

(0401737) Power Systems Dynamics and Stability (3 credit hours)

The course is designed to give a review of power system stability concepts and classifications, study the power system component modeling for stability studies such as synchronous machines, transmission systems and loads, role and impact of excitation systems, turbine-governor dynamics, and power system stabilizers on system stability and dynamics , examines in detail the theoretical, computational aspects and analysis techniques of small-signal stability, transient stability, voltage stability, stability improving and mitigation techniques, dynamic characteristics and performance of power systems, stability studies and dynamic monitoring, dynamics and stability of modern and hybrid power systems, stability issues in interconnected power systems.