



5055 Santa Teresa Blvd  
Gilroy, CA 95023

### Course Outline

**COURSE:** WTRM 220                      **DIVISION:** 50                      **ALSO LISTED AS:** WTRM 120

**TERM EFFECTIVE:** Summer 2024                      **CURRICULUM APPROVAL DATE:** 06/11/2024

**SHORT TITLE:** POLLUTION PREVENTION/STORM WTR

**LONG TITLE:** Pollution Prevention and Storm Water Management

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
3	18	Lecture:	3	54
		Lab:	0	0
		Other:	0	0
		Total:	3	54

Out of Class Hrs:            108.00

Total Learning Hrs:        162.00

#### **COURSE DESCRIPTION:**

Pollution Prevention and Storm Water Management reviews methods and regulations to prevent pollutants from reaching the waters of our rivers, streams and aquifers. It reviews methods of reducing pollutants in industrial wastewater, water reuse and water recycling. Additionally, it reviews the methods and regulations for storing hazardous wastes and materials. Lastly, it reviews the general storm water permits for municipalities, industry and construction. At the end of this course, the student will have a fundamental knowledge of how to reduce pollution in our wastewater through effective water and process management, as well as appropriate hazardous materials and waste storage. This course also covers the implementation of methods required by the State's general permits to prevent pollution from entering storm water runoff. This course was previously listed as WTRM 120.

**PREREQUISITES:**

**COREQUISITES:**

**CREDIT STATUS:** D - Credit - Degree Applicable

**GRADING MODES**

L - Standard Letter Grade

**REPEATABILITY:** N - Course may not be repeated

**SCHEDULE TYPES:**

- 02 - Lecture and/or discussion
- 05 - Hybrid
- 71 - Dist. Ed Internet Simultaneous
- 72 - Dist. Ed Internet Delayed

**STUDENT LEARNING OUTCOMES:**

By the end of this course, a student should:

1. Explain the required elements of a General Municipal Storm Water Permit, a General Industrial Storm Water Permit, and a General Construction Storm Water Permit.
2. Outline the key elements of Pollution Prevention, Ingredient, and Chemical Waste Storage, Process Design, Equipment Design, and Facility Design.

**COURSE OBJECTIVES:**

By the end of this course, a student should:

1. Discuss best management practices for process management, process control, rinsing process, cleaning process, equipment design, facility design, material storage, and water reuse / recycling as they relate to storm water management - pollution prevention.
2. Identify the requirements of Title 22, Article 10 - 14 and Hazardous Waste Storage.
3. Discuss the requirements for Spill Prevention Control and Countermeasure (SPCC) and Petroleum Storage.
4. Explore the primary elements of Erosion and Sediment Control.
5. Identify the requirements of a General Municipal Storm Water Permit.
6. Identify the requirements of a General Industrial Storm Water Permit.
7. Identify the requirements of a General Construction Storm Water Permit.

**COURSE CONTENT:**

Curriculum Approval Date: 06/11/2024

9 Hours

Content: Pollution Prevention, Process Management, Process Control, Equipment Design, Facility Design, Material Storage, Water Reuse, Water Recycling, Cleaning Processes, Rinsing Processes.

Student Performance Objectives: Describe the key elements of Pollution Prevention, Process Management, Process Control, Equipment Design, Facility Design, Material Storage, Water Reuse, Water Recycling, Cleaning Processes, and Rinsing Processes as they relate to pollution control and storm water management.

9 Hours

Content: Title 22, Hazardous Waste Storage.

Student Performance Objectives: Explain the requirements of Title 22, Article 10 - 14 and Hazardous Waste Storage.

9 Hours

Content: SPCC and Petroleum Storage.

Student Performance Objectives: Explain the requirements of SPCC and Petroleum Storage. Outline the requirements of 40 CFR Part 112 Spill Prevention, Containment and Counter Measure.

6 Hours

Content: Erosion and Sediment Control.

Student Performance Objectives: Outline the primary elements of Erosion and Sediment Control. Describe the major elements of erosion and sediment control.

3 Hours

Content: General Municipal Storm Water Permit.

Student Performance Objectives: Explain the requirements of a General Municipal Storm Water Permit.

6 Hours

Content: General Industrial Storm Water Permit.

Student Performance Objectives: Explain the requirements of a General Industrial Storm Water Permit.

10 Hours

Content: General Construction Storm Water Permit.

Student Performance Objectives: Explain the requirements of a General Construction Storm Water Permit.

2 Hours

**METHODS OF INSTRUCTION:**

Lecture, Discussion

**OUT OF CLASS ASSIGNMENTS:**

Required Outside Hours 18

Assignment Description

Out-of-Class Assignments: Read material related to class presentations. Complete take home problems relating to the key elements of Pollution Prevention, Process Management, Process Control, Equipment Design, Facility Design, Material Storage, Water Reuse, Water Recycling, Cleaning Processes, and Rinsing Processes as they relate to pollution control and storm water management.

Required Outside Hours 18

Assignment Description

Out-of-Class Assignments: Read Title 22 and Hazardous Waste Storage requirements. Group homework related to the requirements of Title 22 and Hazardous Waste Storage.

Required Outside Hours 18

Assignment Description

Out-of-Class Assignments: Read SPCC and Petroleum Storage requirements. Group homework related to the requirements of SPCC and Petroleum Storage.

Required Outside Hours 12

Assignment Description

Out-of-Class Assignments: Read material related to class presentations. Group homework related to the primary elements of Erosion and Sediment Control.

Required Outside Hours 6

Assignment Description

Out-of-Class Assignments: Review the General Municipal Storm Water Permit and read its requirements. Group homework related to the requirements of a General Municipal Storm Water Permit.

Required Outside Hours 12

Assignment Description

Out-of-Class Assignments: Review the General Industrial Storm Water Permit and read its requirements. Group homework related to the requirements of a General Industrial Storm Water Permit

Required Outside Hours 24

Assignment Description

Out-of-Class Assignments: Review the General Construction Storm Water Permit and read its requirements. Group homework related to the requirements of a General Construction Storm Water Permit.

**METHODS OF EVALUATION:**

Writing assignments

Percent of total grade: 10.00 %

Written Homework, Reading Reports

Problem-solving assignments

Percent of total grade: 50.00 %

Homework Problems, Quizzes, Exams, Group Projects

Objective examinations

Percent of total grade: 40.00 %

Multiple Choice, Completion, Other: Storm Water Pollution Prevention Plan

**REPRESENTATIVE TEXTBOOKS:**

Most current government codes posted online. See list below., State of California, U.S. Government, State of California, U.S. Government, or a comparable textbook/material.

ISBN:

Grade Verified by: Dana Young

Most current Government Codes posted online: CCR Title 22 , Chapters 10 -14; 40CFR Part 112; California General Municipal Storm Water Permit; California General Industrial Stormwater Permit; California General Construction Storm Water Permit; Certified Professional in Erosion and Sediment Control Exam Review and Study Guide, State of California; US EPA, State of California X3, Envirocert.

**ARTICULATION and CERTIFICATE INFORMATION**

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

Not Transferable

UC TRANSFER:

Not Transferable

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 1 Program Applicable

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: C

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000530897

Sports/Physical Education Course: N

Taxonomy of Program: 095800