EE 3322
Electronic Circuits II

Catalog Description: Introduction to analog electronic circuits. Topics include BJT and MOSFET device models, single stage and multi-stage amplifiers, differential amplifiers, current mirrors and active loads, output stages, frequency response, and feedback and stability. The course will be concluded with an examination of basic analog building blocks (filters, oscillators, comparators, and data converters) and applications of mixed-signal and analog integrated circuits.

Prerequisites: EE 2322 (Grade of C- or better), EE 2122 (Grade of C- or better) and EE 2350 (Grade of C- or better). Concurrent registration in EE 3122.


Instructor: Jinghong Chen
Email: jhc@smu.edu
Phone: 214-768-2812, Fax: 214-768-3573
Office location: 337 Junkins Building, SMU campus

Lecture Time: Tuesday and Thursday 11:00 - 12:20 am, Room 112 Junkins Hall

Office Hours: Tuesday and Thursday 1:00 - 2:00 pm or by arrangement

Course Grading Policy: Homework 10%
Midterms (2) 50%
Final 40%
100%

Topics Covered
1. Review of BJT and MOSFET devices
2. Review of basic amplifiers
3. Operational amplifiers
4. Current mirrors and active loads
5. Differential and multistage amplifiers
6. Output stages
7. Frequency response
8. Feedback and stability
9. Filters, oscillators, comparators, and data converters
10. Applications of integrated circuits

Disability Accommodations: Students needing academic accommodations for a disability must first be registered with Disability Accommodations & Success Strategies (DASS) to verify the disability and to establish eligibility for accommodations. Students may call 214-768-1470 or
visit http://www.smu.edu/alec/dass to begin the process. Once registered, students should then schedule an appointment with the professor to make appropriate arrangements.

**Religious Observance:** Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

**Excused Absences for University Extracurricular Activities:** Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)

**Final Exams:** Final course examinations shall be given in all courses where they are appropriate, must be administered as specified in the official examination schedule, and shall not be administered during the last week of classes or during the Reading Period.

**Student Learning Outcomes**

**Outcome:** C (Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability)

**Outcome:** K (An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice)