

LESSON PLAN

PSS LAB

4TH Semester Diploma in Electrical Engineering (SCTEVT Odisha)



Name of the Faculty-

SIBANANDA PATHY

DEPARTMENT OF ELECTRICAL ENGINEERING

VISION:

To produce Electrical Engineer professionals who can contribute for socio-economic and technological development to meet global needs.

MISSION:

M1 - To strengthen academic infrastructure leading to quality professional by using modern technical tools and technologies.

M2 - To impart innovative knowledge among the students and make more industry-institution programs to make them successful professionals for serving the society.

M3 - To provide a learning environment to improve problem solving abilities, leadership abilities, ethical responsibilities and lifelong learning.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: Apply electrical engineering knowledge and practical skills to solve well-defined engineering problems using modern tools and techniques.

PEO2: Perform effectively in industry and society as competent junior engineer, supervisors, or entrepreneurs with ethical and sustainable engineering practices.

PEO3: Demonstrate teamwork, communication, leadership, and project management skills in professional engineering activities.

PEO4: Engage in lifelong learning and adapt to emerging technologies for career growth and higher education.

PROGRAM SPECIFIC OUTCOMES

The electrical diploma engineers will be able to:

PSO1:-Apply the fundamentals of mathematics, science and engineering knowledge to identify, formulate, design and investigate engineering problems of electric circuits, analog and digital electronics, control system, electrical machines and power system.

PSO2:- Apply the appropriate techniques and modern engineering hardware and software tools in electrical engineering to engage in life-long learning and to successfully adapt in multidisciplinary environments.

PSO3:-Work professionally in power systems engineering, Electrical machinery and electrical circuit.

Class No.	Experiment No.	Topics / Experiment to be Covered
1	---	Introduction to Power System Simulation Laboratory, Laboratory Rules, Safety Precautions, MATLAB/Simulink Environment and Syllabus Discussion
2	1	Study the Power System Blocks in MATLAB/Simulink
3	2	Design Short Transmission Line and Long Transmission Line using MATLAB
4	3	Study and Calculate the Transmission Line Parameters
5	4	Study of Corona Loss in Power Distribution System
6	5	Study of Proximity Effect and Skin Effect in Transmission Lines
7	6	Find the ABCD Parameters of a Transmission Line Model
8	7	Study the Performance of a Transmission Line under No-load Condition
9	7	Study the Performance of a Transmission Line under Load at Different Power Factors
10	8	Observe the Ferranti Effect in a Transmission Line Model
11	9	Study the Performance Characteristics of a Typical DC Distribution System (Radial Configuration)
12	9	Study the Performance Characteristics of a Typical DC Distribution System (Ring Main Configuration)
13	10	Study the Mechanical Design of Transmission Line
14	---	Repeat Experiment, Observation and Record Verification
15	---	Viva-Voce, Practical Demonstration and End Semester Practical Preparation

Faculty Signature

HOD Signature