



University of Tehran
School of Electrical and Computer Engineering

Course:	8101683 – Power System Dynamics II		
Course type:	elective	EE*	Credit: 3
Level:	Graduate		
Co-requisite(s):			
Prerequisite(s):	Power System Dynamics I		
Prerequisite by topic:			
Textbook(s):	<p>[1] P. Kundur, Power System Stability and Control, McGraw-Hill Inc, 1994.</p> <p>[2] K. R. Padiyar, Power System Dynamics: Stability and Control, Anshan, 2004.</p> <p>[3] J. Machowski, J. Bialek and J. Bumby, Power System Dynamics: Stability and Control, 2nd ed., Wiley, 2008.</p> <p>[4] P. W. Sauer and M. A. Pai, Power System Dynamics and Stability, Stipes Publishing Co., 2007.</p>		
Coordinator:	Hamid Lesani		
Goals:	Educating transient, voltage and frequency stability in power systems and stabilizing methods and being familiar with new methods of harmonic stabilizing.		
Outcome:	Be able to <ol style="list-style-type: none"> 1. Analyze different kinds of stability in power systems 2. Simulating multi machines model and implementing harmony and stabilizing in power system. 		
Topics:	<ol style="list-style-type: none"> 1- Analyzing different kinds of stability in power systems 2- Comprehensive definition of stability in power systems 3- Analyzing different kinds of stability 4- Small signal stabilizing (Dynamic stability) 5- Transient stability and improving methods 6- Voltage stability and improving methods 7- Frequency stability and improving methods 8- Linear optimal stabilizers and modern stabilizers 9- Long term stability 10- Power system dynamic parameters identification 11- Dynamic equivalent of power systems. 		
Computer usage:	MATLAB DIGSilent		
Assignments:			
Projects:	1 Project		
Grading:	<ul style="list-style-type: none"> • Final exam 70% • Project 30% 		

Further readings:	[1]
Prepared by:	Hamid Lesani
Date:	Sept. 14, 2017

*EE: Electrical Engineering