

Department	Electrical and Computer Engineering
Course Number	EE 354
Course Title	Electric Power Applications
Course Designation	A required course for Civil Engineering Technology majors and an elective for other non-EE/CpE engineering students
University Catalog Description	Semesters offered: Fall; 3 credits (Lec 2, Lab 1) Prerequisites: M 166 or M 171 and PHYS 206 or 212 -- An applied study of electricity and electrical power circuits, with laboratory experience, for that person not expected to deal with electronics or advanced circuit techniques. Topics covered include electrical circuit laws; power and energy; alternating current circuits; residential, commercial and industrial wiring; wire sizing, three-phase circuits; and application of transformers and electric motors.
Faculty Coordinator	Dr. Hashem Nehrir
Prerequisites by Topic	Electricity and magnetism, calculus
Textbook	<i>Industrial Electricity</i> , Brumbach and Nadon et al. Delmar Publishers, 2005.
Course Objectives	The course is intended to give students an introduction to electrical power applications for the non-major
Course Learning Outcomes	At the conclusion of EE 354, students are expected to be able to: 1) Understand the basics of electrical power applications
Topics Covered	1) Electric power and energy 2) Test equipment 3) Resistive electric circuits 4) Magnets and magnetism 5) Single and three-phase alternating current 6) Conductor types and sizes 7) Wiring applications 8) Transformers 9) Electrical distribution 10) AC motors, drives, motor selection and application 11) DC motors, drives and application
Class/Laboratory Schedule	EE 354 meets three times per/week for 50 minutes
Professional Component (Criterion 5)	Students learn the basics of electric power applications
ECE Program Outcomes	N/A
Total Credit Hours	3
Prepared by	James Becker 5/27/09