Fundamentals of Electrical & Computer Engineering  
EE292 Fall 2012

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

Professor: Brendan Morris  
E-mail: brendan.morris@unlv.edu  
Office: SEB 1242  
Phone: 702-774-1480

Class: TuTh 10:00-11:15  
Office Hours: M 15:30-17:00, Tu 13:30-15:00  
Final: Tu Dec. 11, 10:10-12:10

Textbook

Recommended Text
Lessons in Electric Circuits, Tony R. Kuphaldt  
Available free online: http://openbookproject.net/electricCircuits
Principles and Applications of Electrical Engineering, G. Rizzoni, ISBN: 0-7-288771-0

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

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

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)