

Generator Theory

OEM: Rockwell Automation • Duration: 2 Days (16 hrs) • Code: EMS-110

COURSE MODULES & TOPICS

Objectives

- Identify the terminology associated with AC and DC power generation
- List and describe the major components of an AC generator
- Describe AC power generation theory
- Explain the operation of AC generators
- List and describe the major components of a DC generator
- Describe DC power generation theory
- Explain the operation of DC generators

Student Materials

- Student Manual includes the key concepts, definitions, examples, and activities presented in this course
- Lab Book provides learning activities and hands-on practice. Solutions are included after each exercise for immediate feedback.

Next Level Learning

- Motor Control and Troubleshooting course (EMS-230)

Course Agenda

Day 1

- Defining Generator Terms
- Explaining Generator Theory
- Describing DC Generator Construction and Operation
- Applying the Effects of Armature Reaction to Generator Operation

Day 2

- Describing AC Generator Construction and Operation
- Sharing Loads Between Generators
- Differentiating Stationary Armature Generators and Rotating Armature Generators
- Performing Generator Maintenance

- Review
- Written exam
- Final lab