

EE 3338: Electronics I (ONLINE)

CRN: 16850

Fall 2020

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COURSE DESCRIPTION

The continuation of Electrical Circuits II (EE2351) and introduction to electronic devices. The primary goal of EE 3338 is the analysis of Diode, Op Amp, and Bipolar Junction and Field Effect transistor circuits. Circuits including these electronic devices will be explored using: Ohm's law, Kirchhoff's law, and analysis techniques including: node-voltage, mesh-current, superposition, and Thevenin and Norton equivalent circuit.

COURSE PREREQUISITES

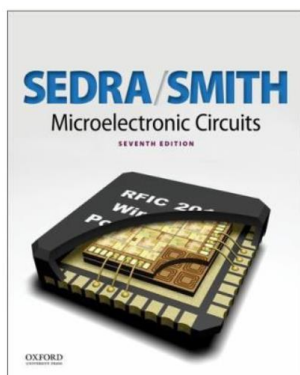
EE 2351 electric Circuits (II) and EE 2151 lab with grade of "C" or better.

COURSE OBJECTIVES OR EXPECTED LEARNING OUTCOMES

At the end of this course, students will be able to:

- Understand the design aspects of and be capable of analyzing circuits containing Diodes, Op Amps, and Bipolar Junction and Field Effect transistors by analyzing:
 - Operational Amplifiers. Closed loop gain, finite open loop gain, inverting and non-inverting configuration, integrator and differentiators.
 - Diodes, forwards and reverse bias, breakdown region, Zener diodes, full and half wave rectifiers.
 - Metal-semiconductor Field-Effect Transistor, device structure, current-voltage characteristics, modes.
 - Bipolar Junction Transistor, device structure, operation, current-voltage characteristics.

REQUIRED MATERIALS



Microelectronic Circuits 7th ed., by Adel Sedra and Kenneth Smith.

ISBN: 9780199339136

You can find this book on:

Amazon: [Microelectronics Circuits](#)

UTEP bookstore: [Microelectronic Circuits](#)

You will also need regular access to a computer, stable, consistent internet, Blackboard, and your UTEP email account.

COURSE ASSIGNMENTS AND GRADING POLICIES

Grade Distribution:

Quizzes	10%
Exams (I – III)	60%
Final Exam	20%
Team Exercise	10%

Exam Dates:

Exam I – Ch. 2	9/17*
Exam II – Ch. 4	10/15*
Exam III – Ch. 5	11/5*
Final Exam - Comprehensive	12/3*

* Exam days may vary.

Grading Scale:

A: 90% - 100% B: 80% - <90% C: 70% - <80% D: 60% - <70% F: 0 - <60%

Note:

- Each student must take all assessments (Quizzes, exams, and team exercise).
- Each assessment must be taken the designated date unless arrangements are made in advance.
- There will be NO EXTRA CREDIT
- All assignments including exams and quizzes will be submitted via blackboard.

CLASS MEETINGS

- Lecture: Held on Blackboard Collaborate Ultra Tuesdays and Thursdays from 1:30 pm to 2:50 pm.
- Virtual Office Hours: By appointment via Blackboard Collaborate Ultra

TECHNOLOGY REQUIREMENTS

Course content is delivered via the Internet through the Blackboard learning management system (LMS). Ensure your UTEP e-mail account is working and that you have access to the Web and a stable web browser. Mozilla Firefox and Google Chrome are the most supported browsers for Blackboard; other browsers may cause complications with the LMS. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

You will need to have or have access to a computer/laptop, scanner, a webcam, and a microphone. You will need to download or update the following software: Microsoft Office, Adobe, Flashplayer, Windows

Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

If you encounter technical difficulties beyond your scope of troubleshooting, please contact the [Help Desk](#) as they are trained specifically in assisting with technological needs of students.

ATTENDANCE POLICY

Because this is an online course, attendance is determined by class participation online. Participation is determined by completion of the following activities:

- Presence in daily lectures on Blackboard Collaborate Ultra
- Reading/Viewing all course materials to ensure understanding of assignment requirements
- Completing all assignments on time
- Discussion Boards: Team Exercises will be submitted through a discussion board in order to provide and receive feedback from classmates and instructor.

NETIQUETTE

- Always consider audience. Remember that members of the class and the instructor will be reading any postings.
- Respect and courtesy must be provided to classmates and to instructor at all times. No harassment or inappropriate postings will be tolerated.
- When reacting to someone else's message, address the ideas, not the person. Post only what anyone would comfortably state in a F2F situation.
- Blackboard is not a public internet venue; all postings to it should be considered private and confidential. Whatever is posted on in these online spaces is intended for classmates and professor only. Please do not copy documents and paste them to a publicly accessible website, blog, or other space. If students wish to do so, they have the ethical obligation to first request the permission of the writer(s).

LATE WORK POLICY

Quizzes

- Quizzes will be due on Thursdays before midnight (11:59 PM). No late work will be accepted.

Exams

- Exams will be available on Thursday afternoon and will be due on Saturday before midnight (11:59 PM). No late work will be accepted.

Team Exercise

- Team exercise will be available Tuesday morning and needs to be completed with a group of three students. Each group will have 48 hours to post their solutions to BB (Discussion board) and provide feedback (comments) to at least two teams. Detail instructions for each assignment will be provided on each assignment handout.

DROP POLICY

To drop this class, please contact the [Registrar's Office](#) to initiate the drop process. If you cannot complete this course for whatever reason, please contact me. If you do not, you are at risk of receiving an "F" for the course. The deadline to drop this course with an automatic W is **October 30th**.

ACCOMMODATIONS POLICY

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the [UTEP Center for Accommodations and Support Services](#).

SCHOLASTIC INTEGRITY

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more [HOOP: Student Conduct and Discipline](#).

STUDENT RESOURCES

UTEP provides a variety of student services and support:

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.

- [Math Tutoring Center \(MaRCS\)](#): Ask a tutor for help and explore other available math resources.
- [History Tutoring Center \(HTC\)](#): Receive assistance with writing history papers, get help from a tutor and explore other history resources.
- [Military Student Success Center](#): UTEP welcomes military-affiliated students to its degree programs, and the Military Student Success Center and its dedicated staff (many of whom are veterans and students themselves) are here to help personnel in any branch of service to reach their educational goals.
- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.