



University of Tehran
School of Electrical and Computer Engineering

Course	Relay Lab		
Course type, level, credit	Required	Undergraduate	1 units
Field, Major	Electrical Engineering	All Majors	
Co-requisite(s)	- High voltage substation design		
Prerequisite(s)	- Relay and protection - Power system analysis II		
Prerequisite by topic	- Load flow calculation - Short circuit computation - Overcurrent relays coordination - Current and voltage transformers		
Goals	In this course, coordination of power overcurrent relays in a power system based on simulation is aimed. In addition, commissioning tests of instrument transformers are investigated.		
Outcome	Students who successfully passed the course will be able to: - Coordinate overcurrent (OC) relays based on simulation under DIgSILENT software environment - Change setting parameters and configuration of an industrial OC relay, and load its event recorder and fault recorder - Perform routine function tests of OC relays - Perform commissioning and field tests of instrument transformers		
Topics	- Simulation of power system and the corresponding protective relays using DIgSILENT software - OC relay coordination based on DIgSILENT simulation software - Introduction an industrial OC Digital relay - Capabilities - Hardware parts - Setting and configuration - Fault and event recorder - Performing instrument transformers field tests		
Required software	- DIgSILENT		
Assignments			
Projects	1 project		
Grading	Influential attendance:	10 %	
	Project and class activities	40%	
	Final exam:	50 %	

Textbook(s)	[1] Hossein Golzar, Overcurrent relay coordination based on DIGSILENT simulation software
Further readings	