

**VILLANOVA UNIVERSITY
WATER RESOURCES AND ENVIRONMENTAL
ENGINEERING GRADUATE PROGRAM**

**Evening Course
in**

Modeling of Open Channels

C.E.E. 8509

Offered – Even Years –Spring*

(Available through Real Time Distance Education)



COURSE DESCRIPTION:

Continuation of CEE 8503 Open Channel Hydraulics. Advanced in depth look at one dimensional open channel hydraulics to include steady and unsteady flow conditions. Lectures will focus on accuracy, boundary conditions, and current practice. Unsteady flow topics will focus on the Dam Failure@ scenario, as well as urban stormwater flows.

Students will be using either the most recent, or experimental freeware software available. Software expected to be used is:

HEC-RAS 3 - Hydrologic Engineering Center - Corps of Engineers
(includes Unsteady Flow capabilities)

SWMM - EPA

DAMBRK or FLOODWAVE - National Weather Service.

PREREQUISITE: C.E.E. 8503 Open Channel Hydraulics

INSTRUCTOR: Dr. Robert G. Traver, PE
Associate Professor of Civil Engineering
610-519-7899 robert.traver@villanova.edu

Prospective students may contact the instructor or the Department of Civil and Environmental Engineering at 610-519-4960.

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

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

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*Instructor/Course Offerings are subject to change.