

CIV 424 - Stormwater Management & Design

Current Catalog Description: The main focus of this course is on the design of stormwater management practices to reduce runoff pollutants from impacting local waterways. Topics to be discussed will include an overview on regulations governing stormwater activities, stormwater impacts, basic hydrology, urban hydrology (rational method and TR55), stormwater runoff calculations, design and criteria for various standard practices, erosion and sediment control practices, with emphasis on the New York State stormwater management design requirements for meeting water quality and flood control. Policy discussion will include site redevelopment, flooding and drainage issues.

Prerequisite: CIV 420

Corequisite: CIV 420

Textbooks and/or Other Required Material: None

This course is: Not Required;
Technical Elective Option

- Topics Covered:**
1. Overview on regulations governing stormwater activities
 2. Stormwater impacts
 3. Basic Hydrology
 4. Urban Hydrology (rational method and TR55)
 5. Stormwater runoff Calculations
 6. Design and criteria for various standard practices
 7. Erosion and Sediment Control Practices
 8. Policy discussion
 - a. Site redevelopment
 - b. Flooding and Draining issues

Course Learning Objectives:

Learn the fundamentals of hydrology
Stormwater/urban runoff impacts to the environment
Runoff curve number, stormwater runoff volume, time of concentration, peak flow, hydrograph and other runoff parameters.
Use of rational method and TR55 to calculate stormwater runoff parameters
Design stormwater management practices that meet New York State regulatory criteria
Learn the various design criteria such as wet ponds, infiltration basins, wetlands, and proprietary units in order to design and size the proper practices to reduce pollutants from stormwater runoff to improve water quality.

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