**EENG 3510 Electronics I Laboratory (Experimental Course)**

**Instructor:** Xiangnan Zhong  
**Course Website:** EENG 3510 on UNT Blackboard  
**Email:** Xiangnan.Zhong@unt.edu  
**Office Hours:** TBD

**TA:** Yunlong Qi  
**Email:** yunlongqi@my.unt.edu  
**TA Office:** B209  
**TA Office Hours:** Make an appointment by email

**Course Description**  
Electronics I (Devices and Materials) Laboratory (Experimental Course). 1-4 hours. Introduce the terminal characteristics of contemporary electronic devices and corresponding basic circuits. Learn how to create circuits using basic devices and models, then measure and analyze the characteristics and performance of the circuits.

**Textbooks**  
• *N/A*

**Prerequisites**  
EENG 2610 Circuit Analysis, solid algebra skills, and basic calculus.

**Course Objectives**  
This course provides introductory topics in analog and digital electronics. Together with EENG 3520, it constitutes the foundation for discrete and integrated analog circuit analysis, synthesis and design. At the end of the class, the student should be able to:

- Describe how electrical and computer engineering uses or benefits from electronics.
- Explain with justification the properties of operational amplifiers, diodes, MOS field-effect transistors, and bipolar junction transistors.
- Model, analyze, synthesize and prototype circuits containing a few transistors.

**Grading Policies**  
Projects (4): 25% each

**General Comments**  
- Students are encouraged to discuss class material and homework in order to better understand concepts. However, all the homework and projects you submit must be of your own (or your team’s). Direct copying of a solution (from a friend or a book) will be considered as plagiarism and a violation of the University Honor Code. If you cheat I will find out and you will be disciplined. I find at least 1 student every semester cheating.
- Homework assignments are to be turned in at the beginning of the class on the due date. Late submission (once class is over) will not be accepted.
The midterms and final are closed book with one page and two pages, respectively (8 ½ x 11) of notes allowed. Make up exams may be given only under exceptional circumstances and with prior approval of the instructor.

All students are responsible for announcements made in lecture or via Blackboard.

It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office (see http://www.unt.edu/oda).

If you have a university approved excused absence you have 1 week from your return date to complete and turn in any missed work (HW, projects, exams).

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD</td>
<td>TBD</td>
<td>Op Amps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td>TBD</td>
<td>Diode IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td>TBD</td>
<td>Rectifier Circuits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td>TBD</td>
<td>NMOS Biasing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>