

Circuit Theory I
ITEE 0609-214
Rochester Institute Of Technology
School of Engineering Technology

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Course Name: Circuit Theory I
Course No: Lecture: 0609-214

Course Description:

This course introduces the students to the principles of electrical circuit theory. The course presents the basics of circuit devices and performance. Concepts of analysis are developed while introducing fundamental circuit laws. This prepares the students for subsequent circuit and electronic study as well as presenting theory concepts useful in the laboratory.

Intended Learning Outcomes:

- 1) Be able to apply Kirchhoff's laws of voltage and current to mesh and nodal circuit analysis.
- 2) Properly follow a schematic to construct a basic circuit.
- 3) Understand the nomenclature of components and circuit values.
- 4) Perform DC measurements in simple and relatively complex circuits.
- 5) Analyze DC circuits by analytical means.
- 6) Work individually to generate results and plots to demonstrate circuit principles.
- 7) Individually generate a report that effectively and clearly demonstrates the data and results of a basic experiment.

Lecture Topics:

- 1) Ohm's law, power and energy
- 2) Series, parallel & series-parallel circuits
- 3) Kirchhoff's voltage law (KVL)
- 4) Notation conventions
- 5) Voltage sources and batteries
- 6) Current sources & source conversions
- 7) Mesh and nodal analysis

Text:

Introductory Circuit Analysis, by Boylestad, Prentice Hall 10th edition

Homework: Homework will be assigned with most lectures and collected on Wednesdays.

Answers must be boxed and highlighted. Your lowest homework grade will be dropped.

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Quizzes: Quizzes will be given every Wednesday during the first 10 minutes of class. The quiz will be one of the assigned HW problems from the previous week. Quizzes will be closed book and closed notes. One quiz will be dropped. No makeup quizzes.

Three Tests: Three tests will be given during the quarter. You may bring one 8.5"x11" sheet with hand written equations for use during Test 1, two sheets to Test 2 and three sheets to test 3. The tests will be closed book. In case of an emergency a reasonable attempt must be made to contact me. Use e-mail or phone call. In these cases a make-up test can be scheduled but will not receive a grade greater than 70%.

Final: Three sheets are permitted for the Final. The final will be a closed book exam. There will not be a make-up for the final.

Evaluation:

Weekly quizzes	10%
Weekly homework	5%
Highest scoring Test	20%
Test	15%
Lowest scoring Test	10%
Final exam	15%
Laboratory	25%

Extra-Credit: If you find and are the first to document an error in the textbook, I will add 10% to one of your quiz or homework grades. To receive the extra points send me an e-mail with the following information: chapter, page number, description of what the book says and what it should say. Please check the posted errors on mycourses.

Special Needs:

Students that have special needs above the usual student, other than the student who is already classified as deaf or hearing impaired and noted as such on the class roster, must present documentation to the instructor to certify the nature of his or her needs at the beginning of the quarter. This will allow me to plan ahead to best serve you.

Withdrawal Policy

The deadline for withdrawing from a course with a W grade is the end of the 6th week of the quarter. Forms may be obtained from your department office and require the instructor's signature.

If you want to make an easy job seem mighty hard just keep putting off doing it.