

**WWTR 125 Course Outline as of Fall 2019****CATALOG INFORMATION**

Dept and Nbr: WWTR 125 Title: PRETREAT FACILITY INSPEC  
 Full Title: Industrial Waste Pretreatment Facility Inspection  
 Last Reviewed: 1/28/2019

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	5	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: ENVT 125

**Catalog Description:**

This course covers the roles and responsibilities of a pretreatment facility inspector, including development, application and implementation of regulations, inspection of typical industries, safety, sampling procedures for wastewater, wastewater flow monitoring, industrial wastewater composition, pretreatment and source control technology, industrial inspection procedures, emergency response, and pretreatment administration.

**Prerequisites/Corequisites:****Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: This course covers the roles and responsibilities of a pretreatment facility inspector, including development, application and implementation of regulations, inspection of typical industries, safety, sampling procedures for wastewater, wastewater flow monitoring, industrial wastewater composition, pretreatment and source control technology, industrial inspection

procedures, emergency response, and pretreatment administration. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended:

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Effective:	Inactive:
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<b>UC Transfer:</b>	Effective:	Inactive:
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**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Demonstrate ability to perform duties of an industrial pretreatment inspector.

**Objectives:**

At the conclusion of this course, the student should be able to:

1. Apply pretreatment regulations to development of a pretreatment plan/permit for a given facility.
2. Identify business practices that support proper industry conformance with pretreatment regulations.
3. Explain source control and its benefits for the wastewater treatment plant.
4. Explain sampling requirements and processes.
5. Develop a monitoring and sampling plan.
6. Explain uses of databases for pretreatment program tracking and administration.
7. Implement pollution prevention control measures and best management practices.

**Topics and Scope:**

- I. Roles of the Pretreatment Facility Inspector
  - A. Definition of pretreatment
  - B. Pollution prevention
  - C. Requirements and responsibilities
- II. Pretreatment Program Administration
  - A. Planning
  - B. Funding
  - C. Required elements

- D. Databases
- E. Hazardous waste
- III. Applicable Regulations
  - A. Sewer use code
  - B. Federal regulations
  - C. Permit conditions
  - D. Permit violations
- IV. Overview of Wastewater Treatment Plant
  - A. Influent
  - B. Effluent
- V. Typical Regulated Industries
  - A. Inspection of a typical industrial facility
  - B. Standard industrial codes
- VI. Safety in Pretreatment Inspection and Sampling Work
  - A. General safety considerations
  - B. Hazardous materials
  - C. Confined space
  - D. Industry-specific hazards
- VII. Sampling Procedures for Wastewater
  - A. Reasons
  - B. Preparation
  - C. Collection
  - D. Documentation
- VIII. Wastewater Flow Monitoring
  - A. Requirements
  - B. Methods
  - C. Supervisory control and data acquisition (SCADA)
- IX. Industrial Wastewaters
  - A. Manufacturing process types
  - B. Effects on treatment system
- X. Source Control
  - A. Modification of manufacturing process
  - B. Pollution prevention methods by industry
  - C. Best management practices
- XI. Emergency Response Procedures
  - A. Response plan
  - B. Roles
  - C. Enforcement
  - D. Spill reporting

**Assignment:**

1. Reading assignments (10-30 pages per week)
2. Problem solving homework (weekly)
3. Quizzes (10-15)
4. Final exam
5. Field trip(s) (1-3) and associated report(s) (3-5 pages each)

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Field trip report(s)

Writing  
5 - 10%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems

Problem solving  
30 - 50%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes and final exam

Exams  
40 - 60%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Field trip

Other Category  
5 - 10%

**Representative Textbooks and Materials:**

Pretreatment Facility Inspection. 3rd ed. CSUS Office of Water Programs. 1996 (classic)  
Instructor prepared materials