

VILLANOVA UNIVERSITY

WATER RESOURCES AND ENVIRONMENTAL
ENGINEERING GRADUATE PROGRAM

Evening Course in

Urban Hydrology And Storm Water Management

CEE 8508 –

Offered –Odd Years – Summer*

Offered both in class and through Real Time Distance Learning



Urban Hydrology and Stormwater Management addresses design practices used by engineers to eliminate flow and quality issues caused by urbanization. After reviewing past approaches to stormwater management from a regional and nationwide perspective, the instructors will present methods to estimate pollutant loads and flow excesses from developing sites or watersheds. After determining the problem, the course turns to look at solutions from both a site and watershed perspective. Both structural and non-structural Best Management Practices are presented, ending in a look at low impact site development and a discussion of ordinances. The impact of NPDES Phase II and Pennsylvania Comprehensive Stormwater Policy will be included. While stormwater management in Pennsylvania is the course focus, due to the national focus of NPDES II, it is applicable to most areas of the country.

Topics to be covered include:

- NPDES Phase II
- Effects of Urbanization
- Determining Pollutant Loads and Runoff
- Modeling Stormwater Management Quality and Quantity
- Structural and Non-Structural Best Management Practice Design
(Detention / Infiltration / Filtration)
- Watershed/Regional Stormwater Issues
- Low Impact Design

Students will participate in a weekend field trip with the instructors. Distance Learning students will be asked to participate through websites, and through their own field trip.

PREREQUISITES: CEE 7111 (*Introduction to Hydraulic Engineering and Hydrology*) or equivalent

INSTRUCTORS*: Dr. Robert G. Traver, P.E.
Associate Prof. of Civil Engineering
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Dr. Frank X. Browne, P.E.
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Prospective students may contact the instructors or the Depart. of Civil and Environmental Engineering 610-519-4960.

Further information on all of the Department's graduate programs is available at:

<http://www.engineering.villanova.edu/ce/>

Updated – Spring 2005

Instructor/Course Offerings are subject to change.