ENGR 201  Winter 2020
Electrical Fundamentals I

Instructor: Karti Mayaram (email: karti@eecs.oregonstate.edu)
Office: KEC 4095 (phone: 737-2972)
Office Hours: Mon 5pm-6pm, Tue 11am-noon
Web page: http://www.eecs.oregonstate.edu/~karti/engr201.html
http://classes.engr.orst.edu/engr/

TA Office Hours: See information online and on Canvas
Course Objective: Analysis of linear circuits. Circuit laws and theorems. DC responses of circuits. Operational amplifier characteristics and applications.

Grading:
- Midterm Exams (2) 40%
- Comprehensive Final Exam 25%
- Assignments 15%
- Recitation Quizzes and Lab Reports 20%

Your final grade will be based on the overall absolute score. The score ranges for the grades are:
- A: 90 and above; B: 80-89; C: 70-79; D: 60-69; F: below 60.

Assignments: The assignments are all online problems from the electronic textbook (EText) and are directly accessible from Canvas. Homew orks will be assigned on Tuesday at 11:59pm and are due the following Tuesday at 11:59pm. There will be no homework assigned in an exam week.

No late homeworks will be accepted.

Exams:
The exams will be closed book. I will provide a reference sheet that will be made available prior to the exam. Calculators will not be allowed.
- Midterm exams: Thu: Jan. 30 and Thu: Feb. 20, 10:00-10:50am.
- Final exam: Mon Mar. 16, 9:30-11:20am.

There will be no makeup exam unless there is a medical emergency and a doctor's note is provided to the instructor.

Recitations/Labs: Attendance is required in all weekly laboratory (recitation + lab) sessions. During these sessions additional example problems and problem solving techniques will be demonstrated. There will be three guided hands-on labs with the first one starting in Week 4. A short quiz (graded) will be given at the end of each recitation session and a written lab report will have to be completed for each lab.

Cheating Policy: Cheating is unacceptable. Swift disciplinary action will be taken for cheating.


Course Outline

(3 weeks) Basic circuit concepts, circuit laws, and resistive circuits (Chap. 1 - Chap. 3)
(4 weeks) Analysis methods, circuit theorems (Chap. 4).
(1 week) Opamps (Chap. 5)
(2 weeks) Capacitors, Inductors, first-order circuits (Chap. 6 and Chap. 7).
<table>
<thead>
<tr>
<th>Week</th>
<th>Assignments/Reading</th>
</tr>
</thead>
</table>
| Week 1: 1/06-1/10 | Assignment #1 Assigned 1/07  
Read Textbook: Sections 1.1–1.6 |
| Week 2: 1/13-1/17 | Assignment #2 Assigned 1/14  
Read Textbook: Sections 2.1, 2.2, 2.4, 2.5, 3.1, 3.2 |
| Assignment #1 Due 1/14 (Tue) |  
Assignment #3 Assigned 1/21  
Read Textbook: Sections 3.3–3.5, 3.7, 4.1–4.4 |
| Week 3: 1/20-1/24 | Assignment #2 Due 1/21 (Tue)  
Assignment #4 Assigned 2/04  
Read Textbook: Sections 4.5–4.8, 4.13 |
| Assignment #3 Due 1/28 (Tue)  
Test#1: 1/30 10-10:50am | Assignment #5 Assigned 2/11  
Read Textbook: Sections 4.9–4.12 |
| Week 4: 1/27-1/31 | Assignment #4 Due 2/11 (Tue)  
Assignment #6 Assigned 2/25  
Read Textbook: Sections 5.1–5.6 |
| Assignment #5 Due 2/18 (Tue)  
Test#2: 2/20 10-10:50am | Assignment #7 Assigned 3/03  
Read Textbook: Sections 6.1–6.3, 7.1–7.3, 7.4 (pp. 241-244) |
| Week 8: 2/24-2/28 | Assignment #6 Due 3/03 (Tue)  
Assignment #7 Due 3/12 (Thu)  
Week 10: 3/09-3/13  
Week 11: 3/16-3/20  
Final Exam: 3/16 9:30-11:20am |
Statement Regarding Students with Disabilities:

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu/. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Expectations for Student Conduct:

Student conduct is governed by the university’s policies, as explained in the Office of Student Conduct and Community Standards. In an academic community, students and faculty, and staff each have responsibility for maintaining an appropriate learning environment, whether online or in the classroom. Students, faculty, and staff have the responsibility to treat each other with understanding, dignity and respect. Disruption of teaching, administration, research, and other institutional activities is prohibited by Oregon Administrative Rule 576-015-0015 (1) and (2) and is subject to sanctions under university policies, Office of Student Conduct and Community Standards.

Academic Integrity - Students are expected to comply with all regulations pertaining to academic integrity. At OSU academic integrity is defined as the following: “(a) upholding the standards of the academic discipline of which you are a part, (b) honesty in all academic processes and accomplishments, (c) respect for and appropriate use of the work of others, (d) taking responsibility for your own work, and (e) accountability to protect personal academic work from misuse by others.”

Academic Dishonesty - is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

The following policies apply:

- OSU policy: http://studentlife.oregonstate.edu/studentconduct/offenses
- College of Engineering policy: http://engineering.oregonstate.edu/undergraduate-policy-manual#honesty