

Department of Electrical Engineering			
Electrical Installation and Safety Systems (63426)			
Total Credits	3		
major compulsory			
Prerequisites	P1 : Electrical Machines (63391) OR Electrical Machines II (63324)		
Course Contents			
Electrical Load estimations for lighting, sockets, elevators, conditioning and motors, power factor improvement, electrical lighting systems and ways to calculate illumination. Earthing systems components and calculations. Design and calculations of the main and auxiliary distribution boards. L.V systems (Alarm ,TV ,network, Telephone). Electrical system tests. AutoCAD and Dilaux computer aided software for electrical designs and drawings.			
Intended Learning Outcomes (ILO's)		Student Outcomes (SO's)	Contribution
1	Design the As built plans for the light , power and the earthing system for any construction using AutoCAD and Dialux softwares and be able to read and understand an existing plans. Power factor improvement and UPS systems.	C	60 %
2	To Design the As built Plans for Low Voltage needed from Electrical Engineering and be able to read all the plans (Fire alarm installation plans , Telephone installation planes, Computer installation plans, Satellite installation plans.	J	25 %
3	To understands all the administration duties needed form the engineer in the advising process	F	10 %
4	An ability to communicate effectively	G	5 %
Textbook and/ or References			
1- Electrical Installation Designs, 2nd edition . Bill Atkinson 2- Residential Service Handbook, Clark Public Utility (2010) 3- Electrical Installation, Dr Jilani, 1st edition			
Assessment Criteria		Percent (%)	
Mid. Term Exam		20 %	
Quizzes		10 %	
Projects		30 %	
Final Exam		40 %	
Course Plan			
Week	Topic		
1,2	Electrical Load estimations for lighting, sockets, elevators, conditioning and motors,		
3	power factor improvement,		
4,5	electrical lighting systems and ways to calculate illumination Midterm Exam I		
6,7	Earthing systems components and calculations		
8,9	Design and calculations of the main and auxiliary distribution boards -PROJECT		
10,11	L.V systems (Alarm ,TV ,network, Telephone)		
12,13	Electrical system tests		
14	BMS and Revision		
15	Final Exam		