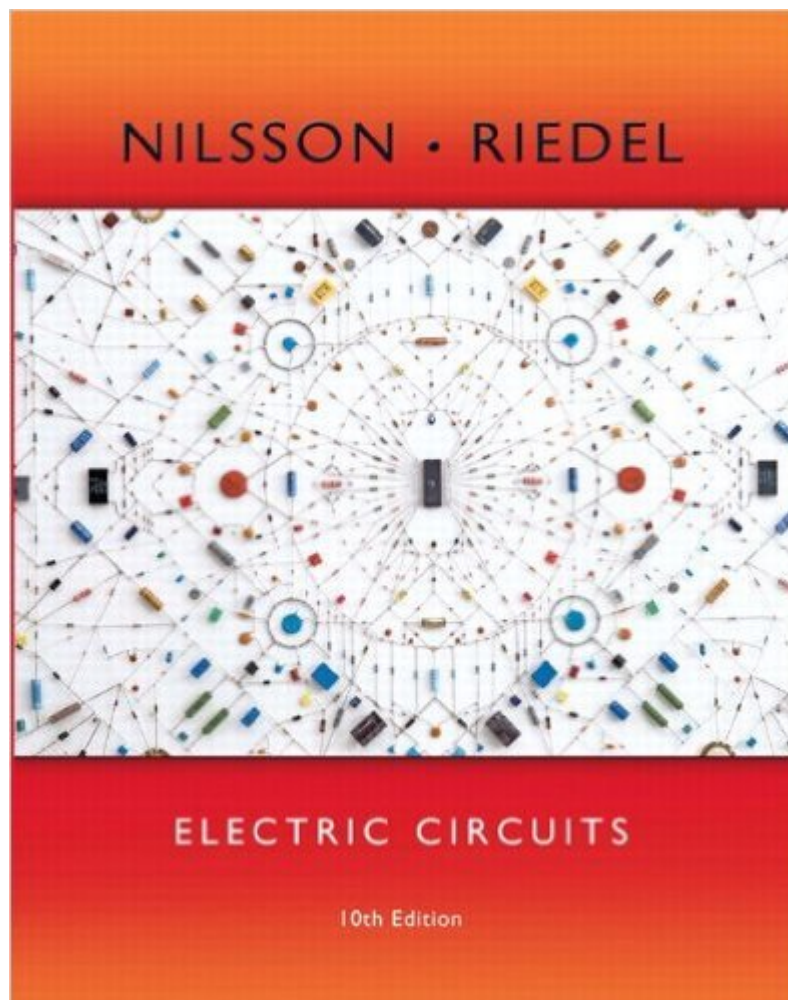


UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

EE 2350 ELECTRIC CIRCUITS I
SYLLABUS

Instructor Dr. Benjamin C. Flores
Office: Engineering Annex A-314
Phone: (915) 747-5470
e-mail: bflores@utep.edu

Classroom TBA
MW 1:30 – 2:50 PM



Catalog Description Theory of electric circuits: DC analysis of resistive circuits; AC analysis of RC, RL, and RLC circuits; operational amplifiers; complex power and balanced three-phase circuits.

Prerequisites EE 1305 Introduction to Electrical Engineering
MATH 1312 Calculus II
PHYS 2421 Fields and Waves
MATH 2326 Differential Equations

Note: PHYS 2421 and MATH 2326 may be taken concurrently.

Required Textbook J.W. Nilsson and S.A. Riedel, Electric Circuits, 10th Edition, Prentice Hall, 2014.

Mastering Engineering package. Read homework section below.

Course Outcomes From an educational perspective, students are expected to *remember* (recall facts and basic concepts), *understand* (explain ideas and concepts), *apply* (use information in new situations), and *analyze* (draw connections among ideas). By the end of the summer session, you will be able to:

1. Analyze resistive electric DC circuits using source transformations, node and mesh techniques.
2. Analyze AC circuits made of resistors, inductors, capacitors and op-amps.
3. Analyze average power consumption of single-phase, ideal transformer circuits, and three-phase circuits.
4. Apply software tools for the analysis of dc and ac electric circuits.

