Geography 498K, Fall 2017 University of Maryland College Park

Internet GIS

Lecture & Lab: M W 12-12:50PM, 1158 LEF; W 1-2:50PM, 1136 LEF
Instructor: Naijun Zhou, Ph.D., GISP, njzhou@umd.edu
Office: 1159 LeFrak Hall, Office hours: M W 11-11:50AM
Course site: ELMS

Course Objectives

Since 2000, Internet has become the major GIS platform, and a majority of GIS applications are Internet or Web based. This course aims to introduce the development of Web-based systems to search and browse geographic data, and to explain the principals and methods necessary to develop such systems. To achieve this objective, multiple topics will be covered, which include 1) Web design and development, 2) HTML and JavaScript, 3) ArcGIS server, 4) Web services, 5) ArcGIS API for JavaScript, 6) ArcGIS online, and 7) Google Map API. Students will form small groups and complete a course project of develop a Web GIS using ArcGIS API for JavaScript and ArcGIS Server.

Class Organization

Each class time will be devoted to both lecture and lab. Lectures will cover the principles and methods, and the lab will provide hands-on experience of Web GIS development.

Prerequisites

Students will learn HTML and JavaScript to program Web GIS systems. To succeed in this course, **it is critical students have completed GEOG373 (Introduction to GIS) and a programming course (e.g., GEOG376).**

Textbooks

There are no required textbooks, but the following on Web GIS is recommended:
Pinde Fu, 2015, Getting to Know Web GIS. ESRI Press. Redlands, CA. ISBN-13: 978-1589483842 ISBN-10: 1589483847. Available for online reading via UMD library.

Requirements and Important Information

- **5** labs of Web GIS programming and development. Each lab compliments the lecture.
- **5** homework assignments, each is to complete a lab.
- **1** final project. Up to 3 students can form a group to complete the course project.
- **Late homework policy**. The late homework penalty is: 1 point for every 12 hours. That is, if a homework is late for less than 12 hours, the final numerical score will be the score less 1. The penalty is 2 points if the work is late for 12 to 24 hours, etc., and 0 point after 48 hours.
- ALL materials including lecture slides, announcements, lab instructions and homeworks will be posted on ELMS. Check ELMS frequently.
- **As an advanced GIS course, it requires considerable student engagement.** You are expected to have a **strong desire to learn** essential GIS skills, and willing to design, program and debug your Web GIS system.
- **E-mail**: for efficient communication, please send your email to njzhou@umd.edu instead of ELMS message.

- **COMMUNICATE**! Feel free and do not hesitate to contact the instructor if you have any concerns, critiques and suggestions. They are ALWAYS welcome, and the earlier the better.
- The instructor will make every effort to accommodate students who are registered with the Disability Support Services (DSS) Office and who provide the instructor with a University of Maryland DSS Accommodation form. This form must be presented to the instructor no later than 9/11/2017.

Tentative Schedule

Date	Lecture Topics
8/28, 8/30	Introduction
9/4, 9/6	LABOR DAY; HTML 5
9/11, 9/13	HTML 5
9/18, 9/20	JavaScript (1)
9/25, 9/27	JavaScript (2)
10/2, 10/4	JavsScript (3); dojo; ArcGIS Server
10/9, 10/11	ArcGIS API for JavaScript (1)
10/16, 10/18	ArcGIS API for JavaScript (2)
10/23, 10/25	Online Spatial Analysis
10/30, 11/1	Project Report & Presentation
11/6, 11/8	CSS, Web design
11/13, 11/15	Web Services
11/20, 11/22	ArcGIS Online; THANKSGIVING
11/27, 11/29	Google Map API
12/4, 12/6	Conclusion
12/11	Final Project Presentation
TBA	Final Project due

Notes: 1) This is a tentative schedule subject to revision. 2) As a non-standard course, the due date of the final project (counted as the final Exam) will be determined by the University until mid-semester.

Grading

My baseline grade for the course, which assumes that you complete the work in good faith, on time, with serious effort, and with a certain degree of success, is a "B." To do better, you need to give something extra; to do worse, you need to give something less. The numeric points of student's work will be evaluated as:

Assignment Type	Number of Assignments	Points Per Assignment	Total Points
Homework 1, 2, 3, 4, 5	5	4	20
Attendance & class participation		N/A	5
Project presentation	1	10	10
Final Project and Report	1	65	65

The final letter grade is based on the calculated numeric points in the table, and will be graded as: A: 85.0-100, B: 75.0-84.9, C: 65.0-74.9, D: 55.0-64.9, F: <55.0

Academic Misconduct and Disruptive Behavior

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity for all undergraduate and graduate students. All students are responsible for upholding these standards for this course. **It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism**. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.shc.umd.edu. Students are also expected to treat each other, the TA and the Instructor with respect.