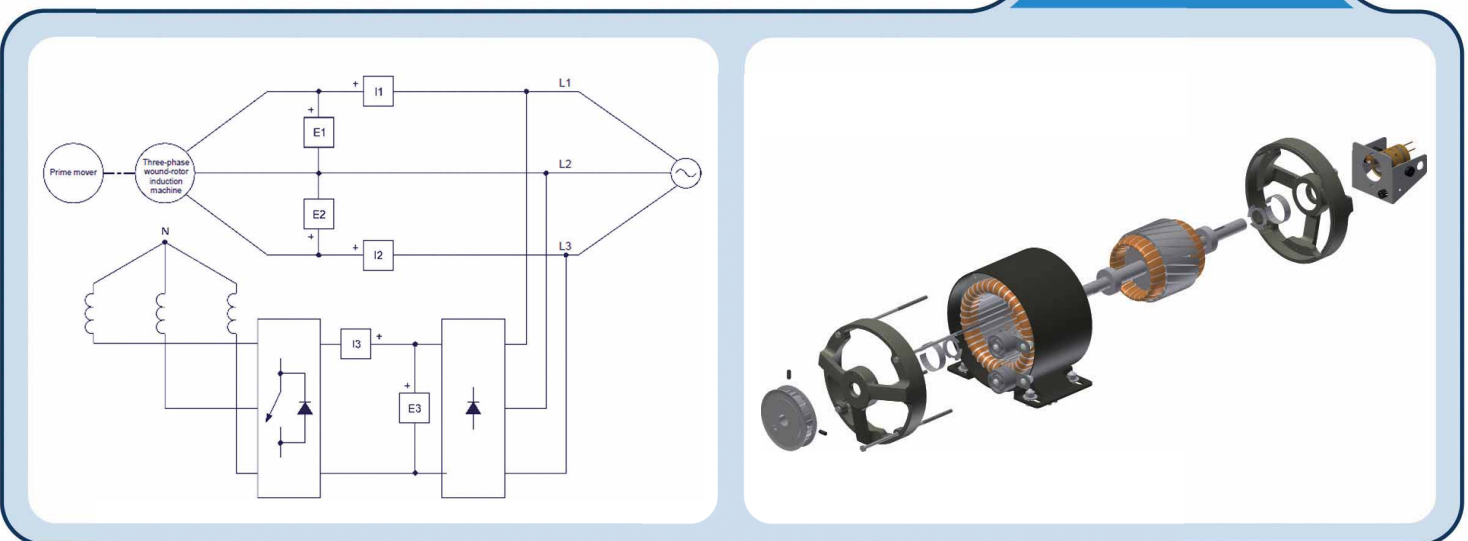


Principles of Doubly-Fed Induction Generators

Course 86376

The Principles of Doubly-Fed Induction Generators (DFIG) course deals with the large-scale production of electricity from wind power using a doubly-fed induction generator. This technology allows the generator to operate at different rotation speeds while keeping the frequency of the generated voltage and current fixed; a key feature when the generator is used in a wind turbine.



Topic Coverage:

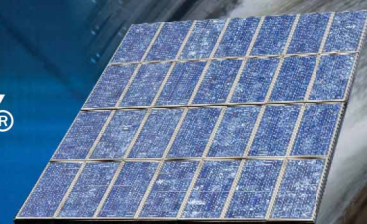
- » Study a three-phase wound-rotor induction machine operating as a synchronous machine.
- » Create a variable-speed synchronous motor using a doubly-fed induction machine.
- » Create a variable-speed synchronous generator using a doubly-fed induction machine.
- » Learn how to produce fixed-frequency voltage using a doubly-fed induction generator.
- » Discover applications of DFIG in wind turbines.
- » Bonus content: using the equipment in this course, the Three-Phase Transformer Banks and Three-Phase Wound-Rotor Induction Machine courses can also be completed.

