SAN JUAN COLLEGE
Success Matters

INST-1920-INDUSTRIAL MEASUREMENT 4 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course is an introduction to the basic principles of process measurement, including techniques for the measurement of flow, level, temperature, pressure, and analytical process variables. Typical industrial transducers and sensing elements are included.

Prerequisites: INST 1150

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. Define process control instrumentation.

2. Understand the physics on temperature, pressure, flow, level.

3. Understand gas laws.

4. Measure pressure, flow, level and temperature with proper instruments such as gauge, manometers, bubblers differential pressure flowmeters, rotameters, thermocouples, RTD, etc.

5. Calibrate transmitters for pressure, flow, level and temperature using five-point check method and electronic calibrators.

6. Calculate interpolation between electrical signal reading and physical measurement reading.