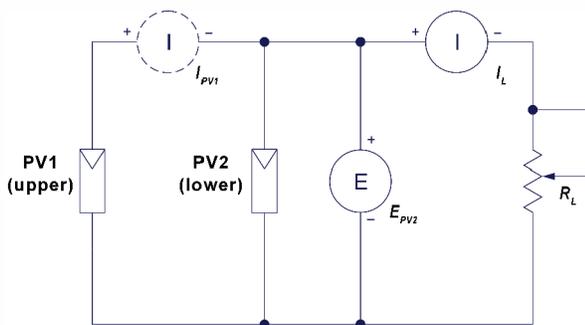


Solar Power (Photovoltaic)

Course 86352

The Solar Power (Photovoltaic) course covers the production of electricity using photovoltaic (PV) solar panels. The course begins by introducing the diode, the basic semiconductor component in PV solar panels. Students then learn how a solar panel produces electricity from solar power, as well as how to store this electric energy in batteries to ensure electric power is available during cloudy periods. This is followed by learning to connect PV panels in series and in parallel to increase the voltage and current produced, respectively. Finally, students learn how to set the orientation of solar panels so the maximum amount of energy is produced.



Topic Coverage:

- » Become familiar with the operation of a diode and a silicon photovoltaic (PV) cell.
- » Learn about the characteristic E-I curve of a PV cell.
- » Observe the effect of irradiance on the power produced by solar panels.
- » Study the effect of temperature on solar panel performance.
- » Learn how to store energy produced by solar panels using lead-acid batteries.
- » Study the effect of shading on solar panel operation.
- » Understand how the solar illumination at any location on Earth varies over the course of a year.
- » Maximize annual energy production of outdoor fixed PV panels by learning how to correctly set their orientation.

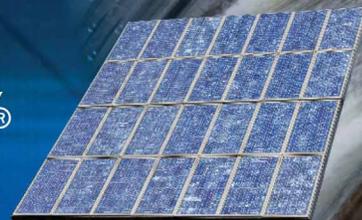
- » Study the effect of insolation on the performance of solar panels.

Features and Benefits:

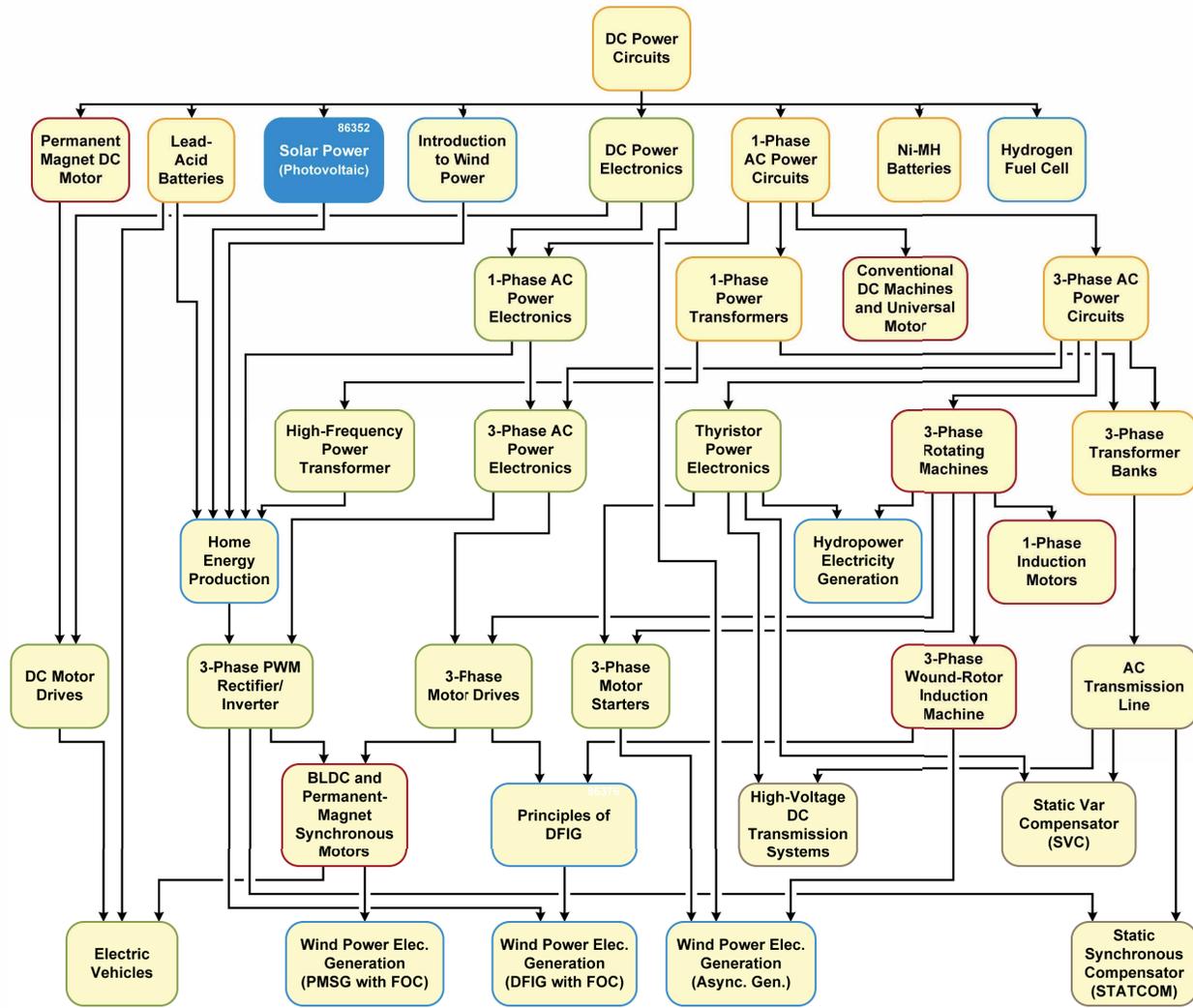
- » Use full power of a PV panel in an indoor environment.
- » Parallel and series connections of PV panels.



Lab-Volt®



Lab-Volt Electric Power Technology Training Program



Equipment

Qty	Model	Description	Qty	Model	Description
1	8131	Three-Module Workstation	1	8806	Monocrystalline Silicon Solar Panel
1	8801	Lead-Acid Batteries	1	86352/1	Student Manual/Instructor Guide
1	8805	Solar Panel Test Bench			

Lab-Volt reserves the right to make product improvements at any time and without notice.

Lab-Volt[®]

USA (732) 938-2000 / 800-LAB-VOLT, FAX: (732) 774-8573, EMAIL: us@labvolt.com
 CANADA (418) 849-1000 / 800-LAB-VOLT, FAX: (418) 849-1666, EMAIL: ca@labvolt.ca

89066-00 Rev. B