

**ADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UGC - AUTONOMOUS)**

M. Tech I Year - II SEMESTER (EPS)

**L C
3 2**

**POWER SYSTEM SIMULATION LAB
(14EPS12P02)**

Course Objectives:-

1. To formulate Bus admittance & impedance matrices for a power system network
2. To analyze different load flow algorithms
3. To investigate the response of a two area power system for tie line deviations

Course Outcomes:-

After Completion of this course students will be able to

1. Analyze the formation of bus matrices using MATLAB.
2. Investigate load flow analyses through different methods using MATLAB
3. Realize the transmission line models, economic load dispatch and Ferranti effect using MATLAB
4. Realize the stability analysis using SIMULINK
5. Investigate the step response of two area system with & without integral controller using SIMULINKS

List of Experiments:-

1. Y - Bus Formation Using MATLAB
2. Illustration Transmission line models using MATLAB.
3. Gauss – Seidel Load Flow Analysis using MATLAB
4. Z-bus formation Using MATLAB
5. Fast Decoupled Load Flow Analysis using MATLAB
6. Point by Point Method using MATLAB
7. Ferranti Effect of Long Transmission Lines.
8. Step Response of Two Area System with Integral Control and Estimation of Tie Line Power Deviation using SIMULINK
9. Step Response of Two Area System with Integral Control and Estimation of Tie Line Frequency Deviation using SIMULINK
10. Load Flow Analysis by Newton Raphson Method
11. Transient Stability Analysis
12. Economic Load Dispatch Analysis