

IPOP-2720 1 CREDITS MUNICIPAL WASTEWATER TREATMENT OPERATIONS

SYLLABUS

CATALOG DESCRIPTION:

This course provides the basic fundamentals involved with the operation of wastewater treatment facilities. Topics covered in this course include: wastewater sources and characteristics; wastewater collection systems; basic wastewater treatment including Primary and Secondary Treatment; equipment used in these treatment processes; proper safety procedures, proper sampling, testing and reporting methods used in the industry. The class along with the Applications of Municipal Wastewater Treatment class will prepare the student to take a preliminary certification exam.

Prerequisites: Faculty Approval, Math 1170 or higher

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...

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

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1. Identify different wastewater sources
2. Identify different contaminants found in various wastewater streams
3. Explain the various steps involved in Primary treatment along with the equipment used in those steps and operational concerns with them.
4. Explain the various steps involved in Secondary treatment along with the equipment used in those steps and operational concerns with them.
5. Explain the various methods used for wastewater solids processing.
6. Perform a number of mathematical calculations used in the industry
7. Identify different sampling methods and proper procedures used for obtaining representative samples
8. Identify various testing methods used in the wastewater industry