

INTRODUCTION

- Introduction to Power Systems
- Review of Single-phase & Three-phase Circuits
 - Per-unit System
 - Impedance Diagram
 - Power Transfer
 - Load Models

SYNCHRONOUS GENERATORS

- Construction/Types
- Synchronous Reactance
- Equivalent Circuits
- Voltage Regulation
- Excitation Control
- Governor Control
- Parallel Operation
- Applications

POWER TRANSMISSION LINES

- Construction
- Properties of R, L & C
- Equivalent Circuits

FAULTS in POWER SYSTEMS

- Symmetrical Faults
- Z_{Bus} Matrix and Thevenin's Methods

POWER SYSTEMS OPERATION

- Reactive Power & Voltage Control
 - Methods of Voltage Control
 - Shunt Compensation