Syllabus: EEL 3308C – Electronic Circuits I Spring 2018

Credits: 4

Meeting Times: T 2-3, R 3

Instructor: Allen E. Turner, Ph.D.
227 NEB
turneral@ufl.edu
352-392-2652

Office Hours: MW 1:00-2:00, or by appointment

General Description: Course introduces the concepts, materials, devices and systems comprised of electronic circuits. Topics covered include signals, amplifiers, operational amplifiers, semiconductors, diodes, MOS field-effect transistors, bipolar junction transistors and, related circuits and systems.

Objectives: After successful completion of this course, the student will have a basic understanding of:

• Electronic components and their characteristics
• Amplifiers, their implementation and the important performance characteristics of amplifiers
• Operational amplifiers and Operational amplifier circuits
• Semiconductor materials and properties including the fabrication of diodes, MOSFETs and BJT’s
• Diodes and diode circuits
• MOSFET’s, including digital and analog MOSFET circuits
• BJT’s, including digital and analog BJT circuits


Attendance and Expectations: In a large class it is especially important to establish, and maintain, a productive, professional environment free from distractions and disruptions.

To that end it is understood that all attendees will
- Be focused on the lecture
- Minimize distractions for everyone.
  - no newspapers
  - no cell phones
  - no iPads
  - no iPODs
  - no laptops
- Be on-time and ready when class starts
- Attend the entire class, no early departures
Grading: The grade for the course will be based upon a weighted combination of 2 tests, the final exam, homework, labs and possibly pop quizzes.

- **a)** Homework will be assigned and due weekly. The homework average, H, out of 100 will be calculated.
- **b)** There will be between 8 and 12 labs during the term. The lab average, L, out of 100 will be calculated.
- **c)** Two Help Session/Tests, T₁ and T₂ will be given on Thursday evenings starting at 7PM (February 22nd, April 5th)
- **d)** A final exam, FE, will be given on Friday, May 4th from 10am-12pm.

An overall weighted average score for the two tests and final exam, T, will be calculated as shown

\[ T = \frac{0.2T_1 + 0.2T_2 + 0.3FE}{0.7} \]

The score, S, for the course will be determined by combining the average scores, out of 100, Homework, H, Labs, L, and Tests, T, with

\[ S = hH + lL + tT \]

where h, l and t are determined as follows.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Formula</th>
<th>Maximum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>If H &gt; T then h = 0.15</td>
<td>Otherwise h = 0.15 + (T - H) * 0.003</td>
<td>Maximum h = 0.3</td>
</tr>
<tr>
<td>If L &gt; T then l = 0.15</td>
<td>Otherwise l = 0.15 + (T - L) * 0.003</td>
<td>Maximum l = 0.3</td>
</tr>
<tr>
<td>t = 1 - h - l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pop quizzes can occur at any time, however, they will occur whenever the instructor deems that the class is not prepared to start on time, if any student is using a computer, cell phone, ipod, ipad, etc., reading a newspaper, socializing or otherwise being rude, disrespectful or disruptive during class.

Any student causing a pop quiz will receive a zero on the pop quiz and any student responsible for multiple pop quizzes will, at the instructor’s discretion, receive a zero for their overall pop quiz score.

Each pop quiz will count 2% of the overall score, the remaining portion of the overall score will be weighted as shown in the table below.

An overall score, OA, will be tabulated for each student based on the pop quiz score, P, the number of pop quizzes, N, along with the score, S, according to the formula below

\[ OA = S(1 - 0.02N) + P(0.02N) \]

An overall score will be tabulated based on the weightings shown above and grades will be assigned based on the table shown below.

<table>
<thead>
<tr>
<th>Overall Score</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.5-100</td>
<td>A</td>
</tr>
<tr>
<td>90-92.499…</td>
<td>A-</td>
</tr>
<tr>
<td>87.5-89.99…</td>
<td>B+</td>
</tr>
<tr>
<td>82.5-87.499…</td>
<td>B</td>
</tr>
<tr>
<td>80-82.499…</td>
<td>B-</td>
</tr>
<tr>
<td>77.5-79.999…</td>
<td>C+</td>
</tr>
<tr>
<td>72.5-77.499…</td>
<td>C</td>
</tr>
<tr>
<td>70-72.499…</td>
<td>C-</td>
</tr>
<tr>
<td>67.5-69.99…</td>
<td>D+</td>
</tr>
<tr>
<td>62.5-67.499…</td>
<td>D</td>
</tr>
<tr>
<td>60-62.499…</td>
<td>D-</td>
</tr>
<tr>
<td>Less than 60</td>
<td>E</td>
</tr>
</tbody>
</table>

Honesty Policy

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.
Accommodation for Students with Disabilities

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- CareerResource Center, Reitz Union, 392-1601, career development assistance and counseling.