

EE 3340 ELECTRONIC II

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COVID Precautions: I highly encourage you to be both vaccinated and to wear a mask whether you are vaccinated or not, when advised. **I am vaccinated**, but I will still be wearing a mask at UTEP based on present conditions as needed. COVID is tenacious, and with new variants, even vaccinated people are getting sick. Via empirical evidence, and some scientific, both the vaccines and masks help a lot. So please wear a mask in class to protect your classmates and professors, when advised. Most of your professors are old enough that a COVID infection could be very bad news. Another consideration, particularly for this class, is that I am the only one that can teach this class, and if I get sick, it will be quite hard to finish the class. Like in other areas in ECE, there are no easy substitute professors. So protect me, and the rest of the ECE professors, so that we can teach the full semester.

Office Hours: My office is not setup well to have face-to-face office hours. I will use the following approach. You can come by my office or call (747-6972) or e-mail or talk to me at class and we can arrange something. If we need to meet, my plan is to exit my office and we can meet in the big open area outside my office or perhaps a conference/class room. I should be available generally in the afternoon.

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.

Absence Policy: Make-up work is in general not possible and effort should be made to attend every class. Thus, the professor should 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 cases an oral quiz/exam may be administered to make-up a quiz/exam. A physician's note or a similar document may be required prior to such a make-up.

Course Format: This course will use a modular, student-centered, flipped, problem-based focus. Students will work in groups and individually. Resources will include the textbook, internet, professor, etc. Lecture 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.

Undergraduate Grading: Based on scaled totals of Exam/Quiz and lab scores. Total Exam/Quiz scores will be worth 80% of the final grade and the labs as a group will represent the remaining 20%. Exam/Quiz score will be scaled to the below 4-point grade range. **Scaling** on the Exam/Quiz score essentially means dividing your total score by the total possible score on Exams/Quizzes and multiplying by 4. An individual quiz will be worth less than an exam. The values in the Exam/Quiz grade range mean

- 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.**

Scores between two of the above are expected on Exams/Quizzes. It should be understood that a minimum overall score of 2 is required on exams/quizzes to pass the course. Each lab will receive a 0 (not checked-out and completed) or 1 (checked-out and completed) score. The total lab score will also be scaled to the 4-point scale.

The above scaling approach and four-point scale range will be used in final grades as well. In general, an average performance of 3.5 to 4 will earn an A, 3 to 3.5 a B and so on in the course. Thresholds between grades may vary somewhat (e.g., the threshold for a C might be lowered to 2.4). Class participation may be taken into account and could have a positive effect on your final grade. **Some curving may occur in final grades, but should not be expected. In no case will a student with less than 2.0 overall score receive better than a D.**

Any questions concerning a Test/Quiz or lab score must be brought within 2 days of the class meeting after the grade is assigned (scores made available to students). Any questions concerning final grades should be brought up within one week of grades being posted to Goldmine. Any materials not picked up within a week of the end of the term, will be shredded.

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.

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).

Exam/Quiz Etiquette

Unless an exception has been approved by the instructor in advance, the following will be enforced during exams/quizzes:

- 1) No caps, hats, or similar can be worn during exams.
- 2) Ears must be visible. Generally, no device can be plugged into or on your ears.
- 3) Only standard, basic prescription eyeglasses can be worn. No sunglasses.
- 4) Only T-shirts and other standard, simple shirts/blouses, and jeans and other simple pants or shorts are allowed. No cargo pants/shorts. No coats, hoodies, or similar can be worn during exams. No heavy clothing layering is permitted, but a simple cardigan-type sweater may be worn with approval.
- 5) No book bag is permitted at the desk during exam/quiz.
- 6) All exam/quizzes are closed book and closed notes.
- 7) No watches, calculators, cell phones, tablets, laptops or other electronics allowed at desk during exam. Only pencils and an eraser are allowed. Pencils must be standard, hand-sharpened types (Bring several to exam.). Only small erasers (3” x 1” maximum size) are allowed. No pens or mechanical pencils.
- 8) Medical equipment may be allowed with instructor permission.
- 9) Water bottles and other drinks are not allowed without instructor permission.
- 10) No bathroom breaks during exam. Go to the bathroom before test. If you ask to leave the room during test, you must turn-in your exam. You cannot return to continue the test.