

CEET 1110 Fundamental Electronics
Course Syllabus for Fall Semester 2011

Instructor: Julie McCulley

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Office Hours: as posted or by appointment.

Lecture: Wednesday 10:30 AM - 11:20 AM Room B4 401

Lab: Wednesday 11:30 AM - 12:20 PM Room B4 416

Website: <http://faculty.weber.edu/jmcculley/>

Required Text and Materials

1. CD Text and Materials kit:

Summers and Bearson, (2007). Fundamental Electronics, OrchEd.

2. *Circuit Design Trainer: The OrchEd Mini Lab I circuit design trainer.

*Note: CEET Students who presently are required to purchase and build the OrchEd Circuit Design Pro Trainer may use it in place of the Mini Lab I Trainer.)

Course Description

The Fundamental Electronics course is an exciting and empowering hands-on, technical experience presented in a comprehensible way supplemented by lab experiments and classroom demonstrations. The CD text for the course presents powerful concepts and principles with an entry-level student in mind. A new topic is covered each week that is reinforced with a required lab.

Topics covered in the course include basic principles of electricity, voltage, current, resistance, conductivity, Ohm's Law, Kirchoff's Laws, component values, AC and DC current, and how to combine a variety of components to construct useful circuits.

Course Goals

Students will emerge from the course with useful and powerful tools that prepare them for future electronics courses or will give them the background needed for success in other related technical disciplines.

Class Preparation

Each week students are required to read (audio narration is available on CD) the assigned module and complete homework, (assigned Application Exercises at the end of each module), prior to lecture. Lecture will include examples, experiments, and demonstrations to emphasize the weekly module. Homework questions will be answered at the beginning of lecture. A self-assessment quiz is due before the start of each lecture. Homework will be collected at the start of lecture.

CEET 1110 Fall 2011 Schedule

Week	Date	Module	Topic	HW
1	8/24	1	Basic Electricity	5,6,7
2	8/31	2	Electronic Assembly and Testing	Module 1: 1,3
3	9/7	3	Simple Series Circuits	2,7,8,14,15,18,20,22
4	9/14	4	Simple Parallel Circuits	1,3,7,8,9,11
5	9/21	5	DC and AC Power	1,2,5,12
6	9/28	6	DC Voltage Sources	2,4,6,12
7	10/5	7	AC Voltage Generation MIDTERM EXAM	1,5,7
8	10/12	8	Motors and Electro-Mechanical Machines	5,7,8
9	10/19	9	Capacitors and Capacitive Reactance	4,6,7,8,11,14
10	10/26	10	Inductors and Inductive Reactance	6,7,8
11	11/2	11	Semiconductor Device Overview	5,6,7,8,9
12	11/9	12	RC and RLC Circuits	
13	11/16	13	Analog	4,5,6,7,8
14	11/23	14	Digital	2a,2b,4a,4b,5a,8,11
15	11/30	14	Digital	
	12/7		FINAL EXAM DUE!!!	Wednesday!!!

Assessment

Attendance is extremely important. If you must miss class, please make sure to inform me **ahead of time** so we can determine an alternative time for the lab exercise and make-up work.

Grading

1. Homework
2. Weekly quizzes
3. Mid-term exam (Week 7 Oct 5th, due back Oct 12th)
4. Final exam (Available on ChiTester Fri Dec 2 - Wed Dec 7)

You may select three of the four areas listed above to complete 70% of your grade. The remaining 30% is based on the following two areas:

5. **Laboratory assignments** 25%
6. Oral Presentation/Report 5%

The oral presentation is a two minute maximum class presentation on one of the topics of your choice covered throughout the semester.

Homework Assignments

Homework assignments are due one week after assigned at the end of the class period. Homework problems should be on 8-1/2 x 11 graph paper or engineering paper.

Quizzes and Exams

Weekly quizzes will be available on Weber Online. The Midterm will be a take-home exam during the seventh week of classes and the Final will be available on Chi Tester during finals week.

Lab Experiments

There will be a lab experiment each week that will reinforce the topic covered in lecture. The materials for the labs are in the course materials kit. Lab instructions and reports can be printed from the text CD included in the kit. Please be prepared with a printed copy of the lab instructions and report prior to class each week.

You will be working in teams of two or three during lab sessions. Each person is required to complete each lab every week that must be signed off by the instructor.

Excused absences involving missed assignments or exams may be made up within that week if I am notified in advance. Late work will be accepted with a 10% penalty up to one week only.

Grades

A	94 - 100	A-	90 - 93		
B+	86 - 89	B	82 - 85	B-	78 - 81
C+	74 - 77	C	70 - 73	C-	66 - 69

Course Assessment

1. Student reviews
2. CEET Department Chair and Faculty review
3. CEET Advisory Committee review
4. Individual student performance and test scores

Policies

Absolutely no cell phone calls or texting during lecture or lab.

If you require accommodations or services due to a disability, you must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center at the beginning of the semester.