ENGY 126 INTRODUCTION TO NATURAL GAS COMPRESSION

3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

Students will study producing natural gas and oil and the role of natural gas compression in those processes. The uses and applications of gas compressors, their components and how they work and the basic theory and gas laws and how they affect compressor design and function.

Prerequisites:

None

Semester Offered:

Fall and
Spring/Summer

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.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies, information, or resources 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 Assessment website (www.sanjuancollege.edu/assessment).

Course Learning Outcomes

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

1. Understand the terminology used in gas compression.
2. Name the different applications for natural gas compressors and explain why gas is compressed.
3. Understand the basic gas law.
4. Understand compression ratio and why it is important.
5. Identify and explain the function of the components of a compressor skid.
6. Identify how a natural gas compressor works.
7. Understand the basic function of compressor valves.
8. Explain the use of clearance and why it is used.
9. Name the types of drivers used on a compressor skid.

10. Identify the advantage of using an internal combustion engine over an electric driver.
11. Name the reasons a wellhead compressor should be used.
12. Identify and explain the different types of wellhead compressors.
13. Understand other uses of wellhead compressors for artificial lift.