

EE 3340 ELECTRONIC II
Fall 2020

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Course Time: TTh 3 – 4:20 pm

Course Description: Continuation of Electronics I (EE3338). Analysis and design of transistor-based, integrated circuits. CAD will be used for both digital and analog design.

Prerequisite: C or better grade in EE 3338 and EE3138

Textbook: Microelectronic Circuits, by Adel Sedra and Kenneth Smith.

Course Outcomes:

Students completing EE 3340 will be able to:

1. Analyze and design MOSFET-based amplifiers.
2. Analyze and design differential amplifiers, active loads, and current sources used in amplifiers.
3. Understand how to design amplifiers using BJTs via analogy to MOSFET amplifiers.
4. Perform basic digital circuit design using MOSFETs.

Course Format: This course will use a modular, problem-based focus. Students will work in groups and individually. Resources will include the textbook, internet, professor, etc. Lecture and prep material will be provided to address needed information. As material is presented opportunities may be provided to ascertain missing information and presentation topics/assignments may be altered/added. Quizzes/Exams and lab reports (via checkouts) will be used to ascertain the level of understanding.

Absence Policy: Make-up work is in general not possible and effort should be made to attend every class. The professor should however be informed of any problems with attendance **at least a week prior to any absence** to allow for rescheduling of work for the entire class. In the event that an emergency or sudden sickness occurs, **inform the professor as soon as possible**. In such situations, an oral quiz/exam may be administered to make-up a quiz/exam, but only under extreme cases. A physician's note or a similar document may be required prior to such a consideration.

Accommodation under the ADA:

If you feel you may have a disability that requires accommodation, contact the Center for Accommodations and Support Services at 747-5148, go to room 106E Union, or e-mail cass@utep.edu.

Undergraduate Grading: Based on the scaling of total exam/quiz and lab scores.

Approximately two exams and 7 labs are expected. **Scaling** essentially mean dividing your total score by the total possible score and multiplying by 4.

Some curving may occur, but should not be expected. A 4 to 0 grading scale will be used in exam/quiz grading.

4: concept is understood,

3: concept is mostly understood,

2: concept is halfway understood,

1: concept is mostly not understood, and

0: concept is not understood.

Some quiz/exam scores between two of the above are sometimes given.

Labs will be graded with a 1 (completed) or 0 (not completed). The lab grade requires a student to complete entire lab and then pass an oral quiz over the material concerned with the lab at checkout. If either of the latter are not successfully completed, the student will be asked to continue efforts on the lab. If a student does not successfully complete lab grading requirements by due date, that lab's grade will be a 0.

In general, an average performance of 3.5 to 4 will earn an A, 3 to 3.5⁻ a B and so on. Class participation may be taken into account and could have a positive effect on your final grade. Any questions concerning a test/quiz or lab score must be brought up prior to the class meeting after the test/quiz or lab grade is scored. Any paper materials not picked up within a week of the end of the term, will be shredded. Any questions concerning final grades should be brought up within one week of grades being posted to Goldmine.

Academic Dishonesty: “Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the *Handbook of Operating Procedures*, and available in the Office of the Dean of Students and the homepage of the Dean of Students at www.utep.edu, may result in sanctions ranging from disciplinary probation, to a failing grade in the work in question, to a failing grade in the course, to suspension or dismissal, among others.” (Quote from the Undergraduate and Graduate Catalog).