



University of Tehran
School of Electrical and Computer Engineering

Course	Electrical Workshop		
Course type, level, credit	Required	Undergraduate	1 units
Field, Major	Electrical Engineering	All Majors	
Co-requisite(s)	-		
Prerequisite(s)	-		
Prerequisite by topic	-		
Goals	Introducing principles of electricity including electrical safety, electrical and electronic circuits, and simple control system are the aim of this course.		
Outcome	<p>Students who successfully passed the course would learn the following issues:</p> <ul style="list-style-type: none"> - Assembling electrical circuits and panel wiring, and their trouble-shooting. - Understanding electrical safety issues to be familiar with its dangers and coping strategies - Getting familiar with common used equipment, for example, electrical meters, signal generators, and oscilloscope 		
Topics	<ul style="list-style-type: none"> - Electrical safety - Building electric wiring and system - Practical utilizing common used measuring equipment and signal generator - Implementation of simple electrical and electronic circuit - Design and implementation of contactor-based control circuits <ul style="list-style-type: none"> - Control of three phase motor rotation - Three phase motor starting current reduction using Start-Delta method - Design and implementation of PLC-based control circuits 		
Required software	- LOGO Soft Comfort		
Assignments	2 homework		
Projects			
Grading	Influential attendance: 10 % Class activities 50% Final exam: 40 %		

Textbook(s)	[1] Mahdi Davarpanah, Electrical safety presentation file [2] Mohammad Ramezani, Electrical workshop instruction
Further readings	