

EE 211 Circuits and Signals I

Course title:

Circuits and Signals I

Office hours:

TBD

Class hours:

M 10-10:50 (A), W 10-10:50 (A)

F 10-10:50 (A) (sometimes)

Exercises:

M 8:00-8:50 (B), M 15:00-16:00 (C),

T 13:00-13:50 (D)

Instructor:

Dr. Anders M. Jorgensen

Workman 227

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Classroom location:

A - Cramer 203

B - TBD

C - TBD

D - TBD

Textbook:

- *Leonard S. Bobrow*, Elementary Linear Circuit Analysis, Second edition, Oxford University Press.

Learning objectives:

1. You will learn the principles of circuit analysis.
2. You will learn about simple circuit components and how they are used.
3. You will learn about time-dependent circuit analysis
4. You will learn about operational amplifiers, a nearly universal component in modern circuits.

Prerequisites:

EE 101.

Topics covered:

In this course we will explore electrical circuits and develop tools for analyzing them. The specific topics that we will cover are

1. Kirchoff's laws and equivalent circuits
2. Dependent sources
3. Node and mesh analysis
4. RLC components
5. Time-dependent signals
6. Operational amplifiers

Course work:

1. Reading. Stay current with assigned sections in the textbook.

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2. Active participation in class. Show up, respond to questions, ask questions.
 3. Homework. Work suggested homework problems.
 4. Tests. Take weekly tests.
 5. Exams. Take exams. Three highest exam scores will be counted.

Grading policy:

1. Weekly 15-minute tests 40%.
2. Four exams 60%. The lowest exam score is dropped.

Approximate Schedule (subject to change, see website for actual schedule):

Week of	Lecture	Exam
Aug 20	Kirchof's laws	
Aug 27	Node and mesh analysis	
Sep 3	Operational amplifiers	
Sep 10	The ideal op-amp	
Sep 17	Non-ideal sources	1
Sep 24	Inductors and capacitors	
Oct 1	Inductors and capacitor circuits	
Oct 8	First-order circuits	
Oct 15	Analysis of first-order circuits	2
Oct 22	RLC circuits	
Oct 29	Second-order circuits	
Nov 5	Time-domain analysis	
Nov 12	Complex numbers and frequency analysis	
Nov 19	Frequency analysis	3
Nov 26	Power analysis	
Dec 3	Review	4