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.

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