

**This is a tentative course schedule. The instructor has the right to make necessary changes.**

ZyBook assignments ALWAYS due Sunday's at 11:59 PM (MST). No late work accepted.

Exams dates are projected to be on Friday's, will need LockDown Browser and Webcam

Module #	Lecture #	Date	Topic
1	1	Aug.24-30	Course Information, Syllabus, Introduction to Digital Design
	2		Logic Gates, Basic Boolean Operators, timing diagrams (gates)
2	3	Aug.31- Sept. 6	Number Systems, Arithmetic operations in binary
	4		Two's Complement, overflow, other codes,
3	5	Sept. 7-13 <i>*Labor day on Monday</i>	Basic Boolean Algebra, Equations, Logic Diagrams (CKT), Function tables, Timing Diagrams
	6		Reduced Equations via Boolean Algebra, SOP, POS
4	7	Sept. 14-20	Canonical Equations
	8		Design steps for Combinational Systems, K-Maps & Reduced Equations (2 & 3 Variables , SOP & POS)
5	9	Sept. 21-27	Kmaps (4 variables), Don't care conditions.
	10		Quine-McCluskey method of reduction ,More design considerations
6	11	Sept. 28-Oct.4	<b>Exam 1</b> // Other gates: XOR, XNOR, NAND, NOR
	12		Other implementation guidelines, Binary Adder design
7	13	Oct.5-11	Analysis (reverse engineering) vs Design of Digital Systems. Binary adder design
	14		MSI Devices, Multiplexers and Decoders
8	15	Oct. 12-18	Subtractor, other MSI examples. // Sequential Digital Systems Intro
	16		Flip-Flops and timing diagrams. Registers.
9	17	Oct. 19-25	Counter design, Registers Design.
	18		Sequential Machines. Capturing behavior with FSM
10	19	Oct. 26-Nov. 1 <i>*Fall Drop Deadline</i>	<b>Exam 2</b> // Mealy and Moore Machines
	20		Other sequential design considerations. State Encodings
11	21	Nov. 2-8	Continue with other Sequential Design vs Sequential Analysis examples
	22		Algorithmic State Machines (ASM) methodology
12	23	Nov. 9-15	Basic ASM Design
	24		ASM Design with MSI
13	25	Nov. 16-22	Design Examples – Different Hardware versions
	26		ASM Design with LSI
14	27	Nov. 23-29 <i>*Thanksgiving 26 &amp; 27 ~UTEP closed</i>	Other design considerations (e.g. timing issues, max. frequency, critical paths, etc.)
	28		ASM Design with LSI
15	29	Nov. 30- Dec. 6	Other design considerations (e.g. timing issues, max. frequency, critical paths, etc.)
	30		<b>Exam 3</b>
16	---	<b>Dec 7- 13</b> <b>*FINALS WEEK*</b>	<b>Comprehensive</b> exam for those that <b>need</b> to replace a partial exam score (see syllabus for details and requirements).