

ECECS 352: Electronics II, Spring 2008

Catalog Data: 20-260-352 Electronics II, Frequency response of amplifiers, feedback systems, filters, oscillators, tuned amplifiers, MOS and bipolar digital circuits.

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Goals: Study of analog circuit design including frequency response and feedback, with an introduction to digital integrated circuits.

Prerequisites by Topics: ECECS 351: Transistor biasing and analysis, equivalent circuits of active devices, basic logic circuits.

Grading: Two one-hour tests, each counts for 25 % of total grade
Two-hour final exam, 40 % of total grade
Homeworks 10 % of total grade

Homeworks and powerpoint presentations of notes covered in class will be posted on the web at:
<http://www.ececs.uc.edu/~mcahay/ece352.html>

Office Hours and TA: TBA

Text: Sedra and Smith, "Microelectronic Circuits", 5th Ed., Holt, Rinehart, and Winston (2004)

Topics: Textbook Sections

- Chapter 7: Amplifier low frequency response analysis and design (3 classes)
- Chapter 7: High frequency transistor models (2 classes)
- Chapter 7: High frequency analysis of BJT and FET amplifiers (4 classes)
- Chapter 8: Feedback principles and basic topologies (2 classes)
- Chapter 8: Feedback amplifier analysis and design (4 classes)
- Chapter 8: Feedback amplifier stability (2 classes)
- Chapter 11: Filter types and transfer functions (3 classes)
- Chapter 11: Tuned amplifier design (2 classes)
- Chapter 12: Basic RC and LC oscillators (3 classes)
- Chapter 13: MOS digital circuit design (5 classes)
- Chapter 14: Bipolar digital circuits (5 classes)
- Tests (3 classes)

List of ABET outcomes: a_1 , a_2 , a_3 , c, e, k.