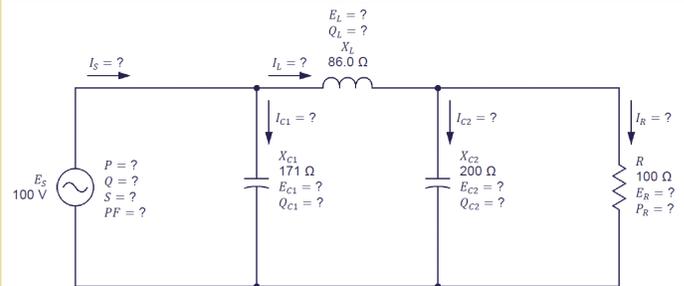
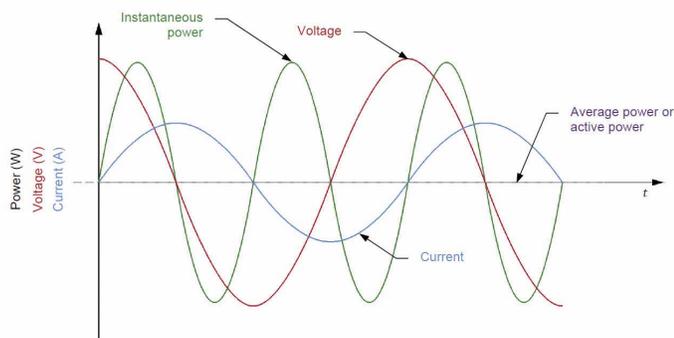


Single-Phase AC Power Circuits

Course 86358

The Single-Phase AC Power Circuits course first introduces students to the fundamentals of alternating current (ac) such as the sine wave, period and frequency, phase angle and phase shift, instantaneous and average power, etc. Students then explore the inductor and capacitor. The course continues with more advanced topics, such as impedance, active power, reactive power, apparent power, and power triangle. The course concludes by teaching the student how to solve ac power circuits using the impedance calculation method or the power triangle method.



Topic Coverage:

- » Become familiar with alternating current (ac).
- » Learn to define, measure, and calculate various parameters of voltage and current sine waves.
- » Measure the average power dissipated in a resistive load connected to an ac power source.
- » Examine inductors and capacitors and learn how to calculate the inductive reactance and capacitive reactance.
- » Analyze the relationship between the source frequency and the reactance of an inductor or a capacitor.
- » Define active, reactive, and apparent power, and learn to calculate their values.

- » Solve simple to complex ac circuits using the circuit impedance calculation method and the power triangle method.

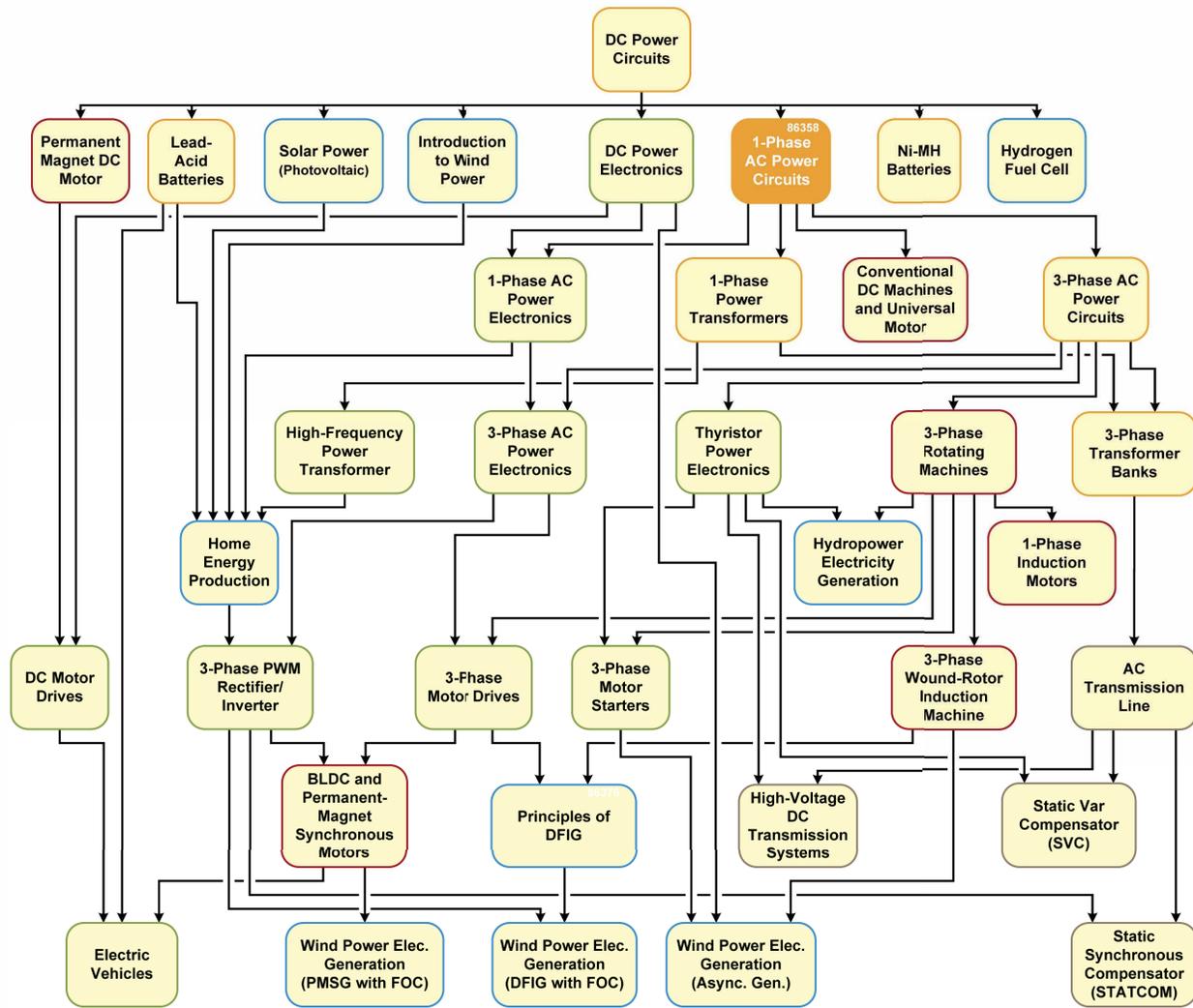
Features and Benefits:

- » Low-cost solution.
- » Easy-to-understand calculation methods to solve ac power circuits.



Lab-Volt®

Lab-Volt Electric Power Technology Training Program



Equipment

Qty	Model	Description	Qty	Model	Description
1	8131	Three-Module Workstation	1	8960-C	Four-Quadrant Dynamometer/Power Supply
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	8331	Capacitive Load	1	86358/-1	Student Manual/Instructor Guide
1	8951-L	Connection Leads			

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

