EE 210: Electrical Network (Circuit) Analysis I
Section 02 – Fall 2016

Instructor: DR. PARISA KAVEH
Contact Info: E-mail: pkaveh@mail.sdsu.edu
Office hours: Mondays & Wednesdays 3:00 – 4:00 PM
Office room: E-403J
Note: Any communication regarding this course must be via the provided e-mail address. Your full name, Red ID, class time and section number must be included in your e-mail.

Schedule: MW 5:00 – 6:15 PM
Location: LSS-365
Prerequisite: Math 151 and Physics 196 (a grade of C or better is required)
Midterm Exam: November 7th, 2016
Final Exam: Saturday, December 17th, 2016 / 7:00 AM – 9:00 AM / Location: HT-140

Labs: There will be a set of laboratory projects that include hands-on experiments and computer simulations.

Syllabus: Chapters 1-7, 9, 10 of the textbook will be covered. The following is the list of the topics:

1. Introduction to Electrical Networks: Systems of Units, Charge, Current and Voltage Concepts
3. Resistive Circuit Analysis: Node Analysis, Mesh Analysis
5. Active Circuit Elements: Capacitors, Inductors
8. Operational Amplifiers: Amplifier Characteristics, Integrator & Differentiator Circuits, Limitations

Objectives:

This course provides students with: a basic understanding of the nature of current flow and voltage distribution in electric circuits; analysis tools for the precise computation of currents and voltages in DC, transient and AC circuits; an introduction to the behavior of standard passive electrical components, operational amplifiers and transformers; a sense of the potential hazards involved in the physical manipulation of electric circuits and power lines; the skills needed to determine the electrical behavior of circuits using computer based design and analysis aids.

By the end of the semester, the students will be able to:

1. Calculate basic circuit parameters using current and voltage principles
2. Analyze simple linear circuits using Kirchhoff’s Laws
3. Perform Superposition, Thevenin & Norton Equivalent operations to simplify complex linear circuits
4. Analyze circuits containing resistors, capacitors, inductors and operational amplifiers
5. Use computer-aided techniques to assist with circuit analysis

Disability:

If you are a student with disability and you need accommodations for this class, it is your responsibility to contact Student Disability Services as soon as possible to avoid any delay in the receipt of your accommodations. Please note that accommodations cannot be provided until you have presented your instructor with the necessary letter from that center. Your cooperation is appreciated.
Grading:  Homework (10%); Labs (15%); Quizzes (15%); Mid-term Exam (25%); Final Exam (35%)

Policies:

1. Students who have not met the prerequisites will be dropped from the course in the second week of the semester.
2. Course materials, assignments and announcements will be given through the Blackboard. If you are absent from any class, it will be your responsibility to check on announcements that were made while you were not present.
3. Cell phones must be turned off or set to vibrate and may not be used during the lecture. You may be asked to leave the class otherwise. Any other conduct that could be disruptive to the learning process of the students may result in your dismissal from the class, as well.
4. If you want to use your laptop during the lecture, you MUST sit at the last row of the classroom, with nobody sitting behind you. The noise from typing on the keyboard should not disrupt the class. You may be asked to leave the class otherwise.
5. A homework assignment will be given through the Blackboard for each chapter. Solutions will be posted to the Blackboard after the due date. The lowest homework grade will be dropped.
6. No Late assignment will be accepted whatsoever.
7. Quizzes will be given frequently based on the covered material and assigned homework. Quizzes will be announced either in class or through the Blackboard. The lowest quiz grade will be dropped.
8. No make-up quiz will be given whatsoever.
9. If you have any question that requires writing mathematical equations or helping out with finding an error in the solution, you should come during the designated office hours instead of e-mailing.
10. You are responsible for clear presentation of your work in all the assignments, quizzes and exams. Your papers must be neat, organized, well written and stapled together. You must show all the steps of your work and list all the assumptions for full credit. All the calculated values in every step of solving a problem must be boxed. Unsupported and not clearly identified answers will not be accepted. Any loss of credit due to lack of organization is the student’s responsibility and will not be compensated.
11. Laboratory assignments are performed as self-study group projects. The groups may consist of at least two and at most four students. The compositions of the team members are left upon the preference of the students. Each group is responsible for proper completion and prompt presentation of the assignment to the TA at the designated time. Upon completion of the assignment, a written report must be submitted for that project. The reports should be turned in class and they must be typed. Guidelines regarding the labs, as well as the assignments, will be posted on the Blackboard. They must be carefully read and followed for full credit.
12. All exams are closed book and closed notes. The necessary formulas will be provided for you.
13. All exams will start on time. Please try to be punctual. You must have your Red ID card or another valid ID card such as a Driver’s License with you.
14. The use of calculators is allowed on the tests and quizzes; however, you must show all your steps and procedures for full credit. You cannot use your cell phones, tablets, computers or any other electronic devices BUT a designated calculator, for computation on the exams and quizzes. Cell phones and all the other aforementioned electronic devices must be turned off and put away during the tests and quizzes. You may not share someone else’s calculator during the exams and quizzes. You will receive a zero for the grade otherwise.
15. If you have an acceptable excuse with supporting documents, you may be allowed to make up a midterm or a final exam. You should send an e-mail and inform me about your problem before the exam. No Excuses will be accepted after the exam. A make-up exam may be different and generally more difficult than the scheduled one.
16. The Final Exam is comprehensive.
17. The final grades will be determined based on the overall performances of the two sections of EE 210. Sharing the test materials, including quizzes and exams, can only result in your own loss.

Academic Misconduct:

Academic misconduct such as cheating, plagiarism, falsifying records & data, etc., will result in a grade "F" for the course and will be reported to the Center for Student Rights & Responsibilities. For further information visit the website of this center at: http://csrr.sdsu.edu/.