and will be referred to the Office of Student Conduct and Conflict Resolution (OSCCR). Dishonesty/cheating/plagiarizing may result in a zero on the assignment, an “F” in the course, or even suspension from the university. If you need assistance with your assignments, please consult authorized sources of help. For more information on Scholastic Dishonesty and/or Plagiarism, consult the Handbook of Operating Procedures: Student Affairs, which is available in the Office of Student Life.
**Tips for Success in this class:**

1. Come to class, take good notes (Power Point presentations will not be provided) and keep everything organized.
2. Read, study and use all the course materials **before** each class. Be ready to show your understanding in the Quizzes and exams!
3. Visit instructor during office hours if you need assistance, or use e-mail to set up an appointment
4. Visit the EE2369 Tutor (find information on Blackboard about times and location)
5. Finish your assignments early and use all available resources (including Tutoring services)
6. Don’t cram for examinations; start your success by not falling behind!