



SYLLABUS

CATALOG DESCRIPTION

Course presents basic principles of the design and operation of gas measurement. Instruction provides students with standard terminology to promote effective communication regarding maintenance issues and potential malfunctions. By understanding gas measurement equipment and techniques, students will be able to perform basic troubleshooting. Students will learn skills, techniques, and procedures to properly perform routine gas measurement and correctly document data to meet government regulations and company requirements. Additional topics include natural gas composition; types of meters; auxiliary equipment; sampling; inspection of measurement equipment; gas sales contracts & unaccounted-for (ghost) gas.

Prerequisites: None

Semester Offered: All

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. Inspect oil gas meter sales meter run(s) for leaks.
2. Assure accurate gas measurement techniques and capture data correctly.
3. Proactively identify and repair leaking valves, and identify incorrect measurement equipment.
4. Maintain database and hard copies of identified gas measurement issues.
5. Use correct method for gas sampling for regulatory and revenue requirements
6. Identify orifice plate size and range chamber bellows location, and check against RTU data.

7. Calculate and interpret beta ratio.
8. Calculate proper meter tube length required for turbulent flow with and without flow conditioners.
9. De-energize the meter run; remove orifice plate and inspect for correct installation and/or damage.
10. Ensure that 5-valve manifold is set to normal position(s).
11. Perform proper gas meter regulatory inspections/witnessing.
12. Identify inaccurate measurement, document issue, and notify pipeline gatherer or company supervisor.