CVEN 458 Hydraulic Engineering  
Spring 2006

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Schedule: Mondays, Wednesdays and Fridays 9:10 a.m. – 10:00 a.m. at CE203

Office hours: Mondays and Wednesdays 10:00 a.m. – 11:00 a.m.

Objectives: This course discusses the fundamental concepts of pressure conduit and open channel hydraulics and presents the computer simulation packages. After taking this course, the students will be able to analyze and solve complex problems involving open channels and pressure conduits using standard software packages in the professional environment.

Prerequisite: CVEN 339 Water Resources Engineering.

Class web page ceprofs.tamu.edu/folivera/cven458/spring2006/home.htm  
The class web page includes an Announcements page in which last-minute information will be posted. Students are expected to access the Announcements page at least each other day.

Textbook: Water Resources Engineering by Wurbs and James, Prentice Hall.

Grading:  
Homework 10%  
Class participation 10%  
Tests 50%  
Project 30%

The homework and class participation grades cannot be greater than 1.1 times the test average. The project grade cannot be greater than 1.2 times the test average.  
No final exam will be given.  
Letter grades will be assigned according to: A (100 – 90), B (89 – 80), C (79 – 70), D (69 – 60), and F (less than 60).  
Numeric grades will be rounded to the nearest integer.
Outline:
- Steady Flow in Open Channel
  Flow classification
  Uniform flow and normal depth
  Critical flow, critical depth and specific energy
  Channel design
  Gradually-varied flow
  Rapidly-varied flow
  HEC-RAS (computer simulation package)
- Steady Flow in Pressure Conduit
  Basic equations for steady flow
  Pumps in pipelines
  Culverts
  Pipelines connecting reservoirs
  Pipe network systems
  KYPIPE (computer simulation package)

Project
Students have to complete a Term Project consisting of the application of the hydraulic methods and tools learned in class to real-world problems. Deliverables include a report (in hard and electronic copy) and a 15-minute in-class presentation. Project teams will have two members.

University Student Rules:
It is the student’s responsibility to be fully acquainted and to comply with the University Student Rules (http://student-rules.tamu.edu).

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of student Life, Services for Students with Disabilities in Room 126 of the Koldus Building, or call 845-1637.