

ECE323

Electronic Analysis, Design, and Simulation

Objectives: Learn the basics of analysis and design of modern electronics, mainly for preparation for advanced courses. Introduction to electronics design projects.

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Text: Microelectronic Circuits by Sedra/Smith any edition.

Class Web page: <http://www.ece.osu.edu/~bibyk/ee323/ee323.htm>

Most of the class content is on the web page, eg. the Syllabus.

Beginning coursework:

1. Skim over the online Sedra/Smith Preface, Table of Contents, and Chapter 1 ppt. Slides. Compare to the Hambley Electronics textbook website – Chapter 1.
2. Look at the ece323 web link of the MIT combined Circuits/Electronics Intro Course
3. Download TopSpice from www.penzar.com and write up two of the Examples projects (LC Tank and MOSFET I-V) in a short report.

Read the following Class Sheets:

1. Paradox in Circuit Design (Thomas & Rosa)
2. Engineering Design Communication
3. Mixed Signal System
4. Useful Analog in a Digital World
5. System Decomposition in Wireless Sensor Networks

Read the following Class Links

1. DAC Newsletter Jan. 08 Issue on Analog design in System-on-a-Chip
2. Look at the practical electronics links at Circuit Cellar, Nuts & Volts, TinyOS projects.
3. From the ece682Y Web page, look at the TI Design Contest and the TI All Product Design Support link.
4. From the ece721 Web page, download and skim Chapter 1 (1.1 to 1.4) from the Weste and Harris textbook.