

EENG 3520-001 Electronics II

Instructor: Shuping Wang
Office: NTDP F130
Phone: 940-369-8895
Email: shuping@unt.edu

Spring 2024
Time: (TuTh) 4:00 pm - 5:20 pm
Meeting Place: NTDP E266
Office Hours: (TuTh) 2:00 pm - 4:00 pm

TA: Sudesna Das Rochi
Email: SudesnaDasRochi@my.unt.edu
Office Hours: TuTh 1:00 - 2:00 pm, Room B241

Course Description

This course is a continuation of EENG 3510 (Electronics I). Topics include single- and multi-stage amplifiers, differential amplifiers, feedback, and frequency response. The goals of this course are to expand the students' knowledge of basic electronics, to provide the students with the design and analysis of advanced analog electronics circuits, and to expose the students to a variety of tradeoffs for practical electronics design.

Course Information

Prerequisites

EENG 3510 Electronics I.

Required Text

Adel S. Sedra, Kenneth C. Smith, Tony C. Carusone, and Vincent Gaudet, Microelectronic Circuits, 8th Edition. Oxford University Press, 2020, ISBN 9780190853464 or 978-0190853532 (eBook).

Attendance

Attendance is mandatory. Lecture periods will be utilized to present the principles and theory of the course topics. Class participation and discussion are expected in these sessions.

Homework

Homework will be assigned to assess understanding and reinforce the materials covered in the lecture.

- Homework needs to be uploaded to Canvas at the due date/time.
- Homework turned in late will be penalized 50%. No homework is accepted after 24 hours.
- Students have one week to contest any grade once the grade is posted.

Exams

There will be **three** exams (this includes the final exam), each worth 100 points. Exams will be based on text readings, handouts, class exercises, and class lectures and discussions. Students are responsible for all text material, regardless of whether we review the text material in class or not.

Missed Exams

There are **no** make-up Tests. If you cannot take the test for any reason, the weight of the test will be put onto the final, so that the final is worth 55% of your grade. Make-up exam accommodations for the Final Exam will only be made if you have a documented university-excused absence (refer to UNT Policy 06.039).

Grading Elements and Weights

Homework:	20%
Test 1:	25%
Test 2:	25%
Final Examination:	30%

Grade Distribution

Points	Letter Grade
90.0% - 100%	A
80.0% - 89.9%	B
70.0% - 79.9%	C
60.0% - 69.9%	D
59.9% & Below	F

UNT Policies

ODA Policy

UNT makes reasonable academic accommodations for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time; however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member before implementation in each class. For additional information see the [ODA website \(https://disability.unt.edu/\)](https://disability.unt.edu/).

Academic Integrity Policy

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Tentative Course Outline

- Review of MOSFET and BJT Amplifiers (1/16)
- Building Blocks of Integrated-Circuit Amplifiers (1/18, 1/23, 1/25, 1/30)
- Differential and Multistage Amplifiers (2/1, 2/6, 2/8, 2/13, 2/15)
- **Test 1** (Monday, 2/20)
- Frequency Response (2/22, 2/27, 2/29, 3/5, 3/7)
- **Spring Break** (3/11 – 3/17)
- Feedback (3/19, 3/21, 3/26, 3/28, 4/2)
- **Test 2** (Monday, 4/9)
- Filters (4/4, 4/11, 4/16, 4/18, 4/23, 4/25)
- Review (4/30)
- **Final Exam:** 5/9/2024, Thursday, 1:30pm – 3:30pm