GEOG 4210: Fluvial and Hydrological Processes
GEOG 6210: Advanced Fluvial and Hydrological Processes
Spring 2010

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Office Hours: As posted, or by appointment


Course Description: This course provides a comprehensive examination of surface water hydrology and fluvial geomorphology. Although the course will examine hydrologic and fluvial theory, we will also address applied problems in homework exercises to develop skills in data collection, data analysis, and the basic techniques used in hydrologic analysis and design. This course should be of interest to earth, atmospheric, and environmental scientists, as well to planners and others involved in managing water resources.

Grades: Grades will be based on homework exercises, a mid-term exam, a final exam, and for graduate students, a research project that will include a written paper and an oral presentation. The final exam is not a cumulative final, but will be taken during the scheduled final exam period. The homework exercises must be turned in on the assigned due date (usually the following week) in order to receive full credit. Late exercises will have points deducted for each day it is late, and none will not be accepted if more than one week late. Make-ups for exams will be given ONLY for medical emergencies if you notify me PRIOR to the scheduled exam time.

Undergraduates

Homework exercises........40%
Mid-term exam..................30%
Final exam......................30%

Graduate Students

Homework exercises........25%
Mid-term exam...............25%
Final Exam....................25%
Research project............25%

The topic of the graduate student’s research project will be decided in consultation with me, and must be identified early in the semester. The written paper will consist of 10-15
Field Trip: We will take at least one field trip (probably more) during our scheduled afternoon class period. Attendance is required.

Course Web Site: PowerPoint lectures and study guides for the exams can be accessed through Blackboard. I suggest that you print out the lectures before class so that you can take notes on my description of each slide rather than writing down what is already on the slide.

Course Outline/Reading Assignments:

Introduction
Precipitation .................................................. Ch. 2
Interception .................................................... Ch. 3
Evaporation & Evapotranspiration ............ Ch. 4 (pp. 95-103), 5 (pp. 126-132; 135-138)
Infiltration ..................................................... Ch. 6 (pp. 163-183)
Surface Runoff ............................................... Ch. 9, 10 (pp. 279-297)
Drainage Basins .............................................. Ch. 14
Floods .......................................................... Ch. 10 (pp. 298-363), 11 (skim)
River Channels .............................................. Ch. 16 (pp. 590-646), 17
Human Impacts .............................................. Ch. 18
Water Quality

Americans with Disabilities Act: East Carolina University seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must be registered with the Department for Disability Support Services located in Slay 138 (252) 737-1016 (Voice/TTY).