

<b>DISCIPLINE:</b> Electrical & Electronics Engg.	<b>SEMESTER: 4<sup>th</sup></b> Semester	<b>NAME OF THE TEACHING FACULTY:</b> Majji Lalitha / Sriya panda
<b>SUBJECT:</b> PSS Lab(PR3)	<b>NO OF DAYS/PER WEEK CLASSES ALLOTTED:</b> 4	<b>SEMESTER FROM DATE:</b> 22.12.2025 TO 18.04.2026 <b>NO OF WEEKS:</b> 15

Week	Class Day	PRACTICAL Topics
1st	1st	Introduction to power system simulation software (MATLAB/ETAP/MiPower).
	2nd	-----do-----
2nd	1st	Load flow analysis using Gauss-Seidel method.
	2nd	-----do-----
3rd	1st	Load flow analysis using Newton-Raphson method
	2nd	-----do-----
4 <sup>th</sup>	1 <sup>ST</sup>	Short circuit analysis for balanced and unbalanced faults.
	2 <sup>ND</sup>	-----do-----
5 <sup>th</sup>	1 <sup>ST</sup>	Transient stability analysis of a single-machine infinite bus (SMIB) system.
	2 <sup>ND</sup>	-----do-----
6 <sup>th</sup>	1 <sup>ST</sup>	Economic load dispatch using simulation software.
	2 <sup>ND</sup>	-----do-----
7 <sup>th</sup>	1 <sup>ST</sup>	Study of voltage stability and reactive power compensation.
	2 <sup>ND</sup>	-----do-----
8 <sup>th</sup>	1 <sup>ST</sup>	Simulation of automatic generation control (AGC) in power systems.
	2 <sup>ND</sup>	-----do-----
9 <sup>th</sup>	1 <sup>ST</sup>	Load frequency control of an isolated and interconnected power system.
	2 <sup>ND</sup>	-----do-----
10 <sup>th</sup>	1 <sup>ST</sup>	Harmonic analysis in power systems using FFT-based tools.
	2 <sup>ND</sup>	-----do-----
11 <sup>th</sup>	1 <sup>ST</sup>	Power factor correction and capacitor bank optimization using simulation tools
	2 <sup>ND</sup>	-----do-----
12 <sup>th</sup>	1 <sup>ST</sup>	Repeat Class
	2 <sup>ND</sup>	Repeat Class
13 <sup>th</sup>	1st	Repeat Class
	2 <sup>nd</sup>	Repeat Class
14 <sup>th</sup>	1 <sup>ST</sup>	Repeat Class
	2 <sup>ND</sup>	Repeat Class
15 <sup>th</sup>	1st	Repeat Class
	2nd	Repeat Class

Majji Lalitha  
Lecturer  
22.12.25

Dr. Sriya  
HOD 22.12.25

Sriya  
Principal