

ENGY 1330-PROCESS TECHNOLOGY 1 3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course introduces the student on the usage of common process equipment. Appropriate terminology and identifying process equipment components such as piping and tubing, valves, pumps, compressors, turbines, motors and engines, heat exchangers, cooling towers, heaters and furnaces, boilers, filters and dryers and vessels. Included are basic functions, scientific principles and symbols. Students will identify components on typical process flow diagrams, piping and instrument diagrams.

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. List common hand tools used in Industrial Operations

A copy of this approved syllabus is on file in the dean's office.

Updated 2017-05-01

2. List and identify process equipment found in Industrial process operations, i.e. piping, valves, tanks
3. List different types of pumps, compressors, motors and turbines and describe the operation of each
4. Describe different heat exchangers, components thereof and the operation of each
5. Describe types and operation of boilers and list associated equipment for each boiler
6. Describe various types of furnaces, basic components and operation thereof
7. List basic instruments used in process industry and recognize symbols for these instruments on drawings
8. Name symbols on process flow diagrams
9. Identify the utility systems found at Industrial Process Operation facilities