Features and Benefits:

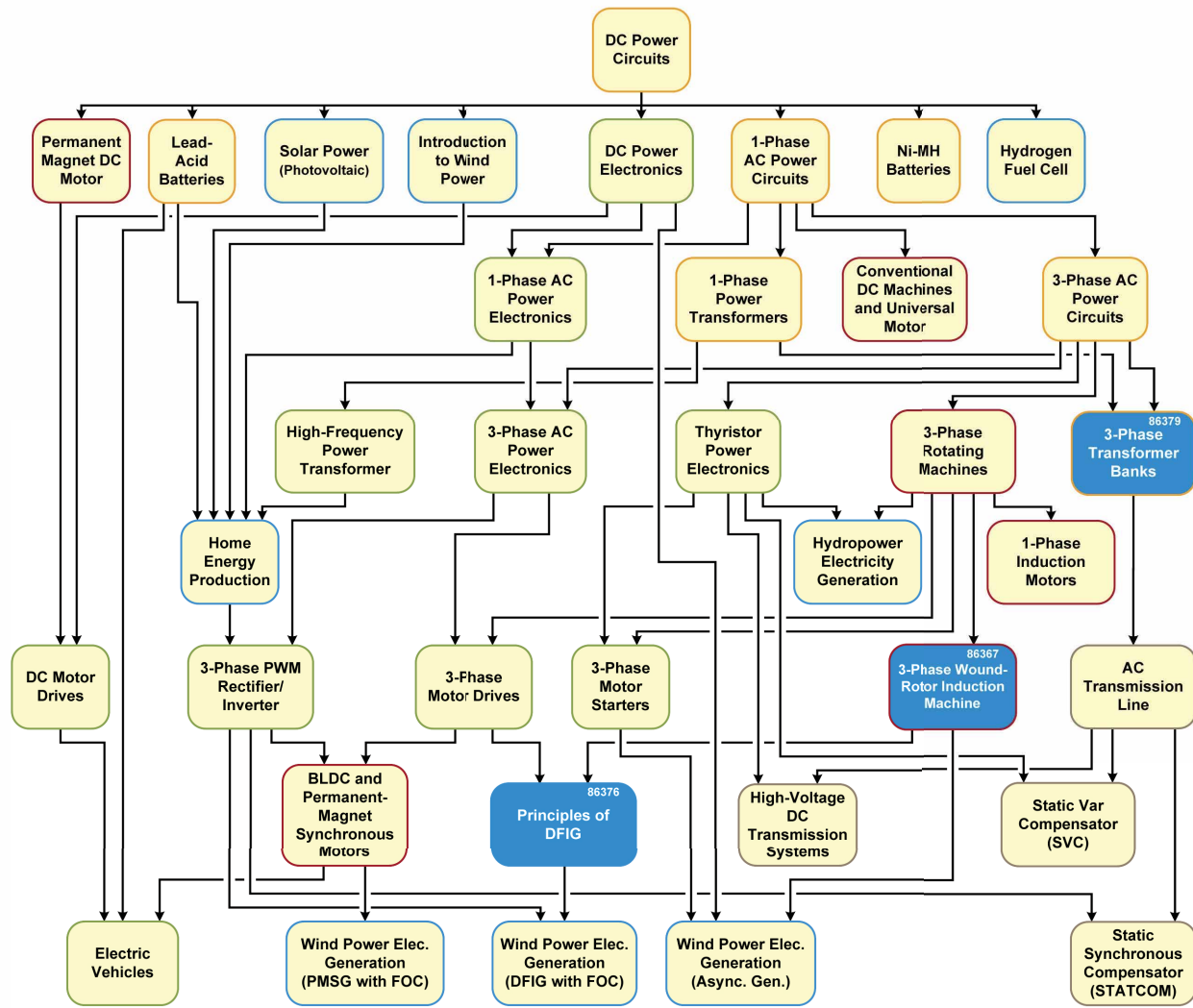
- » Easily demystify complex principles of DFIG.
- » Manual control of the rotor voltage and frequency allows the student to fully understand the behavior of a DFIG.
- » Three-Phase wound-rotor induction machine with precise overvoltage protection.



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Lab-Volt Electric Power Technology Training Program



Equipment

Qty	Model	Description	Qty	Model	Description
1	8134-2	Workstation	1	8951-L	Connection Leads
1	8231-B	Three-Phase Wound Rotor Induction Motor	1	8960-C	Four-Quadrant Dynamometer/Power Supply
1	8311	Resistive Load	1	9063-C	Data Acquisition and Control Interface
1	8348-4	Three-Phase Transformer Bank	1	30004-2	24V AC Power Supply
1	8823	Three-Phase Power Supply	1	86376/-1	Student Manual/Instructor Guide
1	8837-B	IGBT Chopper/Inverter	Bonus content:		
1	8842-A	Rectifier and Filtering Capacitors	1	86367/-1	Student Manual/Instructor Guide
1	8942	Timing Belt	1	86379/-1	Student Manual/Instructor Guide

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

Note: A computer is required to perform the exercises.

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