

COURSE TITLE	TE142408: Stability and Control of Electrical Power Systems Credits: 2 ELECTIVE COURSE
LEARNING OBJECTIVE	Studying and enhancing power system stability.
COMPETENCY	<ul style="list-style-type: none"> • Understanding the power systems stability analysis method. • Understanding power systems modeling for stability study. • Implementing the stability analysis for power system analysis. • Controller design to enhance power systems stability.
SUBJECTS	<ul style="list-style-type: none"> • Power System Stability: Introduction of definition and type of stability at Power Systems. • Transient Stability of Single Generator to Infinite Bus: Single machine stability principle, differential equation of generator power equilibrium, power curve, stability analysis using equal area criteria. • Multimachine Transient Stability: Multimachine stability principle, multi machine differential equation of power balancing, simplify multimachine to single machine ekivalen, multimachine power curve, multimachine stability analysis using equal area criteria. • Dynamic Stability: Dynamic Stability Principle, Dynamic Stability Equation, The Influence of Governor Model to Dynamic Stability, The Influence of excitation system model to Dynamic Stability, Power System Stabilizer Design to Enhance dynamic Stability.
MAIN REFERENCES	<ul style="list-style-type: none"> • P.M. Anderson, A.A. Fouad <u>Power System Control and Stability</u> • Prabha Kundur, <u>Power System Control and Stability</u> • Kimbark, <u>Power System Stability</u> • Glenn W. Stagg, Ahmed H. El-Abiad, <u>Computer Methods in Power System Analysis</u>, McGraw Hill
OPTIONAL REFERENCES	-
PREREQUISITE	Power System Analysis