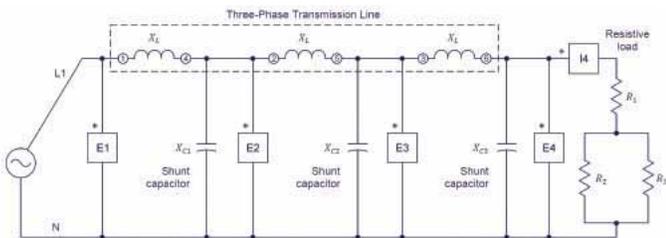


AC Transmission Line

Course 86365

The AC Transmission Line course familiarizes students with the fundamentals of three-phase ac power transmission lines. Students first examine the voltage regulation characteristics of ac power transmission lines, then learn how to achieve voltage compensation using shunt capacitors. The course then explores the power transmission capacity of ac transmission lines and demonstrates how to apply voltage compensation to long ac transmission lines. The course concludes by demonstrating control of the amount of active and reactive power flowing through ac transmission lines used in an interconnected power network.



Topic Coverage:

- » Study equivalent circuits and characteristics of ac transmission lines for resistive, inductive, and capacitive loads.
- » Become familiar with the voltage compensation of ac transmission lines using shunt capacitors and study the effect of load loss.
- » Calculate the maximal amount of active power that can be transferred by a voltage-compensated ac transmission line.
- » Learn how to increase active power transmission by adding shunt-capacitor substations to long ac transmission lines.
- » Study how to control the flow of active and reactive power between interconnected power networks.

- » Bonus content: using the equipment in this course, the Three-Phase AC Power Circuits and Three-Phase Transformer Banks courses can also be completed.

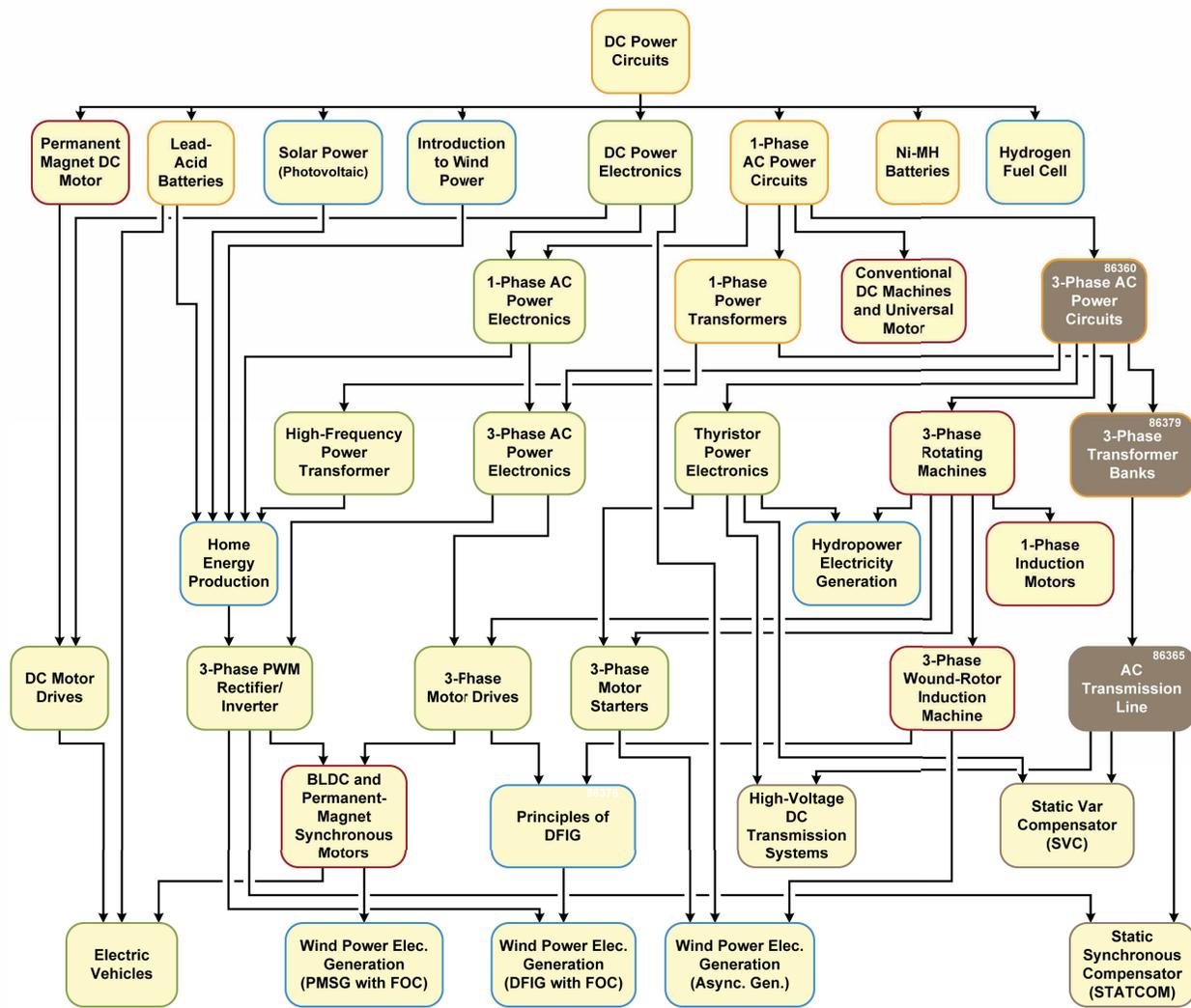
Features and Benefits:

- » Realistic three-phase transmission line emulation.
- » Reactive power, active power, phase shift and voltage control.
- » Voltage compensation analysis using a three-phase phasor analyzer.



Lab-Volt[®]

Lab-Volt Electric Power Technology Training Program



Equipment

Qty	Model	Description	Qty	Model	Description
1	8131	Three-Module Workstation	1	8951-L	Connection Leads
1	8311	Resistive Load	1	9063-B	Data Acquisition and Control Interface
1	8321	Inductive Load	1	30004-2	24 V AC Power Supply
1	8329	Three-Phase Transmission Line	1	86365/-1	Student Manual/Instructor Guide
1	8331	Capacitive Load	Bonus content:		
1	8348-4	Three-Phase Transformer Bank	1	86360/-1	Student Manual/Instructor Guide
1	8349	Three-Phase Regulating Autotransformer	1	86379/-1	Student Manual/Instructor Guide
1	8823	Three-Phase Power Supply			

Lab-Volt reserves the right to make product improvements at any time and without notice. **Note:** A computer is required to perform the exercises.

