

EENG 3511 - Electronics I Laboratory

Fall 2026

Prerequisite(s): EENG 2610 - Circuit Analysis

Corequisite(s): EENG 3510 - Electronics I

Course Description: This course is designed to supplement the material of EENG 3510 and provide practical, hands-on experience with Diodes, MOSFET, BJT and Op-amps.

Recommended Text(s):

[1] V. C. Gaudet and K. C. Smith, Laboratory explorations to accompany Microelectronic Circuits. Oxford University Press, 2015.

[2] A. S. Sedra, Microelectronic circuits. 7th ed. Oxford University Press, 2015.

Lab Topics

Lab#	Chapter	Topic
1	2.3	Difference Amplifier
2	2.4	Instrumentation Amplifier
3	4.1 & 4.2	Diode I-V Transfer Curve and Rectifiers
4	4.3	Limiting and Clamping Circuits
5	5.1	NMOS I-V Characteristics
6	5.3	NMOS at DC
7	6.1	NPN I-V Characteristics
8	6.3	NPN at DC
9	7.1	NMOS Common-Source Amplifier

Course Objective: Exploration of Microelectronics characteristics and uses through application.

Grading:

- Attendance is mandatory on lab days and will constitute **30%** of the total grade.
- Lab reports will **not** be accepted for unexcused absences.
- If you are unable to attend a lab session, notify the instructor in advance to coordinate a makeup session.
- Each lab report is worth **10 points**.
- There will be a total of **10 lab reports**, amounting to **100 points**.
- Lab reports will account for **70%** of the total grade.

Canvas: Course material and grades will be maintained on the course Canvas site. You should check this page often to keep current on important information. <https://unt.instructure.com>.

Course Policies:

- Labs Reports are due at time listed on Canvas. **Lab Reports turned in after class will be penalized 25%**. No Lab report will be accepted after 1 week.
- Students have one week to contest any grade once graded/returned.

Rights and Responsibilities:

- Students are expected to inform the instructor of any issues regarding their performance in class in advance.

- Students who are aware of an authorized absence (religious observance, military service, official university function, etc.) should notify the instructor as soon as possible, in accordance with UNT Policy 15.2.5.
- Students with disabilities should inform the instructor of their needs at the beginning of the semester, according to UNT Policy 18.1.14, to receive proper attention and accommodations.
- Cheating and academic dishonesty will not be tolerated. Any student found to have participated in academic dishonesty will receive an F in the class and may be subject to further disciplinary action. Acts of academic dishonesty include academic fraud (e.g., changing solutions to appeal a grade), copying or allowing one's work to be copied, fabrication/falsification, plagiarism, sabotage of others' work, and substitution (e.g., taking an exam for someone else). For more details, see UNT Policy 18.1.16.
- Letter grades will not be assigned until the end of the term, after the final grades have been calculated. Any letter grade assignment posted before the end of the class should be regarded as tentative and subject to change.
- Course Safety Procedures Students enrolled in Electronics I Laboratory are required to use proper safety procedures and guidelines as outlined in UNT Policy 06.038 Safety in Instructional Activities. While working in laboratory sessions, students are expected and required to identify and use proper safety guidelines in all activities requiring lifting, climbing, walking on slippery surfaces, using equipment and tools, handling chemical solutions, and hot and cold products. Students should be aware that the UNT is not liable for injuries incurred while students are participating in class activities. All students are encouraged to secure adequate insurance coverage in the event of accidental injury. Students who do not have insurance coverage should consider Standard Syllabus Statements Related Policy 06.049 Course Syllabi Requirements obtaining Student Health Insurance. Brochures for student insurance are available in the UNT Student Health and Wellness Center. Students who are injured during class activities may seek medical attention at the Student Health and Wellness Center at rates that are reduced compared to other medical facilities. If students have an insurance plan other than Student Health Insurance at UNT, they should be sure that the plan covers treatment at this facility. If students choose not to go to the UNT Student Health and Wellness Center, they may be transported to an emergency room at a local hospital. Students are responsible for expenses incurred there.