EE 2350 ELECTRIC CIRCUITS I
SYLLABUS FOR SPRING 2023

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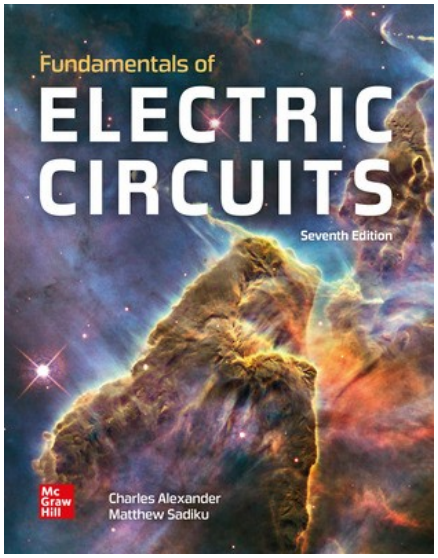
TEACHING ASSISTANT: TBA
OFFICE HRS.: T-F 9:00 – 10:00 AM
TEXTBOOK: Fundamentals of Electric Circuits**,** 7th Edition. By Charles Alexander, Matthew Sadiku



WEB TOOLS:
Connecy by McGrawHill.
Go to https://connect.mheducation.com/class/h-erives-spring-2023-1

CATALOG DESCRIPTION: Introduction to systematic methodologies for the analysis of electric circuits in DC and AC steady state. Use of simulation tools for steady state circuit analysis. Can be taken concurrently with **PHYS 2421** and **MATH 2326**.

PREREQUISITES: EE 1305, MATH 1312, PHYS 2421+ and MATH 2326+, each with a grade of C or better. (PHYS 2421 and MATH 2326 may be taken concurrently.)

COURSE LEARNING OUTCOMES: Students completing EE 2350 will be able to:
- Understand terminology used in conjunction with electric circuits of ideal circuit elements.
- Mathematically model electric systems using ideal resistive, inductive, and capacitive elements.
- Apply phasors and impedance transformations to the analysis of electric circuits.
- Apply various systematic methods (node, mesh, terminal equivalency, and circuit theorems).
- Apply various circuit analysis techniques to study circuits that include operational amplifiers.
- Apply various circuit analysis techniques to study energy and power in dc and ac circuits.
- Apply software tools to the analysis of electric circuits in steady state.

COURSE GRADING:

- Two Partial Exams 30%
- Homework (Connect) 30%
- Quizzes 20%
- Comprehensive Final Exam 20%
- **Attendance** **Required**

You can can find your grades on the left-hand navigation panel on "My Grades."
Late work WILL BE assessed a late penalty of 30%.

GRADE DISTRIBUTION: Grades will be based on the standard scale

90% - 100%	A
81% - 90%	B
71% - 80%	C
60% - 70%	D
Below 60%	F
At least 70%	S

TOPICS TO BE COVERED FROM THE TEXTBOOK: (the exact order, pages and/or sections and subsections will be listed in homework assignment handouts). See the Appendices for very useful review and reference materials!

CALENDAR: Tentative schedule

Dates	Topics
Jan - Feb	**Chapter 2: Basic Laws** a) Nodes, Branches, and Loops b) Ohm's Law c) Kirchhoff's Laws d) Wye-Delta transformations **Chapter 3: Methods of Analysis** a) Nodal Analysis b) Mesh Analysis
Feb - Mar	**Chapter 4: Circuit Theorems** a) Superposition b) Source Transformation c) Thevenin Therorem d) NortonTheorem e) Maximum Power Transfer **Chapter 5: Operational Amplifier** a) Ideal Op Amplifier b) Inverting Amplifier c) Noninverting Amplifier d) Difference Amplifier
	Exam I
Mar - Apr	**Chapter 6: Capacitors and Inductors** a) Capacitors b) Inductors c) Integrator d) Differentiator e) Analog Computer **Chapter 9: Sinusoids and Phasors** a) Sinusoids b) Phasors c) Impedance and Admittance d) Kirchhoff's Laws in the Frequency Domain

Apr - May	**Chapter 10: Sinusoidal Steady-State Analysis** a) Nodal Analysis b) Mesh Analysis c) Superposition d) Source Transformation e) Thevenin and Norton Equivalent Circuits **Chapter 12: Three-Phase Circuits** a) Balanced Three-Phase Voltages b) Balanced Wye-Wye Connection
	Exam II
May	**Final Exam (According to UTEP's Academic Calendar).**

ACADEMIC INTEGRITY:
Please review the statements below and UTEP's Web page on Policy on Academic Integrity at: http://sa.utep.edu/osccr/academic-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. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be taken seriously and will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

CENTER FOR ACCOMMODATIONS AND SUPPORT SERVICES (CASS):
If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

COVID-19 PRECAUTION STATEMENT
Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.