EET 3010 Course Syllabus

Electronics Engineering Technology EET 3010, Advanced Circuit Analysis I
Instructor: Justin Jackson  Website: http://faculty.weber.edu/justinjackson
Office: WSU Building 4 Room 421H Phone: (801) 626-6078  Email: justinjackson@weber.edu
Office Hours: Tue & Thurs 9:30 am, Tues 3 pm (Davis), Thurs 12:30 pm, & Thurs. 4:00 pm (Davis) or by appointment.
Meeting Time: Tue., Thurs. 10:30 AM -12:20 PM

Text:  Electric Circuits 9th edition by James W. Nilsson and Susan Riedel

Advanced calculus-based topics related to electronic circuit analysis, Laplace transforms, differential equations, Fourier series, Fourier transforms, and applications. Lecture and lab combination. Laboratory activities include circuit design, construction, computer simulation, and analysis.

LECTURE SCHEDULE:
1. Circuit Variables, Elements, and Circuits
2. Techniques of Circuit Analysis
3. Op-Amps
4. Inductance and Capacitance
5. Natural and Step Responses
6. Laplace Transforms
7. Fourier Series
8. Fourier Transforms

STUDENT ASSESSMENT:
1. Homework assignments (20%).
2. Exam 1 (20%).
3. Laboratory assignments (20%).
4. Exam 2 (20%).
5. Final Exam (20%).

GRADING:
Grades will be assigned as follows based on the percentage breakdown.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&gt; 93%</td>
</tr>
<tr>
<td>A-</td>
<td>90-93%</td>
</tr>
<tr>
<td>B+</td>
<td>87-90%</td>
</tr>
<tr>
<td>B</td>
<td>84-87%</td>
</tr>
<tr>
<td>B-</td>
<td>80-84%</td>
</tr>
<tr>
<td>C+</td>
<td>77-80%</td>
</tr>
<tr>
<td>C</td>
<td>73-77%</td>
</tr>
<tr>
<td>Grade</td>
<td>Percentage</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>C-</td>
<td>70-73%</td>
</tr>
<tr>
<td>D+</td>
<td>67-70%</td>
</tr>
<tr>
<td>D</td>
<td>63-67%</td>
</tr>
<tr>
<td>D-</td>
<td>60-63%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60%</td>
</tr>
</tbody>
</table>

COURSE ASSESSMENT:
The following course assessment criteria will be used:
1. Student review.
2. ET Department Chair and faculty review.
3. EET Advisory Committee review.
4. Individual student performance and test scores.

CREDITS AND CONTACT HOURS:
Four semester credits total, three credits for the lectures and one credit for the lab. Three
hours of lecture per week for three credits, and two hours of lab per week for one credit.

PREREQUISITE: EET 2110 & MATH 1210

LAB FEE:
$20.00 to maintain WSU laboratory equipment and laboratory printers. Your lab fee also
entitles you to access to the parts room to replace parts you burn up in lab.

COMPUTER REQUIREMENTS:
Word processing for all lab reports and circuit simulation software.

ORAL COMMUNICATIONS REQUIREMENTS: None.

WRITTEN COMMUNICATIONS REQUIREMENTS: Lab reports, written homework
assignments.

CALCULUS REQUIREMENTS: Calculus 1 Math 1210

LIBRARY REQUIREMENTS: None

REPORT PROCEDURES:
Your laboratory report should include the following sections:
1. Introduction and Overview of the Experiment – Explain in general terms what is
   supposed to happen in the experiment. Include circuit performance specifications.
2. Theory – Explain any principles, equations, or logical results predicted by
   fundamentals being learned.
3. Design Calculations – Show all steps from a system or block diagram to the final
   logic diagram.
4. Schematic Diagram or Block Diagram of the circuit(s) to be built.
5. List parts and materials needed or used.
6. Neatly show your data and results. Use tables or graphs, and describe your results.
7. Summarize what you did and learned from the experiment.

A good test of your report is to ask a friend to read it. Another person should have enough information in the report to duplicate your work. **Lab reports will be due at the start of the class meeting the following week.** (If lab is performed on Tuesday then the report will be due at the start of the following Tuesday’s class.)

**HOMEWORK:**
Homework will be assigned in class and is **due at the start of the next class meeting the following week.** (If the homework is assigned on Thursday it will be due at the beginning of class on the following Thursday’s class.) Late work will not be accepted.

**SERVICES FOR STUDENTS WITH DISABILITIES:**
Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in Room 181 of the Student Services Center. SSD can also arrange to provide course materials (including the syllabus) in alternative formats if necessary.