

Department of Chemical Engineering			
Electrical Power Engineering (64395)			
Total Credits	3		
major compulsory			
Prerequisites	P1 : Electrical Machines (63391)		
Course Contents			
Importance of Electrical Energy. Generating stations. Variable load on power stations. Power factor improvement. Performance of transmission lines with different lengths Power systems modeling. Load flow analysis and control. Fault analysis.			
Intended Learning Outcomes (ILO's)		Student Outcomes (SO's)	Contribution
1	The ability to Understand the importance of electrical energy, generating stations and variable load on power stations.	A	30 %
2	The ability to Learn the performance of transmission lines with different lengths and power systems modeling.	C	35 %
3	The ability to study Load flow analysis and control and power factor improvement equipment and calculations.	B	25 %
4	The ability to understand and calculate faults.	E	10 %
Textbook and/ or References			
Principles of power system. V.K.Mehta, and Rohit Mehta. S.CHAND &COMPANY LTD.2005. Power system analysis: John J Grainger and William D. Stevenson, J. R. McGraw-Hill, 1994.			
Assessment Criteria		Percent (%)	
First Exam		25 %	
Second Exam		25 %	
Final Exam		50 %	
Course Plan			
Week	Topic		
1	Importance of Electrical Energy.		
2-3	Generating stations.		
4	Variable load on power stations.		
5	Power factor improvement equipment and calculations.		
6	MIDTERM EXAM I		
7-8	Performance of transmission lines with different lengths.		
9-10	Power systems modeling and calculations.		
11-12	Load flow analysis and control. Voltage control and power loss reduction.		
13	MIDTERM EXAM II		
14-15	Fault analysis.		