MOHAWK VALLEY COMMUNITY COLLEGEUTICA AND ROME, NEW YORK

DEPARTMENT OF PHYSICAL SCIENCES, ENGINEERING & APPLIED TECHNOLOGIES

**Course Syllabus:** **CT 232 – Environmental Engineering**

1. **CATALOG DESCRIPTION**

#### CT 232 Environmental Engineering [C-2, P-2, Cr-3]

This course covers basic practices in hydraulics and hydrology, as well as the topics of water supply, water quality, wastewater and stormwater management, and pollution control.

Prerequisites: MA 121 – Fundamentals of College Mathematics 1 and CT 151 – Surveying 1

1. **MATERIALS**

Text: *Basic Environmental Technology* (6th Edition) by Nathanson (published by Pearson - Prentice Hall)

Other: Engineer’s scale, engineering computation paper (green), and scientific calculator

1. **COURSE OBJECTIVES**

The objective of this course is to introduce students to pertinent environmental topics that are encountered in the civil engineering field. It will cover basic practices in hydrology and hydraulics as applied to practical civil engineering problems as well as stormwater management practices, sediment/erosion control measures, wetlands, environmental regulations, ecology, sustainability, wastewater treatment, and water distribution.

1. **Student Learning Outcomes**

Students will be able to:

1. Identify pertinent environmental topics that will be encountered in the planning, design, and construction phases of a civil engineering project.
2. Demonstrate the ability to delineate a watershed.
3. Demonstrate the ability to perform basic hydrology calculations.
4. Demonstrate the ability to perform basic hydraulic calculations.
5. Demonstrate an understanding of basic stormwater management practices.
6. Develop a sediment and erosion control measures plan.
7. Identify and define different types of wetlands.
8. Demonstrate an understanding of environmental regulations as they pertain to a civil engineering project.
9. Identify and discuss pertinent ecological issues
10. Identify and discuss various sustainability issues relating to a design project.
11. Demonstrate the ability to perform relevant unit conversions.
12. Demonstrate familiarity with wastewater treatment.
13. Demonstrate familiarity with water distribution systems.
14. Demonstrate the ability to retrieve information from various sources relevant to the topics covered in this course in order to complete assignments.
15. Demonstrate the ability to apply what they have learned in this course to a real life problem taken from industry as a final project.

**V. MAJOR TOPICS**

##### WEEK LECTURE/LABORATORY

#### 1 Introduction to environmental topics

2/3 Hydraulics

4/5 Hydrology

6 Water quality

7 Drinking water – supply, treatment, distribution

9 Wastewater management

10 Sediment & erosion control

11/12 Stormwater management

13 Air quality

14/15 Final Project

# COURSE NAME:\_\_\_\_\_\_\_\_CT 232 – Environmental Engineering\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **DATE FACULTY NAME CHANGE INPUT MEASUREMENT ASSESSMENT ACTION**

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| 1/8/2018 | M. Sisti | Reviewed/revised content/format |  |  |  |  |
| Jan 2019 | M Reilly | Reviewed |  |  |  |  |
| Jan 2020 | S Gannon | Reviewed |  |  |  |  |
| Jan 2021 | S Gannon | Reviewed |  |  |  |  |
| Jan 2022 | S Gannon | Reviewed |  |  |  |  |
| 8 Jan 2023 | M Sisti | Reviewed/Updated policies |  |  |  |  |
| 10 Jan 2024 | M Sisti | Reviewed/Updated policies |  |  |  |  |
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