Course Syllabus: Physics 475, UH Fall Semester 2014
Instructor: Prof. Gary Varner
Class Hours: T Th 10:30 - 11:45am, Lab Th 12:30 - 3:20 Watanabe 415A

week	date	Lecture topics	Reading/Laboratory topics	
1	25-Aug	Overview of electronics	Intro, Chap 1 - 12	
	27-Aug	V,I,R, signals	LAB1: Intro/DC circuits	
2	1-Sep	AC circuits	Chap 13 - 26	
	3-Sep	Time/frequency domains	LAB2: Capacitors	
3	8-Sep	Diodes	Chap 27	
	10-Sep		LAB3: Diode circuits	
4	15-Sep	Transistors	Chap 28 - 29	
	17-Sep		LAB4: Transistors	
5	22-Sep	Field Effect Transistors	Chap 30 - 31	
	24-Sep		LAB5: FETs	
6	29-Sep	Operational Amplifiers (I)	Chap 33	
	1-Oct		LAB6: Op Amps I	
7	6-Oct	Op Amps (II)	Chap 33	**CPAD**
	8-Oct		LAB7: Op Amps II	
8	13-Oct	Op Amps (II) -- make up	Review	
	15-Oct	Comparators/Review	LAB8: Comparators	
9	20-Oct	**Midterm #1**	Class Notes	**B2GM**
	22-Oct	Digital Logic I	LAB9: Logical Gates	**B2GM**
10	27-Oct	Digital Logic II	Class Notes	
	29-Oct	Computers	LAB10: Flip-flops	
11	3-Nov	Interface standards	Class Notes	
	5-Nov	Digital -> Analog	LAB11: Counters and Timers	**NSS**
12	10-Nov	Communications	Class Notes	
	12-Nov	Analog -> Digital	LAB12: Universal Eval Rev. B	
13	17-Nov	Intro to Programmable Logic	Class Notes	
	19-Nov	Intro to VHDL	LAB13: Programmable Logic	
14	24-Nov	**Midterm #2**		
	26-Nov	Holiday: Thanksgiving		
15	1-Dec	Student Project work		
	3-Dec	**Student Project work**	**Student project work**	
16	8-Dec	Student Project work		
	10-Dec	**Design Review**	**Student project work**	
17	**TBD**	**Final Presentations -- Project Write-ups due by 5pm**		

Prerequisite: Physics 272L, and at least junior standing, or permission from instructor

Text: Schultz: G*rob's Basic Electronics, 11th Edition*

Optional/Reference: Horowitz and Hill: *The Art of Electronics*

Office hours: WAT214 M 4-5pm, during lab period, any afternoon in WAT214 by appointment

email: varner@phys.hawaii.edu

Lecture: T Th 10:30 - 11:45am WAT 415A

Lab: Th 12:30 - 3:20 WAT415A, mandatory. **Scientific Calculator & lab notebook also mandatory**

Writing Intensive: Scientific writing and lab reports will be critiqued and graded on both lab and writing techniques by the formula at the bottom:

40% of the course grade is determined by satisfactory completion of the writing assignments

Homework: Assigned Tuesday, due next Tuesday, no late homework.

Grading: Based on curve derived from Total (100) = (MT1(100)+MT2(100)+HW(100)+FINAL(100)+Lab(100))/5