

EE 411, Fall 2007, Circuit Theory, Unique Numbers 16385 and 16390**Lecture MW 3:30-5:00, ENS127****Recitation for 16385 on Wed. 1:00-3:00 in ENS109, and for 16390 on Fri. 2:00-4:00 in ENS115****Professor.** Dr. Mack Grady, ENS348, grady@mail.utexas.edu, 471-5231. Office hours: MW 5-6pm.**TA.** Jong Taek Lee, jongtaeklee@mail.utexas.edu, (office hours to be determined)**Course Home Page.** www.ece.utexas.edu/~grady/EE411_Fall07.html (contains notes, and solutions to homework and tests)**Textbook.** C.K. Alexander, M.N.O. Sadiku, *Fundamentals of Electric Circuits*, Third Edition, McGraw-Hill, 2006.**Course Description.** Linear circuit elements; nodal and mesh analysis; operational amplifiers; capacitance and inductance; simple transient response; sinusoidal steady state analysis; Bode plots; three-phase circuits; transformers; two-port networks (Z-parameters and Y-parameters); computer-aided analysis and design. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Electrical Engineering 302 or 302H with a grade of at least C; credit with a grade of at least C or registration for Mathematics 427K; and credit with a grade of at least C or registration for Physics 303L and 103N.**Schedule.**

Wed., Aug. 29	Introduction and review. Chaps. 1, 2.
Week 1 (Sept. 3).	Mon. holiday. Complex numbers. Appendix A9.
Week 2 (Sept. 10).	Nodal and mesh analysis. Chap. 3.
Week 3 (Sept. 17).	Superposition. Thevenin and Norton equivalents. Chap. 4.
Week 4 (Sept. 24).	Test 1 on Mon. Op amps. Chap. 5.
Week 5 (Oct. 1).	Capacitors and inductors. First-order circuits. Chap. 6 and Chap. 7.
Week 6 (Oct. 8).	First-order circuits, cont. Second-order circuits. Chap 7 and Chap. 8.
Week 7 (Oct. 15).	Second-order circuits, cont. Chap. 8.
Week 8 (Oct. 22).	Sinusoids and phasors. Sinusoidal steady-state analysis. Chap. 9 and Chap. 10.
Week 9 (Oct. 29).	Test 2 on Mon. Sinusoidal steady-state analysis, cont.. Chap. 10
Week 10 (Nov. 5).	Single-phase power. Chap. 11.
Week 11 (Nov. 12)	Three-phase power. Chap. 12.
Week 12 (Nov. 19)	Class on Monday. Magnetic circuits. Chap. 13. Thanksgiving week. No Wed. or Fri. sessions.
Week 13 (Nov. 26)	Magnetic circuits and transformers. Frequency response. Chap. 13 and Chap. 14.
Week 14 (Dec. 3)	Test 3 on Mon. Frequency response. Two-port networks. Chap. 14.

Three One-Hour Tests (50%). Cumulative. On Mondays at 3:30, of the weeks shown above. These tests cover class materials through the previous week. One 8½ x 11" sheet of notes (both sides) is permitted. If you miss one of the tests, your final exam grade will be substituted for the missing test grade. Additional missed tests will be handled on a case-by-case basis. Each test and the final exam is usually curved upward to achieve an average of 75.**Recitation Sessions and Quizzes (25%).** Recitation sessions begin on Wed., Sept. 5. They will focus on solving the homework problems and other problems related to classroom lectures. Some sessions will include laboratory experiments. A fifteen-to-twenty minute quiz will be given at the end of most recitation sessions that covers the most recent homework assignments. Your lowest grade will be dropped in determining your recitation quiz average. You must be present for the entire recitation session to take the quiz. There are no makeups, but if you miss a quiz, keep a log book and staple an explanation sheet your final exam.**Homework.** Homework will be assigned each lecture period. Working in teams is encouraged. Homework will not be turned in for grading. Instead, recitation quizzes will be your homework grade.**Final Exam (25%).** Cumulative. Given during the official UT-scheduled time period and location. Please do not ask to take the final exam at any other time. One 8½ x 11" sheet of notes (both sides) is permitted.**Cell Phones and Laptops.** Turn them off. Laptops may be OK if you clear it first with Dr. Grady.