

EE 2350

Circuit Analysis I

Course Information Summer 2019 Taos

Professor CS Lee

Catalog Description: Analysis of resistive electrical circuits, basic theorems governing electrical circuits, power considerations, analysis of circuits with energy storage elements. Transient and sinusoidal steady- state analysis of circuits containing resistors, operational amplifiers, inductors and capacitors.

Prerequisite: Math 3313, Phys 1304

Textbook: *Electric Circuit Fundamentals*, by Franco, Saunders College Publishing, 1995

Instructor: C.S. Lee, Junkins 332, (214) 768-3257 (ph), (214) 768-3573 (fax), cslee@lyle.smu.edu

Grading Policy: Homework: 50%
Quizzes: 50%

ABET Course Emphasized Outcome:

This course includes, but is not limited to, content that supports the Electrical Engineering educational objectives and outcomes. Specifically, this course furthers the student's knowledge and skills involving the following ABET outcomes:

EAC Outcome 1: An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

EAC Outcome 2: An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

Compressed Schedule: Completion of the required course in 2 weeks just before the fall semester.

Highly focused.
Individual attention.
Immediate feedback and remedy.
Efficient learning environment.
Tutorial session every day for HWs and quizzes.
Option of repeat for each quiz.

Covered Topics

- Topic 1: Kirchhoff's voltage and current law, resistors, series and parallel combinations. (Chapters 1 and 2)
- Topic 2: Circuit solution by inspection, nodal and loop analysis, superposition. (Chapter 3)
- Topic 3: Norton and Thevenin Theorems, maximum power transfer, transformer. (Chapters 4 and 5)
- Topic 4: Op amps, virtual short. (Chapter 6)
- Topic 5: Transient, RL, RC circuits. (Chapters 7 and 8)
- Topic 6: Transient, RLC second-order circuits. (Chapter 9)
- Topic 7: AC analysis, phasor, impedance. (Chapters 10 and 11)
- Topic 8: (Optional) AC power and resonance. (Chapters 12 and 13)

Class information

Class format:

This Taos program offers intensive coverage of core engineering materials within a short period of time, emphasizing individualized personal attention from the professor and immediate feedback and remedy in an efficient learning environment.

In a typical day, the following sequence is given: a quiz, HW review, and lecture.

Grading policy:

The course grade is based on homework and 7-8 short quizzes. A typical quiz may last 30 minutes. If you do not do well in a quiz, you have another chance to take at the tutorial session in the evening. The new score will replace the old. The quiz problems are similar to HW problems.

Tutorial session:

There will be an optional tutorial session each day at a mutually agreeable time. You can bring HWs or any problems that you need help on. You can also take the make-up quiz at this tutorial session if you decide to repeat the exam.