Course Description  Operational amplifiers. Semiconductor junctions. Bipolar and field-effect transistors. Simple transistor amplifier and switching applications. Introduction to digital logic circuits. Laboratory experience. Previously listed as EECS 340. Prerequisite: Grade of C or better in ECE 225.


Homework  Reading and homework will be assigned and the solutions will be posted after the due date. Late homework will not be accepted.

Laboratory  Laboratory sessions will begin with the second meeting of the semester and meet almost every day. There will be pre-lab assignments that must be done before the actual experiments. Please refer to the laboratory section of the course website for more information on laboratory policy, ECE 340 parts kit and the experiments.

Quizzes  Quizzes will be based on homeworks and material covered in lectures. The dates and times for the quizzes will be announced in class.

Grade Determination  Your grade for the course will be determined by your performance in homework, laboratory reports and exams. Here are the relative weights for each component:

- Homework: 10%
- Laboratory Reports: 20% (lowest score will be dropped)
- Quizzes: 40% (lowest score will be dropped)
- Final Exam: 30%

Unless otherwise noted, we will use a straight scale to determine the grades

(A = 90–100%, B = 80–89%, C = 70–79%, D = 60–69%, E = 0–59%)

Topics  The following is a list of topics to be covered.

1. Review of Linear circuit analysis and network theorems.
2. Operational Amplifiers: Ideal and non-ideal op-amp circuit analysis.
3. Non-linear Analysis techniques.
4. Introduction to semiconductor materials.
5. Diodes and diode circuits.
7. Field-Effect Transistors and circuits.
8. Small signal and large signal circuit analysis techniques.

Please check the course webpage for additional information