



Power Systems

ECE 5042

Credit Hours:

3.00 - 3.00

Course Levels:

Undergraduate (1000-5000 level)

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

A power system analysis course presenting power systems loads, modeling of transformers and power system model for voltage calculation and faults.

Prerequisites and Co-requisites:

Prereq: 3040, or Grad standing in Engineering, Biological Sciences, or Math and Physical Sciences.

Course Goals / Objectives:

- Master fundamental understanding of concepts of power systems.
 - Be competent at analyzing and interpreting real-life problems of power systems, such as power delivery assets status, power system stability and electricity markets.
 - Be competent at applying fundamental techniques of power system operation.
 - Be exposed to power system software such as PowerWorld.
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Course Topics:

- Introduction, review of power system concepts
 - Network matrices
 - Power flow analysis
 - Automatic generation control
 - Fault analysis
 - Power system protection
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Designation:

Elective