

COURSE TITLE	TE142301: Power System Modelling Credits: 3 Semester: I
LEARNING OBJECTIVES	To give to the students to model the power system in dynamics approach to do syntheses, re-description, and to explore logically the idea in power system control.
COMPETENCY	<ul style="list-style-type: none"> • The student can do the description for the power system components. • The student can do the exploring arguments and develop the idea to design the controllers in the power system.
SUBJECTS	<ul style="list-style-type: none"> • Introduction • Matrices • State Space • Controlability, stability, and observability • The Basics for Stability • Singlemachine infinite Bus (SMIB) • SMIB Parameter • Excitation Control • Power System Stabilizer • Load Frequency Control • Reactive Power Control • Multimachine system
MAIN REFERENCES	<ul style="list-style-type: none"> • Imam Robandi, <u>Modern Power Control: Design and Solution</u>, 2008. • P.M. Anderson and A.A. Fouad, <u>Power System Control and Stability</u>, The Iowa State University Press, 1977.
OPTIONAL REFERENCES	<ul style="list-style-type: none"> • Prabha Kundur, <u>Power System Stability and Control</u>, McGraw-Hill, Inc., 1994. • M.A. Pai, <u>Power System Stability</u>, North-Holland Publishing Company, 1981. • K.R. Padiyar, <u>Power System Dynamics</u>, John Wiley & Sons Ltd, Interlaine Publishing Ltd. 1996. • Marija Ilic, et.al., <u>Dynamics and Control of Large Electric Power Systems</u>, John Wiley & Sons, Inc., 2000. • Agelidis et.al, <u>Electronic Control in Electrical Power Systems (Power Engineering Series)</u>, IEEE, 2002.
PREREQUISITE	-