

Branch Name:	Electrical Engineering
Program Code:	ET109
Course Name:	Electrical Power System-II Practical
Course Code:	2ET1090601P
Pre-requisite Course:	Electrical Power System-I

Course Objectives:

1. In this subject student will learn the basic principles and operation of distribution systems.
2. The major objective of the subject is to Understand the requirements of substation equipment and earthing.
3. Understand and analyze the behavior of the symmetrical and unsymmetrical fault conditions.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								Total (Marks)
					Theory (Marks)				Practical (Marks)				
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

Course Contents:

Sr. No	Detail of Practical	Contact Hours
1	Simulation and analysis of feeder fed at one end.	04
2	Simulation and analysis of feeder fed at both ends.	04
3	Simulation and analysis of feeder fed at center.	02
4	Simulation and analysis of ring main system.	02
5	To determine the location of underground cable fault using loop test.	04
6	To write computer program for converting given system in Per Unit system.	02
7	To analyze L-L-L-G fault for given motor generator system.	04
8	To write computer program for obtaining symmetrical components for a given set of unbalanced phasors.	02
9	To analyze L-G fault for small system using interconnection of sequence networks.	02
10	To analyze L-L-G and L-L fault for small system using interconnection of sequence networks.	04

Reference Books:

1. D. Das, "Electrical Power System", New Age International Publishers, 3rd edition-2014.
2. B.R. Gupta, "Power System Analysis and Design", S. Chand Publication, 2018.
3. C.L. Wadhwa, "Electric Power System", New Age International Ltd, 2009.
4. W. D. Stevenson, "Element of Power System Analysis", McGraw Hil, 4th edition-2013.
5. J. B. Gupta, "Electrical Power", S. K. Kataria Publications, 15th edition, 2018.

ICT/MOOCs

1. <https://nptel.ac.in/courses/108/102/108102047/>
2. <https://nptel.ac.in/courses/108/104/108104051/>
3. <https://nptel.ac.in/courses/108/105/108105104/>
4. <https://nptel.ac.in/courses/117/105/117105140/>

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Understand the basic principles and operation of distribution systems.	2 Understanding
CLO2	Analyze the performance of the underground cable	4 Analyzing
CLO3	Understand the requirements of substation equipment and earthing.	2 Understanding
CLO4	Apply the per unit calculation to different power system models.	3 Applying
CLO5	Understand and analyze the behavior of the symmetrical and unsymmetrical fault conditions in electrical power system.	2 Understanding 4 Analyzing

Mapping of CLOs with POs & PSOs:

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes(PSOs)			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CLO1	H	L	L	L	L		L	L	M			L	L	L		L
CLO2	H	H	M	L	L		L		M		L	L	H	L		
CLO3	H	L	L	L	L		L		M	L	L	L	L	L	M	M
CLO4	H	H	H	M	L						L	L	H	L		L
CLO5	H	H	M	M	H						L	L	H	L		H

H: High, M: Medium, L: Low