

Course Objectives/Course Outline
Spokane Community College

Course Title: Solid-State Motor Controls

Prefix and Course Number: ELMT 244

Course Learning Outcomes:

By the end of this course, a student should be able to:

- utilize appropriate test equipment.
- describe the different types of drives and their functions.
- size drives to their application.
- install and program AC and DC drives.
- size solid-state starters to their application.
- install and program solid-state starters.

Course Outline:

- I. Variable Frequency Drives
 - A. Types
 - B. Theory
 - C. Operation
 - D. Applications
 - E. Installation and Setup
- II. DC Drives
 - A. Types
 - B. Theory
 - C. Operation
 - D. Applications
 - E. Installation and Setup
- III. Solid-State Starters
 - A. Theory
 - B. Operation
 - C. Applications
 - D. Installation and Setup
- IV. Speed and Torque Applications of Motorized Equipment
 - A. Speed Ratios
 1. belt and pulley driven equipment
 2. chain and sprocket driven equipment
 3. gear driven equipment
 - B. Torque and Speed Relationships