COURSE SYLLABUS AND SCHEDULE

Week	Lecture Dates	Topics	Chapter
1	1/17, 1/19	**Semiconductor Fundamentals:** introduction, semiconductors	1
2	1/22, 1/24, 1/26	… carrier properties, distributions, and concentrations	2
3	1/29,1/31, 2/2	... carrier action	3
4	2/5, 2/7, 2/9^	**Metal-Semiconductor Contacts**	14
5	2/12, 2/14, 2/16	**pn Junction Diode:** electrostatics	5
6	2/21, 2/23^	... *I-V* characteristics	6
7	2/26, 2/28, 3/2	... junction capacitance, transient response, applications	7, 8, 9
8	3/5, 3/7, 3/9^	**Bipolar Junction Transistor:** structure and operation	10
9	3/12, 3/14, 3/16	... BJT static characteristics	11
10	3/19, 3/21, 3/23	... BJT dynamic performance. **PNPN Devices.**	12 & 13
		(Spring Recess 3/26-3/30)	
11	4/2, 4/4^, 4/6	**Metal-Oxide-Semiconductor Capacitor**	16 & 18
12	4/9, 4/11, 4/13	**MOS Field-Effect Transistor:** structure and operation	17
13	4/16, 4/18, 4/20^	… short-channel effects	19
14	4/23, 4/25, 4/27*	... CMOS technology and MOSFET scaling	4
15	4/30, 5/2, 5/4^	… MOS memory devices and charge-coupled devices	
16	5/7	Review	

FINAL EXAM: Saturday 5/12, 12:30-3:30 PM

^Quiz date

Quiz 1 topics: Semiconductor fundamentals

Quiz 2 topics: Carrier action, metal-semiconductor contacts

Quiz 3 topics: pn junction diode electrostatics, *I-V* characteristics

Quiz 4 topics: pn junction capacitance, transient response, BJT fundamentals

Quiz 5 topics: BJT static and dynamic characteristics, MOS capacitor

Quiz 6 topics: MOSFETs

*Design Project Due