SAN JUAN COLLEGE
Success Matters

INST-2250-MOTOR AND MOTOR CONTROL 4 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course offers an introduction to motors, motor controls, position sensors, and pneumatic positioning devices. The principles of AC, DC, and variable frequency motors will be studied. Various start-stop and control circuits will be studied.

Prerequisites: Inst 1550

Semester Offered: Spring/Fall

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to…

1. Describe the components of electric motors, alternators and generators.
2. Wire the proper energy source and connections to a given motor for start, run, direction and speed control.
3. Program and troubleshoot 3 phase variable frequency drive motor controls.
4. Assemble, disassemble and troubleshoot electromechanical devices, control circuits, sensors and actuators.