GEOG 2100 - Introduction to Geographic Information Systems (GIS)  
Winter Quarter, 2016

Class Time:
  Lecture: Tuesday and Thursday 10:00 AM - 11:30 AM  
  Lab: Thursday 11:30AM-1:30PM
Class Date: January 04, 2016 - March 09, 2016  
Classroom: Lab: Boettcher West (BW), Room 126

Instructor: Jing Li  
Office: Boettcher West, Room 106  
Phone: 303-871-4687  
Email: Jing.Li145@du.edu
Office Hours: Tuesday and Thursday 2:00 PM - 4:00 PM or by appointment

Teaching Assistant: Nick Gilroy  
Email: Kai.Gilroy@du.edu  
Office Hours: Monday and Wednesday 11:00 AM - 1:00 PM, BW 136

Email is always the best way to reach me. You can schedule alternative office hours if necessary. Please feel free to email or meet me if you have any questions.

1. Course Description:
A Geographic Information System (GIS) is a set of hardware, software and methods for the capture, storage, management, manipulation, analysis, modeling and display of geographic information. As an introductory course to GIS, this course is designed to provide an overview of the basic concepts and fundamental uses of GIS technology so that students can apply the knowledge and skills learnt in this course to research and studies where geospatial components are involved.

The content will be covered in this course include:
  • Background, development, trends, and prospects in GIS;  
  • Fundamental geographic concepts implemented in GIS such as coordinate systems, map scale;  
  • Organization and manipulation of spatial data (e.g. boundaries of counties) and attribute data (e.g. population of counties) in digital formats;  
  • Principles and issues related to using geospatial data (e.g., data quality);  
  • Usages of a package of GIS tools for manipulating, analyzing, visualizing and representing geospatial data;

After successfully completing this course, students should be able to:
  • Understand the fundamental concepts and principles related to GIS;  
  • Use basic GIS tools to solve problems in the application areas of students’ interests (e.g. identifying the spatial distributions of a type of species using GIS)  
  • Explore help documentation provided with GIS software and/or online resources to address technical issues of using GIS tools (e.g., troubleshooting);
• Conduct the full cycle of a small scale GIS project, including identifying data sources, conducting the project using appropriate GIS tools and presenting results in a desired form (e.g. maps);

Prerequisites:
Students are expected to have the basic skills to operate personal computers and Windows-OS systems.

2. Textbooks, Software and Materials:
Required Textbook

Optional Workbook

ArcGIS 10.2.2
• The software is available in GIS labs (BW 125 and BW 126).
• Remote access information can be found at: http://www.du.edu/gis/remoteaccess.html

Copies of the syllabus, lecture slides, exam reviews and additional course materials are distributed through Canvas: https://canvas.du.edu/

3. Course Assessment:
Class participation 10%
Midterm exam 20%
Lab assignments 35%
Term Project 15%
Final exam 20%
Total 100%

Grading criteria:
Grading will be based upon the performance on class participation, lab assignments and two exams. There may be a few exercises for extra credit.
93-100% A
90-92.99% A-
87-89.99% B+
83-86.99% B
80-82.99% B-
77-79.99% C+
73-76.99% C
70-72.99% C-
63-69.99% D
< 62.99% F
**Class participation:** You are expected to finish in-class exercises and quizzes, present reflections on selected topics and participate in class discussions.

**Lab assignments:** You will acquire hands-on experience through a series of lab assignments on the techniques for collecting, managing, processing, analyzing and representing data. You are expected to turn in lab assignments at the end of the lab sessions on the due days. Failing to do so will result in a 5% deduction per day from the points received for each assignment.

**Term project:** You are expected to demonstrate the skills learnt in this course through conducting a small-scale term project. Project topics will be assigned in Week 5. You are expected to finish one of the projects and submit the project report by Week 10.

**Exams:** Two exams will be given: one midterm exam and one final exam. The exams will assess your knowledge of GIS concepts and are non-cumulative. Review sessions will be provided. No questions will be given on the labs. Students will take the exams through Blackboard. Students are unable to take the exam at the scheduled time should contact me at least one week before the exam date. Otherwise, make-up exams will not be given.

4. **Course Policies:**

**Academic Integrity:** Students are expected to follow the DU Honor Code. For further information, please visit the Office of Student Conduct’s website at www.du.edu/honorcode

**Accommodations:** All academic accommodations regarding disabilities must be arranged through the Disability Services Program (DSP) (http://www.du.edu/disability/dsp or 303.871.2455 / 2278 / 7432). Information is also available on line at http://www.du.edu/disability/dsp; see the Handbook for Students with Disabilities.
5. Tentative Class Schedule (subject to change):

You are responsible for keeping up with the readings, exam dates, and lectures. Any changes to this schedule will be announced in class and posted to the course page.

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<td>Data models: raster</td>
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<td>Project discussions</td>
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