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# Fundamentals of Electrical & Computer Engineering

## EE292 Fall 2012

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<http://www.egr.unlv.edu/~b1morris/ee292>

Professor:	Brendan Morris	Class:	TuTh 10:00-11:15
E-mail:	brendan.morris@unlv.edu	Office Hours:	M 15:30-17:00, Tu 13:30-15:00
Office:	SEB 1242	Final:	Tu Dec. 11, 10:10-12:10
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### Textbook

Electrical Engineering: Principles and Applications, A. R. Hambley, Prentice Hall, 5th Edition, ISBN: 0132130068

### Recommended Text

Lessons in Electric Circuits, Tony R. Kuphaldt

Available free online: <http://openbookproject.net/electricCircuits>

Fundamentals of Electrical Engineering, Giorgio, Rizzoni, ISBN-13: 9780073380377

Principles and Applications of Electrical Engineering, G. Rizzoni, ISBN: 0-7-288771-0

Schaum's Outlines: Electric Circuits, M. Nahvi and J. Edminster, ISBN: 0-07-027389-8

### Additional Material

PK-101 Basic Electronic Kit, Electronic School Supply, Inc.

Arduino Uno

### Grading

Midterm:	30%	09/20, 10/25
Final:	30%	12/11
Homework:	25%	Weekly
Project:	15%	12/04

Students may study together in groups but all assignments must be completed individually. Homework will be due in class on the designated date. No late homeworks will be accepted unless prior notification and arrangements are made.

The course will have an end of the semester mechatronics project that intended to help prepare students for senior design. The project will combine mechanical, electrical, and computer engineering. Students will design a small robot and program it using a microcontroller.

### Catalog Description

Introduction to electrical circuit analysis, electronic devices and circuits, transducers, electric machines and power transmission. For non-electrical engineering majors only.

**Prerequisites:** PHYS180 or PHYS151 and MATH182

## Topics

Chapter	Topic
1	Introduction
2	Resistive Circuits
3	Inductance and Capacitance
4	Transients
5	Steady-State Sinusoidal Analysis
6	Frequency Response and Bode Plots
10	Diodes
12	Transistors
11	Amplifiers
14	Operational Amplifier
7	Logic Circuits
15	Transformers
16	DC Motors

Additional course material not present in the textbook will be distributed to the class when needed. Extra problems can be found in the recommended texts. The Schaum's series book has a number of worked problem solutions making it a good investment.

## Course Policies

- There will be no make-up exams or late homework without prior arrangements. If you have 3 final exams on the same day you may ask for a reschedule. This request must come by the last day of late registration.
- Extensions will only be granted for medical emergencies or due to the observance of a religious holiday. The instructor must be notified of the absence prior to the last day of late registration.
- If you have a documented disability that may require assistance, you will need to contact the Disability Resource Center (DRC) for coordination in your academic accommodations. The DRC is located in the Student Services Complex (SSC), Room A-143, phone 702-895-0866. Or visit the DRC website at: <http://drc.unlv.edu/>
- As a university student, it is your responsibility to conduct yourself ethically and with integrity as described in the Academic Misconduct Policy. Cheating and plagiarism will not be tolerated. Any student caught cheating will be given an F grade.  
(<http://studentconduct.unlv.edu/misconduct/policy.html>)