CE 397 Flood Forecasting
Spring 2015

Unique Number: 15573

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Lectures: Monday-Wednesday-Friday, 1-2PM central time, CRWR Room 28, Pickle Research Campus. On occasion in a given week, the class may be taught in two 75 min sessions beginning at 1PM, to leave one day of the week free for other purposes. Notice will be provided in advance when this is necessary. This course is jointly offered with a parallel course taught by Dr Andy Ernest at the University of Alabama, and the two classes will be connected via teleconference and Adobe Connect to facilitate discussion among students on both campuses.

Objectives: This is intended to be a discussion course that will study and clarify the methodology for a National Flood Interoperability Experiment (NFIE) Summer Institute that is being held in association with the National Weather Service at the National Water Center in Tuscaloosa, AL, in Summer 2015. There is no requirement that students participating in the class also participate in the NFIE Summer Institute.

Prerequisites: Graduate standing in engineering or a related discipline.

Method of Instruction
The course has six elements: lectures, assigned reading materials, homework exercises, a term paper, class interaction, and examinations. All students will prepare a term project in Adobe pdf format that will be posted on the course web site. Part of the final examination will involve synthesis of the term papers presented in the class to provide an assessment of the state of flood forecasting knowledge.

Term Project
The purposes of the term project are:

1. To enable you to explore in-depth some aspect of flood forecasting of personal interest to you
2. To provide experience in the formulation, execution and presentation of original research, including the proper documentation of a term project.
3. To make an oral presentation and produce a report in PDF on the world-wide web that will be informative to you and to your classmates.

The steps in carrying out the project are:

1. Prepare a 1-page proposal in PDF by Weds February 18 specifying the objective of your project and outlining how you plan to go about executing it. Be prepared to briefly discuss your project concept in class. Submit this proposal through the Canvas system. The instructor will respond and provide comment and assessment of your proposal After making any revisions in your proposal that seem necessary in the light of this assessment, this proposal defines the scope of your term project.
2. Prepare a two-page status report in PDF on your project by Weds March 25 and be prepared to make a short presentation about your project in class.
3. Present a final report orally in class near the end of the semester during the period April 20 to May 8 (you will have 15 minutes for your presentation) and present your term paper in PDF on your web page by the last day of classes (Friday May 8). It is critical that you post your paper by this date because your classmates will need to read your paper in order to complete their final exam.

If you would like to work in a group to pursue a term project, that is fine, but you must carry out a particular section of the project on which you will present your oral and written report. Generally team-based term projects are hard to unscramble at the end when it comes time to present the oral and written versions of your term project, so it is probably best to just do an individual term project.

Course Computer Environment

This course will uses the ArcGIS version 10.2.2 software, HEC hydrologic simulation programs, and other software programs needed to produce and interpret flood forecasts.

Course Readings

Readings for this course will be given out as in-class handouts, and links to resources on the web.

Method of Evaluation

Course grades will be based on a weighted average of results as follows:

Homework 20%
Term Project Written Report 30%
Term Project Oral Presentation 10%
Midterm Exam 20%
Final Exam 20%

The midterm exam will be an in class exam held on Weds Mar 11. The final exam will be a take home distributed in class on Friday May 8 and due in a week later, submitted through the Canvas system. The final exam will include preparing a flood forecasting for a project basin as well as essays and short reports that synthesize material from the class and from the term projects of other students in the class.

Letter grades will be assigned as follows:
A = 95 - 100%
A- = 90 - 95%
B+ = 87 - 90%
B = 83 - 87%
B- = 80 - 83%
C+ = 77 - 80%
C+ = 73 - 77%
C- = 70 - 73%
C- = 60 - 70%
F < 60%
There will be no make-up exams or incomplete grades in this course. I reserve the right to change the date of an exam with notice in advance. Lectures may be recorded for later reference.

Course/Instructor Evaluation Plan
An evaluation of the course and instructor will be conducted at the end of the semester using the approved UT Course/Instructor evaluation forms.

Students with Disabilities
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/

Course Drop Policies
From the 1st through the 4th class day, graduate students can drop a course via the web and receive a refund. During the 5th through 12th class day, graduate students must initiate drops in the department that offers the course and receive a refund. After the 12th class day, no refund is given. No class can be added after the 12th class day. From the 13th through the 20th class day, an automatic Q is assigned with approval from the Graduate Advisor and the Graduate Dean. From the 21st class day through the last class day, graduate students can drop a class with permission from the instructor, Graduate Advisor, and the Graduate Dean. **Students with 20-hr/week GRA/TA appointment or a fellowship may not drop below 9 hours.**

Important Dates for the Course:

Date	**Item**
Weds Feb 18	Term project proposal due
Weds Mar 11	**Midterm Exam**
Mar 16 to Mar 21	Spring Break
Weds Mar 25	Project update due
Apr 20 to May 8	Oral Term Project Presentations
Friday May 8	Written Term Project due
Friday May 15	Final exam due in by electronic submission