FIU Engineering & Computing

Jan 06, 2025 - April 26, 2025

Thursday, 5:00 to 7:40 PM

Engineering Center 3930

EEL 4215 or permission of Instructor

Spring 2025

EEL 6273 - POWER SYSTEM STABILITY AND CONTROL

Course Objectives

- Introduce students to practical alternate Energy grid integration issues
- Introduce students to distributed generation technologies and their impacts on power system stability and control.
- Introduction to new technologies of Phasor measurements and smart grid integration issues
- Discuss methods for power system stability and control
- Identify component models for system stability and study transient stability issues and their solution techniques
- Formulate the transient stability for large-scale systems and study of power system control and multi-area control
- Involve students in practical power systems stability and control through the term project.

Course Topics

- Alternate Energy Grid Integration Issues
- Distributed Generation Technologies and the Economics of Distributed Resources in power system stability and control.
- Introduction to Phasor measurements and Smart Grid Integration Issues
- Formulation of the power system stability problem (Generator models for system stability, Transient Stability and Dynamic operation, Stability Criteria)
- Longer-term stability and static and dynamic security assessments
- Introduction to Power systems controls, multi-area control, and automatic generation control.
- Case studies and applications

Prof. Osama A. Mohammed

Faculty

mohammed@fiu.edu
305 348-3040

http://www.aln.fiu.edu/EEL6273