

**EE 2369 – Digital Systems Design I**  
**Spring 2020** → UPDATED FOR ONLINE MODE

**Updated for Online Mode:**

The following text in green was added to the syllabus. The modifications to our previous syllabus (starting at bottom of Page#3) are denoted by **yellow highlighted text**. Please also refer to the **companion document** titled **“Adjustments to EE2369 for Online Mode”** (A.K.A **“To-Do” list**) **Due to the extraordinary crisis situation** we are all going through; we will have to complete the semester in 100% online mode. We will need mutual collaboration, flexibility and understanding of the great challenges this situation has caused on both students/instructors.

**Please keep in mind the following:**

- **Some assignments are no longer possible**
- **Some expectations are no longer reasonable**
- **The implementation of some policies is no longer feasible, hence they will no longer be available**

**In order to continue your academic progress related to this class we will have:**

- **Accessible asynchronous content** to accommodate diverse access, time zones, and contexts. Please be proactive and continue your academic activities by diligently keeping track of your own progress and by **working at your own time** (to allow flexibility for everyone’s schedule). Make sure to **accesses all the additional resources posted on Blackboard (recorded-mini-lectures, ‘how to..’ instructions, reference materials)** and **meet the posted deadlines (explicit calendar** has been made available to help you keep track of what you need to do).
- Incorporate **online tools** for content delivery, assessment submission (hence **you will need a device that provides you access to these tools** in order to complete your preparation and to participate in all assessment activities. Complete the **“To-Do List”** contained in the document titled **“Adjustments to EE2369 for Online Mode”**
- **Synchronous discussion sessions** will only occur when information/discussion benefits from real-time collaboration {Example: first class session for online mode to go over the changes and how to use the tools, exam review sessions, etc) }. During this live-session you will have the opportunity to ask questions {on chat or audio/video} and share screen in the Blackboard Collaborate Ultra environment.
- If you have questions or anything that you want to address with the instructor, please attend **Virtual Office hours** for live one-on-one communication opportunities. You can also attend office hours for our class Tutors in the same Blackboard Collaborate environment

**Prepare for Online mode:** **Read the companion document called “Adjustments to EE2369 for Online Mode” and complete the included “To-do” list in order to be ready to participate in the online version of our class.**

**Temporary Satisfactory/Unsatisfactory (S/U) Policy for Spring 2020 Courses:**

Our course is eligible and **we have opted-in** on this grading policy option to provide individual students to make the choice of grading mode. A passing grade will appear on student transcripts as an “S” (satisfactory), and a failing grade will appear as a “U” (unsatisfactory). Neither an “S” nor a “U” will calculate into the student GPA. A grade of “S” will meet prerequisite requirements and count toward major/minor requirements.

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Therefore, **each individual student will have two grading modalities to choose from:**

- Any student can decide to **remain in the traditional letter-grading mode** (*no need for further action*) **or**
- Any student can decide to **take the S/U option**. Please note **the criteria in this course for getting an S will be a grade of “C” or better**. The student **must declare their wish to take this course as S/U** by submitting their declaration form by the **deadline of May 7<sup>th</sup>2020**. Also, please note that **once you make your declaration it is irreversible**.

<u>Scale for Letter Grade mode:</u>	<u>Satisfactory/Unsatisfactory (S/U) Grading mode:</u>
90% -- 100% → A	A student who declared a change in grading mode to S/U modality will get:
80% -- 89% → B	S -- if they meet the criteria for receive an "A" or "B" or a "C" in the class
70% -- 79% → C	U -- if they had the crieteria to receive a "D" or an "F" in the class
60% -- 69% → D	
0% -- 59% → F	

Before making any decision, please discuss your options with your **advisor** to determine which grading mode would be appropriate for you. Before electing the S/U grading option, students should inquire if the S/U grade will, (1) negatively influence your transcript when applying to graduate or professional schools, or (2) be appropriate if you need to increase your GPA. To learn more about the implications of this S/U policy, click [here](#) for frequently asked questions regarding the S/U option. If you should determine that the S/U option is appropriate for you, please fill out [this form](#) and return it to [records@utep.edu](mailto:records@utep.edu) (or access the form here [https://forms.office.com/Pages/ResponsePage.aspx?id=0iF8hRYapEOQz9V\\_P6udLyq8r\\_qgiJlJo\\_3h0NGxzhpUN1Y0MEZRUEFNS1M3UE5EWld-HNkYxUUpHOC4u](https://forms.office.com/Pages/ResponsePage.aspx?id=0iF8hRYapEOQz9V_P6udLyq8r_qgiJlJo_3h0NGxzhpUN1Y0MEZRUEFNS1M3UE5EWld-HNkYxUUpHOC4u)) before the deadline of May 7<sup>th</sup>. An annotation will go into every student’s official transcript indicating that the S/U grading mode was utilized due to the national health crisis.

**Temporary Course Drop Policy for Spring 2020 Courses**

The deadline to drop a course has been extended to May 7, 2020. Courses dropped in the Spring 2020 semester will receive a grade of “W” (withdrawal) and will not count toward students’ six-course drop limit. Students who elect to drop a Spring 2020 course do not need written approval from advisors or instructors. To drop a course, students should simply email [records@utep.edu](mailto:records@utep.edu) from their Miners email account and include: (1) their name, (2) student ID, (3) course name (e.g. EE 2169), and (4) the course CRN (e.g. 27036) (<https://www.utep.edu/student-affairs/registrar/registration/index.html>) The temporary change applies to students who will remain enrolled in at least one class at the institution for the Spring 2020 semester. Dropping *all* courses is considered a complete withdrawal and follows a [separate policy](#).

