

IPOP-2640-ENVIRONMENTAL PROCESSES 4 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course prepares the student for the various environmental process systems in industrial facilities. These include but are not limited to waste handling and disposal practices, water pollution and air pollution control equipment and treatment. Introduction to boiler water treatment, raw water treatment, cooling water treatment, and ion exchange will be covered. The student will also learn about different types of air, water, and waste pollutants, and their impact on health and environment. Students will be introduced to land use practices for waste handling and disposal. Students will be exposed to emerging environmental issues facing industry.

Prerequisites: IPOP 2610

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. Identify the air quality impacts of industrial process facility operations on health and environment, and summarize equipment used to minimize or eliminate the air pollutants produced in different types of operations.
2. Summarize the different water uses, stream, treatments required and identify point of use applications for water at industrial facilities.
3. Identify types of wastes generated at industrial operations and the handling and disposal methods used. They will also be able to summarize limits based on regulations for waste product handling and disposal.
4. Identify other waste and environmental issues at industrial process operations.