ELEC 3700, Section 001, Spring 2016
Broun Hall 239, Monday, Wednesday and Friday 12:00-12:50pm

Analog Electronics

Catalog Data
ELEC 3700. Analog Electronics (3) Lec. 2 Lab. 3. Prerequisite ELEC 2110. Design and analysis of single-stage and multistage transistor amplifiers.; biasing for integrated circuit design; small signal modeling; operational amplifier circuits; IC design techniques; noise and RF amplifiers; D/A and A/D converters.

Textbook:

References:

Instructor: Prof. Foster Dai, 404 Broun Hall. Tel. 844-1863, Email: daifa01@auburn.edu
Office Hour: 5:00 ~ 6:00 pm, TU, TH.
Assistant: Dongyi Liao, Email for appointment: dzl0021@tigermail.auburn.edu, Office: B361.

Topics:
- Introduction and Review for Microelectronic Devices
- Ideal Operational Amplifiers
- Nonideal Operational Amplifiers
- Operational Amplifier Applications
- Small-Signal Modeling and Linear Amplification
- Single-Transistors Amplifiers
- Differential Amplifiers and Operational Amplifier Design
- Midterm Exam (1 class)
- Analog Integrated Circuit Design Techniques
- Amplifier Frequency Response
- Transistor Feedback Amplifiers and Oscillators
- Conclusions
- Final Exam

Class Calendar:
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Day</th>
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<tbody>
<tr>
<td>Jan. 13</td>
<td>Classes Begin</td>
<td>(Wed)</td>
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<tr>
<td>Jan. 18</td>
<td>M. L. King Jr. Day (no class)</td>
<td>(Mon)</td>
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<tr>
<td>Feb. 3</td>
<td>15th Class Day (last day to withdraw from a course with no grade assignment)</td>
<td>(Wed)</td>
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<tr>
<td>Mar 3</td>
<td>Mid-Semester (36th Class Day)</td>
<td>(Thu)</td>
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<td>Mar. 21</td>
<td>Midterm Exam</td>
<td>(Mon)</td>
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<tr>
<td>Mar. 14-18</td>
<td>Spring Break (no class)</td>
<td>(Mon-Fri)</td>
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<tr>
<td>Apr. 29</td>
<td>Classes End</td>
<td>(Fri)</td>
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<tr>
<td>May 6</td>
<td>Final Exam (noon - 2:30 p.m.)</td>
<td>(Fri)</td>
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Grading:
- Homework (15%)
- Quiz (20%)
- Midterm Exam (25%)
- Final Exam (40%)

Primary program outcomes related to this course:
- Outcome 1. Ability to apply knowledge of math, science and engineering to solve problems.
- Outcome 2. Ability to apply in-depth knowledge in one or more disciplines.
- Outcome 3. Ability to design an electrical component or system to meet desired needs.
- Outcome 6. Proficiency in the use of computers and other modern tools to solve engineering problems.
- Outcome 8. Proficiency in communicating ideas and information orally and in writing.
- Outcome 9. Appreciation of the need for, and an ability to learn new concepts as required for the continuing practice of ECE.

Attendance Policy: Course attendance is strongly encouraged, but will not be a factor in determining the course grade.

Academic Honesty Policy: All portions of the Auburn University student academic honesty code (Title XII) found in the Tiger Cub will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

- Course info located at ftp://ftp.eng.auburn.edu/pub/daifa01/ELEC3700/.

Prepared by: Fa Foster Dai, Date: Jan. 8, 2016.