University of Tehran
School of Electrical and Computer Engineering

Course:	**8101360 – Electrical Circuits II**		
Course type:	Major	EE*	Credit: 3
Level:	Undergraduate		
Co-requisite(s):			
Prerequisite(s):	Electrical Circuit I		
Prerequisite by topic:	Fundamentals of electromagnetics and mathematics		
Textbook(s):	[1] C.A. Desoer, E.H. Kuh (Translated & Completed by P. Jabehdar Maralani), *Basic Circuit Theory, Vol. II*, University of Tehran Press, 2014 (in Persian).		
Coordinator:			
Goals:	Familiar to systematic approach f network modeling. Analysis of electric network in frequency domain.		
Outcome:	Upon successful completion of the course, students will be able 1. To describe and use systematic methods for modeling of electric networks 2. To use mathematical tools for solving electric circuit problems 3. To analyze frequency domain of electric circuits.		
Topics:	1. Network graph and Tellegan Theorem 2. Nodal and mesh analysis 3. Loop and cut-set analysis 4. State equations 5. Modified nodal analysis 6. Laplace transform 7. Natural frequencies 8. Network functions 9. Network theorems 10. Sensitivity 11. Resistive networks 12. Energy and Passive		
Computer usage:	Pspice		

Assignments:	12
Projects:	
Grading:	Assignments: 10% Quiz: 10% Midterm exams: 40% Final exam: 40%
Further readings:	
Prepared by:	Amir Abbas Shayegani Akmal
Date:	September 17, 2017

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