Topics	<p>MODULE 1 (Chapters 1, 2, 3, and 4) Circuit Variables Circuit Elements Simple Resistive Circuits Circuit Analysis Techniques</p> <p>MODULE 2 (Chapters 6, 9, and 5) Inductance, Capacitance and Mutual Inductance Steady State Response of RC, RL, and RCL circuits Operational Amplifier Integrators and Differentiators</p> <p>MODULE 3 (Chapter 10 and 11) Steady State Power Ideal Transformers Balanced Three-Phase Circuits</p>										
Computer Usage	Use of MATLAB and MultiSim for simulation assignments and term project.										
Grading Policy	<p>Your final grade will be based on 3 module exams (20% each), 3 simulation assignments (5% each), a term project report (10%), end-of-chapter homework (10%), and pop-quizzes (5%). Letter grades will be assigned as follows:</p> <table border="0" style="margin-left: 40px;"> <tr><td>At least 90</td><td>A</td></tr> <tr><td>80 - 89</td><td>B</td></tr> <tr><td>70 - 79</td><td>C</td></tr> <tr><td>60 - 69</td><td>D</td></tr> <tr><td>59 or less</td><td>F</td></tr> </table> <p>An <u>incomplete</u> grade will be given <u>only</u> when arrangements have been made with the professor prior to the end of the semester. You must be passing the course in order to request an incomplete.</p>	At least 90	A	80 - 89	B	70 - 79	C	60 - 69	D	59 or less	F
At least 90	A										
80 - 89	B										
70 - 79	C										
60 - 69	D										
59 or less	F										
Midterm Grade and Faculty-Initiated Withdrawal	The midterm grade will be based on HW, quizzes, and the first exam. Lack of effort or poor performance may lead to a faculty-initiated withdrawal.										

Homework

Homework is an essential part of the course. You will be assigned homework for every class period. Homework will be submitted and graded using Mastering Engineering.

Mastering Engineering is an online system that is supported by Pearson, the publisher of your textbook. You will be required to register for Mastering Engineering. For this you will need:

1. Course ID: This will be provided by the instructor.
2. Pearson account: You will either create your Pearson student account or identify your existing account.
3. Access code or buy access: Either enter a student access code or buy access using a credit card or PayPal. A student access code card may be provided with your new textbook or you may be able to purchase this separately.

Mastering Engineering provides tutorial homework problems designed to emulate the instructor's office hour environment. The system can guide you through engineering concepts with self-paced individualized coaching. It will provide you with feedback that is specific to any errors you may happen to make. Also you may elect to receive optional hints that are capable of breaking a complex problem down into simpler steps.

Classroom Etiquette

Part of being a professional is being on time and being prepared to do your job. This applies to your career as a student as much as it does to your future career as an engineer. You are expected to be in class and prepared to participate at the scheduled start time. Wireless devices other than your laptop are not to be used in the classroom. Please set them in silent mode before coming to class. If you have an emergency and must answer the phone, please do so after discretely leaving the room. You may return to class once you finish your call.

Study Habits	For every hour of lecture, you are expected to dedicate three hours of study per day or until the material is understood and the homework assignment is completed. This is a standard expectation for a regular semester. Thus, you should study approximately 9 hours per week or until you fully understand the material discussed in class. Time on task is essential for your success!
Syllabus Changes	The professor reserves the right to make adjustments to the syllabus.

INSTITUTIONAL POLICIES

Academic Honesty. As an entity of The University of Texas at El Paso, the Department of Electrical and Computer Engineering is committed to the development of its students and to the promotion of personal integrity and self-responsibility. The assumption that a student's work is a fair representation of the student's ability to perform is the basis for departmental and institutional quality. All students within the Department are expected to observe appropriate standards of conduct. Acts of scholastic dishonesty such as cheating, plagiarism, collusion, the submission for credit of any work or materials that attributable in the 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 will not be tolerated. Any case involving academic dishonesty will be referred to the Office of the Dean of Students. The Dean will assign a Student Judicial Affairs Coordinator who will investigate the charge and alert the student as to its disposition. Consequences of academic dishonesty may be as severe as dismissal from the University. See the Office of the Dean of Students' homepage (Office of Student Life) at <http://studentaffairs.utep.edu/dos> for more information.

American Disabilities Act. The UTEP Disabled Student Services Office was established for the purpose of providing appropriate and reasonable accommodations as mandated by the Rehabilitation Act of 1973 and the Americans with Disabilities Act. If you have needs regarding learning disabilities, please report your special needs to the course instructor the first day of classes. For additional help, contact the Center for Accommodations and Support Services (CASS): (915) 747-5148, cass@utep.edu, <http://sa.utep.edu/cass/>.

Discrimination. The University of Texas at El Paso does not discriminate, on the basis of age, gender, color, ethnicity, national origin, religion, disability, or sexual orientation. Members of the UTEP community are protected from discrimination and harassment by State and Federal Laws.

Campus Concealed Carry. For details see <http://sa.utep.edu/campuscarry>.