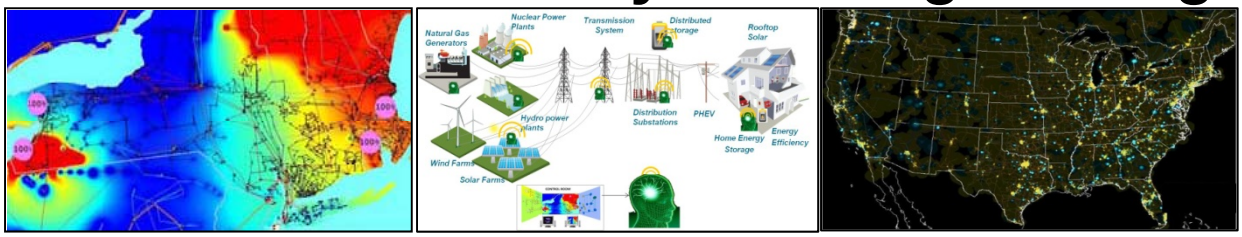
ECE 4321 – Power System Engineering



Spring 2011, Prof. Santiago Grijalva

Description:	This course introduces engineering aspects of large-scale electricity grids encompassing modeling, fault analysis, system protection, transient stability, and smart grid principles. Simulation software and hands-on workshops will be used to demonstrate engineering principles and system analysis.
Pre-requisites:	ECE 3070
Time and Place:	Tu, Th: 9:35 –10:55, VL C457
Instructor:	Prof. Santiago Grijalva http://faculty.ece.gatech.edu/santiago.grijalva
e-mail:	sgrijalva@ece.gatech.edu
Office Phone:	(404) 894-2974
Office Hours:	Tu, Th: 11-12.
Text:	Bergen, Power System Analysis, 2nd Ed., Prentice Hall, 2000 Instructor will provide additional notes for several topics.
Grading Policy:	Homework (30%) 2 Exams (20% each) Final Exam (30%)

Topics:

1. Basics of Large-Scale Electric Power Systems
2. Power System Transmission Modeling
3. Power System Generator Modeling
4. Review of Power Flow Computation
5. Unbalanced System Operation and Fault Analysis
6. Power System Protection
7. Power System Transient Stability
8. Smart Grids Objectives and Architecture