

CE 365K HYDRAULIC ENGINEERING DESIGN
Spring 2015
SYLLABUS

- UNIQUE NUMBER:** 15340
- INSTRUCTOR:** David R. Maidment
Office: ECJ 8.610
Phone: Campus 471-4620, CRWR 471-0065
E-mail: maidment@utexas.edu
Web: <http://www.caee.utexas.edu/prof/maidment/CE365KSpr15/CE365K.htm>
- TEACHING ASST:** Cassandra Fagan, fagan.cassandra@gmail.com
- OFFICE HOURS:** Tuesday and Thursday 2-3:30PM, ECJ 8.610
- LECTURES:** Tuesday and Thursday, 12:30-2PM, ECJ 7.208
- OBJECTIVES:** This course is designed to present these Academic/Learning Goals
- Principles and methods of Hydraulic Engineering Design
 - Assessment of hydraulic engineering infrastructure
 - Applications of Hydraulic Engineering Design
- PREREQUISITES:** Elements of Hydraulic Engineering: CE 356
- COMPUTER:** Proficiency with computers and familiarity with Excel is expected. There will be some computer assignments using HEC and Bentley computer programs, and the ArcGIS Geographic Information System to be completed in the LRC.
- TEXT:** There is no required text for this course but the text “Computer Applications in Hydraulic Engineering” (Eighth Edition) by Haested Methods Water Solutions, published by Bentley Institute Press will be used as a reference.
- CLASS FORMAT:** Lectures supplemented with outside reading, homework, and two in-class exams. There will be a major design project carried out within a project team for which an oral and written report will be presented at the end of the semester. There will be no Final Exam.
- CLASS OUTLINE:** See attached.
- GRADING:** Quizzes, 2 @ 25% = 50%
Homework = 25%
Design Report = 25%
- I will assign grades using the scale:
A = 95 – 100%; A- = 90 – 94%;
B+ = 87 – 89%; B = 83 – 86%; B- = 80 – 82%;
C+ = 77 – 79%; C = 73 – 76%; C- = 70 – 72%;
D = 60 – 69%; F < 60%
- Any problems, personal or otherwise, affecting grades should be brought to the instructor's attention.
- HOMEWORK POLICY:** Homework assignments are due in by 5PM on the day assigned and will be turned in as pdf documents using the Canvas web site for the class. If hand computations are required, you should scan your computations into a pdf document.
- EXAMINATIONS:** There will be two 75 minute in-class examinations. Each examination will be closed book, although you will be allowed a 1-page review sheet. Missed examinations may be made up only if the reason for missing was illness or some other emergency. The in-class exams will take place on Thursday March 5 and Thursday April 16.

- EVALUATION:** An evaluation of the course instructor and teaching assistant will be conducted at the end of the semester using the approved UT Course/Instructor evaluation process.
- DROP POLICY:** From the 1st through the 12th class day, an undergraduate student can drop a course via the web and receive a refund, if eligible. From the 13th through the university's academic drop deadline, a student may Q drop a course with approval from the Dean, and departmental advisor. .
- DISHONESTY:** University procedures will be followed in dealing with cases of suspected scholastic dishonesty.
- ATTENDANCE:** Regular class attendance is expected in accordance with The University's General Information catalog. Class attendance will not be used as part of the course credit assignment.

IMPORTANT NOTE: The University of Texas at Austin provides upon request appropriate academic adjustments for qualified students with disabilities. For more information, see the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, 471-6259 (voice) or 512-410-6644 (video phone) or the web site: <http://www.utexas.edu/diversity/ddce/ssd/>

DESIGN PROJECT: Since this is a Level II Elective course, an important component is the engineering design project that will be carried out in collaboration with a group of 3 or 4 students. You will be expected to self-form your design group by Thurs Feb 12, to submit a proposal for your design project by Thursday Mar 12 and to present the resulting project in Oral and Written form at the end of the semester. Additional detail about design project requirements will be provided before the proposals are due.

COURSE CONTENT: There are four levels of hydraulic engineering design – flood conveyance, flood storage, water quality enhancement and Low Impact Design. We will focus on the first two of these during the first half of the semester and the second two after Spring Break. Dr Michael Barrett of the Center for Research in Water Resources has agreed to provide some lectures on water quality enhancement and Low Impact Design and to be a mentor for student groups wishing to do design projects in those subject areas. All design groups will use the ArcGIS geographic information system to prepare a digital base map of their design project area. We will use a regional scale GIS, hydrologic and hydraulic design database for Travis and Williamson Counties as a basis for developing your design projects.

Important Dates for the Course:

Date	Item
Thurs Feb 12	Form design project group
Thurs Mar 5	First Exam
Thurs Mar 12	Design project proposal due
Mar 16 to Mar 21	Spring Break
Thurs April 16	Second Exam
Apr 27 to May 8	Oral design project presentations
Friday May 8	Written design project report due