**Use the following decision tree to help you in the decision process:**

[https://www.utep.edu/provost/Files/docs/curriculum/S-U\\_decision-tree.pdf](https://www.utep.edu/provost/Files/docs/curriculum/S-U_decision-tree.pdf)

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CRN: 26379

Environment: Blackboard Shell

*\*Regular class meeting times will be used only for extraordinary Live-sessions {information sessions}*

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Instructor	Professor Miroslava Barúa	Phone	<del>(915) 747-5720</del>
Office	Virtual Office @ Blackboard shell	E-mail	miroslav@miners.utep.edu
Office Hours	Mon 9:00AM–10:00AM, Wed 3:00PM–4:00PM or by appointment.		

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<b>Previous Instructor:</b>	Dr. P. Nava	<del>Office: A-319</del>
	Telephone: 747-5994	Email: <a href="mailto:pnav@utep.edu">pnav@utep.edu</a>

**Office Hours:** 11:00 - 12:00 Monday  
2:00 - 2:50 Tuesday  
2:00 - 2:50 Thursday  
Other times by appointment

**Text:** Digital Design with an Introduction to Verilog, 6<sup>th</sup> Ed. by M. M. Mano and M.D. Ciletti

Electronic ZyBooks {electronic Book free of charge!} for homework assignments after March 30<sup>th</sup>

**Electronic Devices:** You must have access to an internet connected device to access course resources, participate in assessment items and to take Exams and Quizzes by using the appropriate tools within Blackboard

**Course Description:** Design and synthesis of digital systems using both combinational and sequential circuits.

**Course (Learning) Outcomes:** (critical outcomes shown in italicized boldface)

*After successful completion of this course, students 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

**Prerequisite:** EE 1305 or CS 1301 with a grade of “C” or better.

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Please refer to file "Adjustments to EE2369 for Online Mode" for all the changes necessary to complete the Course in online mode

**Co-requisite:** EE 2169 (Lab for EE 2369). There are hardware projects and software simulation projects, performed in this lab, that are associated with this class. The 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.

### Course Grading & Scale:

Homework/Quizzes .....20%  
Exams (3 equally weighted)<sup>1</sup> ..... 75%  
Instructor assessment .....5%

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70% -- 79% → C	U -- if they had the criteria to receive a "D" or an "F" in the class
60% -- 69% → D	
0% -- 59% → F	

### Course Policies:

- Attendance will be given by your active participation in the class assignments/assessment items and will be used in the "Instructor Assessment" portion of the grade.
- You should use your own notes from watching the pre-recorded-lecture videos, homework problems, examples, quizzes and handouts as your study guide for the exams.
- Assignments must be uploaded by the deadline indicated.
- You are responsible for doing the homework, even though it may or may not be collected. Doing the homework is imperative, since the quizzes will be problems from the homework.
- All submitted work must have **Name, course, and assignment number** located in the **upper right corner** of the first page. **Problems should be presented in the same sequence as listed on the assignment instructions**
- All work must have good presentation. Please note examples for providing identifying information (name, course, section). Final solution results must be emphasized (via box enclosing final results, if applicable).
- No late work will be accepted – however, special circumstances will be considered, if reported in time.
- Exams are **ONLINE**, you will be asked to provide your official UTEP credentials
- Exam dates are provided on the associated handout entitled "Important Dates."
- Most communication will be via email, therefore all email concerned with this course should have an "EE 2369:" prefix to the subject. An example is provided on the last page of this handout.
- Samples of student work will be collected for quality assurance purposes. Please notify the professor, in writing, if there is any confidentiality requirement.
- Each student must be proactive in using all the online resources and keeping up with announcements made on Blackboard. This means that you must refer to all the resources (physical textbook, electronic book and lecture videos) about the current and upcoming topics, understand your homework, and complete any other assignment **BEFORE** the deadline. **Tutors:** Diego Herrera Calzada, Axel Vazquez

<sup>1</sup> Grade is based on all 3 exams

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## Academic Dishonesty:

As an entity of The University of Texas at El Paso, the Department of Electrical and Computer Engineering is committed to the development of its students and to the promotion of personal integrity and self-responsibility. The assumption that a student's work is a fair representation of the student's ability to perform forms the basis for departmental and institutional quality. All students within the Department are expected to observe appropriate standards of conduct. Acts of scholastic dishonesty such as cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in the whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student, or the attempt to commit such acts will not be tolerated. Any case involving academic dishonesty will be referred to the Office of Student Conduct and Conflict Resolution (OSCCR). The Associate Dean of Students will assign a Student Judicial Affairs Coordinator who will investigate the charge and alert the student as to its disposition. Consequences of academic dishonesty may be as severe as dismissal from the University. See the OSCCR homepage at <http://sa.utep.edu/osccr/> for more information.

## American Disabilities Act:

If you feel you may have a disability that requires accommodations, contact the Center for Accommodations and Support Services (CASS, <http://sa.utep.edu/cass>) at 747-5148 located in the Union East, Room 106.

## Homework Example:



## Email Example:

