University of Tehran
School of Electrical and Computer Engineering

Course:	**8101683 – Power System Restructuring (1)**		
Course type:	Elective	EE*	Credit: 3
Level:	Graduate		
Co-requisite(s):			
Prerequisite(s):	Power System Analysis I and II		
Prerequisite by topic:	Power Flow Studies and Optimization Theories		
Textbook(s):	[1] K. Bhattacharya, M.H.J. Bollenand J.E. Daalder, "**Operation of restructured power systems**", KluwerAcademic Publishers, 2001 [2] M. Shahidehpour, H. Yaminand Z. Li, "**Market operations in electric power systems**", Wiley Interscience, 2002 [3] D. S. Kirschen and G. Strbac, "**Fundamentals of power system economics**", John Wiley & Sons, 2004 [4] J. Wood and B. F. Wollenberg, "**Power generation, operation and control**", Wiley-Interscience, 2nd Edition, 1996		
Coordinator:	Farrokh Aminifar		
Goals:	To be familiar with power system economic operation in competitive environment and transmission pricing in restructured power systems.		
Outcome:	Be able to 1. Analyze power system economic and optimization 2. Determine the output powers of generating units in a restructured power system 3. Conduct transmission pricing 4. Figure out the dynamics of all types of electricity markets		
Topics:	1- Introduction: deregulation and economic fundamentals 2- Power system economic operation overview 3- Power system operation in competitive environment 4- Transmission open access and pricing 5- Ancillary service management and pricing		
Computer usage:	MATLAB and GAMS		
Assignments:	4 HWs		
Projects:	1 Project		
Grading:	• Final exam 60% • Homeworks 20% • Project 20%		
Further readings:	[1] M. Shahidehpour and M. Alomoush, "Restructured Electrical Power Systems Operation Trading, and Volatility" , Marcel Dekker, Inc. 2001		

Prepared by:	Farrokh Aminifar
Date:	Sept. 14, 2017

*EE: Electrical Engineering CE: Computer Engineering IT: Information Technology