

A NEW COURSE

Offered by

Electrical Engineering and Computer Science Department

EECS 6980/8980 – Special Topics: Renewable Energy and Smart Grid

Credit hours: 3

Instructor: Dr. Lingfeng Wang [LFWang@neo.tamu.edu]

Fall 2009

[Mondays and Wednesdays 5:45 pm – 7:00 pm]

Electric power systems nowadays are undergoing significant changes worldwide in order to become cleaner, smarter, and more reliable. This course examines a broad spectrum of topics relevant to these changes primarily caused by renewable energy penetration and digitalized equipment. Emphasis will be placed on the smart grid, which demands extensive innovative technologies and strategies to implement. Key issues associated with smart grid will be covered, including distributed energy resources, integration of intermittent renewable generation, wind/solar power forecasting, micro-grids, probabilistic reliability evaluation, resource adequacy and transmission planning, energy storage, vehicle-to-grid, demand side management, advanced metering infrastructure, energy efficiency, and so forth. The course is useful to students who want to understand the ongoing efforts for power grid upgrades and renewable energy integration.

[Prerequisite: Graduate standing or Instructor's consent for non-EECS students]