

Course Syllabus: Physics 475, UH Fall Semester 2010

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	24-Aug	Overview of electronics	S: Preface - 2.10
	26-Aug	V,I,R, signals	LAB1: Intro/DC circuits
2	31-Aug	AC circuits	S: 2.11 - 2.33
	2-Sep	Time/frequency domains	LAB2: Capacitors
3	7-Sep	Diodes	S: 4.1 - 4.2
	9-Sep		LAB3: Diode circuits
4	14-Sep	Transistors	S: 4.3 - 4.3.2
	16-Sep		LAB4: Transistors
5	21-Sep	Field Effect Transistors	S: 4.3.3 - 4.3.4
	23-Sep		LAB5: FETs
6	28-Sep	Operational Amplifiers (I)	S: 7.0 - 7.3; 7.17
	30-Sep		LAB6: Op Amps I
7	5-Oct	Op Amps (II)	S: 7.6 - 7.11
	7-Oct		LAB7: Op Amps II
8	12-Oct	Comparators/Review	S: 7.12 - 7.13; 9.0 - 9.2; 10;
	14-Oct	Midterm #1	LAB8: Comparators
9	19-Oct	Digital Logic I	S: 10
	21-Oct		LAB9: Gates & Flip-Flops
10	26-Oct	Digital Logic II	S: 12.0 - 12.6
	28-Oct		LAB10: Gates & flip-flops
11	2-Nov	Computers	S: 12.7 - 12.8
	4-Nov	Digital -> Analog	LAB11: Counters and Timers
12	9-Nov	Analog -> Digital	
	11-Nov	Midterm #2	
13	16-Nov	Intro to Programmable Logic	
	18-Nov		LAB12: Programmable Logic
14	23-Nov	Student Project work	
	25-Nov	<i>Holiday: Thanksgiving</i>	
15	1-Dec	Student Project work	
	2-Dec	Student Project work	Student project work
16	8-Dec	Design Review	
	9-Dec	Student Project work	Student project work
17	16-Dec	FINAL: Thursday 9:45-11:45am: Project Report and Presentation	

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

Text: Schertz: *Practical Electronics for Inventors, 2nd 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