
Program	Engineering
Specialization	Electrical Power Systems
Course Number	020303112
Course Title	Electrical power transmission and distribution networks lab
Credit Hours	1
Theoretical Hours	0
Practical Hours	3

□ **Brief Course Description:**

This Course covers different experiments on transmission line model; open & short circuit tests, short & medium lines, power losses, voltage drop, loading of transmission line.

□ **Course Objectives:**

The student should be able to ;

1. Study & explain open & short circuit tests of transmission lines.
2. Determine transmission line parameters
3. Measure & calculate power losses & voltage drop of the line.
4. Explain balanced & unbalanced loading of the line.

□ Detailed Course Description:

Lab Number	Content	Time Needed
1.	Experiments of open – circuit on three – phase transmission line.	
2.	Experiments of short- circuit on three- phase transmission line.	
3	Experiments of voltage drop on single & three- phase transmission lines.	
4	Experiments of short transmission line.	
5	Experiments on medium transmission line (π and T forms) .	
6	Experiments of power losses on single & three – phase transmission lines.	
7	Experiments of loading transmission by ; different types of loads (R,L,C), balanced & unbalanced loads.	
8	Experiment for comparison between DC & AC transmission lines.	
9	Experiment of asymmetrical faults of transmission line.	

□ **Evaluation Strategies:**

		Percentage	Date
1. Exams	reports	30%	
	Midterm Exam	20%	
	Final Exam	50%	

□ **Teaching Methodology:**

1. Laboratory

□ **Textbook:**

The manual of transmission line model.

□ **References:**

Electrical power transmission and distribution; M. Faulkenberry, 1996, ISBN 0132499479 .
