

ECE 322 Winter 2017

Electronics I

Instructor:	Karti Mayaram
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Office Hours:	Tue 5pm-6pm, Thu 5pm-6pm
Web pages:	http://www.eecs.oregonstate.edu/~karti/ece322.html http://classes.engr.orst.edu/eecs/ http://eecs.oregonstate.edu/education/courses/ece322/
TA/Office Hours:	Raviteja Gajula (gajular@oregonstate.edu): Mon 6pm-8pm (KEC atrium) Subramanian TR (tirunels@oregonstate.edu): Thu 2pm-4pm (KEC atrium)
Course Objective:	Principles, analysis, and design of analog electronic circuits. Diodes, BJTs, and MOSFETs.
Grading:	Homeworks 10% Quiz (2) 5% (Wed 1/25/17, Mon 2/20/17) Test (2) 30% (Mon 2/6/17, Mon 3/6/17) Comprehensive Final Exam 25% (Thu 3/23/17, 9:30AM) Lab 30%
Homeworks:	Homework will be assigned each week and solutions will be provided for most of the homeworks. The grading will be either a 10 (mostly correct), 5 (partially correct), or 0 (little or no effort). No late homeworks will be accepted.
Quizzes:	The quizzes will be of 15 minutes each (closed book/notes). They will be given at the beginning of class on the following dates: Wed 1/25/17, Mon 2/20/17.
Tests/Final Exam:	The tests will be closed book/notes . I will provide a reference note sheet that will be made available prior to the exam. Calculators may or may not be allowed. Test dates: Mon 2/6/17, 3/6/17. Final exam date: Thu 3/23/17 at 9:30AM. There will be no makeup exam unless there is a medical emergency and a doctor's note is provided to the instructor.
Laboratory work:	Labs begin 1/9/17 (first week of classes). Please consult TAs for any lab related questions.
Cheating Policy:	DO NOT copy someone else's work. Cheating is unacceptable. Swift disciplinary action will be taken for cheating.
TextBook:	Sedra and Smith, <i>Microelectronic Circuits</i> , Oxford University Press, <i>Seventh Edition</i> , 2015.
References:	Razavi, <i>Fundamentals of Microelectronics</i> , Wiley, 2014. Neamen, <i>Microelectronics - Circuit Analysis and Design</i> , McGraw-Hill, 2010.

Course Outline

(2 weeks)	Review. Diodes, rectifiers. (Chapter 4).
(4 weeks)	BJTs, biasing, amplifiers, and current mirrors (Chapters 6, 7, 8).
(2 weeks)	MOSFETs, biasing, amplifiers, and current mirrors (Chapters 5, 7, 8).
(1 week)	Opamps (Chapter 2).

Statement Regarding Students with Disabilities:

Accommodations are collaborative efforts between students, faculty and [Disability Access Services \(DAS\)](#) with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

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>