

University of Texas at El Paso
Electrical and Computer Engineering Department
EE2369, Summer 2018

INSTRUCTOR:	Dr. Hector Erives
OFFICE:	Engineering Building A312
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EMAIL:	herivescon@utep.edu
OFFICE HOURS:	M-F 11:00pm - 12:00 pm or by appointment
TEXT:	REQUIRED: Zybook on Digital System Design 1. Sign in or create an account at learn.zybooks.com 2. Enter zyBook code: UTEPEE2369ErivesSummer2018 3. Subscribe Optional (NOT required) Morris Mano, "Digital Design with Verilog", 5th Edition, Pearson
CATALOG DESCRIPTION:	EE2369: Design and synthesis of digital systems using both combinational and sequential circuits. Includes laboratory projects implemented with standard ICs. Corequisite: EE 2169. Prerequisite: EE 1305 or CS 1401 with a grade of "C" or better. EE2169: Implementation and testing of basic combinational and sequential digital systems. Co-requisite: EE 2369. Prerequisite: EE 1305 or CS 1401 with a grade of "C" or better.
TEACHING ASSISTANTS	Basavarajaiah Shanmukhayya Totada, Email: bstotada@miners.utep.edu Lab: To Be announced

Course Outcomes

1. Number systems to perform binary arithmetic and conversions between bases.
2. Apply Boolean algebra and K-Map to simplification of Boolean expressions, analysis and synthesis of digital circuits.
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 logic gates.
5. Design and test digital circuits using discrete components and simple CAD tools.

Content Material

Item #	Topic	Chapter Reading
1	Binary numbers,	9
2	Other base arithmetic, Signed binary numbers	9
3	Combinational Logic 1	1
4	Combinational Logic 2	2
5	Verilog	3
6	Sequential Logic	4
7	DataPath components	5

GENERAL COURSE POLICIES

- Students will need to use the ebook system from zybook.com through a subscription to the Digital Design book. There will homework assigned regularly and the grade is based on the timely submission.
- Samples of student work will be collected for quality assurance purposes. Please notify the professor, in writing, if there is any confidentiality requirement.
- If a student requires special support please contact the Center for Accommodations and Support services (<http://sa.utep.edu/cass/>) to help plan and obtain the proper resources.
- The Professor will be available during the assigned office hours or by appointment; Email questions are fine but they might not be answered right away.
- Some homework, special problems and other assignments may be solved online with Zybook and BlackBoard.
- A BlackBoard (<https://my.utep.edu/myhome.aspx>) account is required. It normally is automatically created. If you don't know your account and password, please check with the Help Desk in extension 4357 (or 747-5257 off campus)
- Each piece of written work must have name, student ID, TEAM number (if applicable) on the upper right corner of the first page; and the name in all remaining pages.
- All printed work must be stapled, with good presentation. Final results must be emphasized (example red underline or highlighted box)
- Online work must have in the first text line the name of the student, date, Student id# and the team number (when applicable).
- Late work will be accepted with up to a 30% deduction will be applied.
- Due dates for Lab assignments, homework and exams will be notified with at least one week in advance.
- Detailed instructions for the Labs and other policies will be provided later in separate handouts and in BlackBoard GRADING.

Grading

ITEM	Points
Two Partial Exams	50
Homework	15
Quizzes	15
Final Exam	20

- Each element will accumulate points
- Some elements are individual and others depend on team performance
- Show always all the procedure to arrive to the solutions. End results without the right procedure are considered conceptual errors.
- In exams, each problem has its own weight and will be indicated at the beginning of the problem.
- Labs, homework and special problems have the grades Satisfactory (100%), Attempted (50%) or Unsatisfactory (0%) for the points available.
- Letter scale will be A: 90%-100%; B: 80%-89.9%; C: 70%-79.9%; D: 60%-69.9%; F: below 60% of the reference grade.

Academic Honesty

- It is expected that the students will conduct with integrity in all course areas. Do not attempt to engage in a dishonest activity such as copying, plagiarism, falsifying information, etc. The professor will take measures to prevent such instances and will bring a case to the university authorities.
- Information about University wide policies could be found in the Dean of Students Web page at <http://sa.utep.edu/osccr/academic-integrity/>

TEAM Policies

- Some assignments will be reported in teams of 2 to 3 students. However there is always an individual evaluation. Teams could be self-selected.
- All members must contribute for each assignment and need to show their own part in the team's report.

EE2169 Lab Policies

- The laboratory is graded independently of the lecture. Please review the lab syllabus and other instructions at: <http://wiki.utep.edu/display/EE2169Lab/Home>