Text: Sedra and Smith

I) Basic electronic circuits and properties (4 weeks)
   A) Op Amps
   B) Diodes
   C) Transistors
   D) Frequency Response
   E) Gain-Bandwidth Product
   F) Frequency Response of Op-Amps
   G) Frequency Effects of Coupling and Bypass Capacitors
   H) High-frequency limitations in transistor amplifiers

II) Op Amp architecture (1 week)
    A) Gain Stage
    B) Differential Stage
    C) Level Shifting and Output Stages

III) Signal Processing and Data Conversion (2 Week)
    A) Sample-and-Hold Circuits
    B) Analog Multiplexers
    C) A-D and D-A converters
    D) Log Amplifiers and Analog Multipliers

IV) Digital Circuits and Switching (1 Week)
    A) Binary systems, Boolean Algebra and Gates
    B) Dynamic logic
    D) Programmable logic

V) Electronic Applications (4 Weeks)

Possible topics include audio and video circuits; telephone applications; optoelectronics; illumination control applications such as incandescent, HF fluorescent, strobes; display applications; tube vs. transistorized audio systems; communications systems including receivers, transmitters and wireless data transmission.

Grading

There will be weekly quizzes and six design projects. The quiz average counts for 40% of the grade with the remaining 60% based on design projects. Note that a passing grade must be obtained in the design projects to pass the course. Design reports are to be written in a professional manner with correct spelling, grammar, and punctuation.

Grades are assigned as follows:

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<tr>
<th>Points</th>
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<td>90 - 99</td>
<td>A</td>
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