

Syllabus for GEOG677

Instructor

Name: Jianguo (Jack) Ma, Ph.D.
Office: LeFrak1137
Email: jma3@umd.edu
Phone: (301) 405-3861
Office Hours: Wednesdays (8:00pm-9:30pm)
(Additional office hours can be scheduled by appointment via email or phone.)

Teaching Assistant

Name: Caspar Chung
Email: cchung7@umd.edu
Office Hours: TBD

About the Course

Time: 5:30pm – 8:00pm, Wednesdays
Location: Online (<http://elms.umd.edu>)

Description

This course will help students develop a good understanding about the concepts and theories behind an increasingly important technology – Internet GIS. In addition, this course will introduce different techniques for creating, analyzing, and disseminating GIS data and services via the Internet. The topics covered include the hardware/software structure of the Internet, the means for communication between Internet-connected devices, applications that provide GIS programs and data, and performance and security concerns. Students will be provided with hands-on experiences to design Internet GIS applications, especially using ArcGIS Server.

Textbooks

Zhong-Ren Peng, Ming-Hsiang Tsou, Internet GIS: Distributed Geographic Information Services for the Internet and Wireless Networks, ISBN: 978-0-471-35923-4. This book can be purchased from the UMD bookstore or Amazon (<http://www.amazon.com/gp/product/0471359238>)

Software

The required software for this class include: ESRI ArcInfo 9.3 (ArcMap and ArcCatalog), ArcIMS, and ArcGIS Server.

ArcInfo is available in the department's Open GIS Lab or through Citrix server. ArcIMS and ArcGIS Server can be accessed from a designated server for this course.

Course Communication

All students are required to have a GLUE account and a UMD email address. We will frequently use email for communication in the class and we will **only** use UMD email addresses. Be sure that the email address on TESTUDO is your UMD account. Each student will also need permissions to the OpenLab. Instructions for getting these accounts will be given at orientation and on the first day of class.

Assignments, announcements, data sets, etc. will be made available to registered students via Blackboard: <http://elms.umd.edu>. You are strongly recommended to log in Blackboard and check the announcements regularly (at least once a day). You also need to check your UMD email account often so that you will get all the information sent to the class.

Assignments

There are totally five (5) lab assignments to be completed. Each of these lab assignments will count 12% of the final grade. Late submission of lab reports will result in a reduction of the grade for that assignment of 10 points (out of 100 in total) per day. However, in some rare situations (e.g. medical or family emergency), if you need extra time, you will have to contact the instructor before the due date so that the deadline may be extended.

Final Project

A final project is required to complete this course. In this project, students will need to integrate the concepts and techniques covered in the course to design an Internet GIS application. This application will be published and remain active on web to be graded. The project is preferably relevant to the student's academic field or professional work.

In addition, a written proposal of the final project (≥ 2 pages; single line space) must be submitted by the date specified in the Course Schedule. The proposal should: (1) clarify research topic; (2) provide background information; (3) explain why it is important; (4) identify the targeted audience or users; (5) describe data to be used and how to collect them; and (6) list the expected functions of the to-be-completed Internet GIS tool. Students are encouraged to contact the instructor early during the semester to discuss potential topics and scope. This proposal accounts for 5% of the final grade.

The grading of the final project depends on the functionality, creativity, complexity, robustness, and the user-friendliness of the Internet GIS website, which accounts for 30% of the final grade.

The project must be carried out individually and independently. This project should be limited in scope and designed for completion during the semester. Each student is required to present his/her research project (a live GIS website) in the last class. PowerPoint presentation is optional. The presentation (~5 minutes) accounts for 5% of the final grade.

Grading

The distributions of grade among lab assignments, quizzes, exam, and final project are:

Lab Assignments =	60%
Final Project =	40%

The plus/minus grading system will be used to assign student grades which will be determined as follows:

97-100 =	A+
93-96.99 =	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-
67-69.99 =	D+
63-66.99 =	D
60-62.99 =	D-
<60 =	F

Minor adjustments to this scale might be made based on the performance of the class as a whole.

Rules & Policies

Lab Access

Students have access to the GIS labs through their UMD ID cards as well as an account to use the PCs in the GIS lab. Students are responsible for keeping their account in good standing. This includes keeping the total amount of storage space on the network drive to a reasonable amount that is required to complete the current lab assignments. No materials unrelated to the GIS courses are allowed. Storage space allocations will be checked periodically to determine if any students exceed the reasonable amount of storage. Failure to comply with this policy may result in suspension of GIS lab use privileges.

Class Environment

In this class, students will meet in a virtual space online which will be treated as a classroom. It is important to recognize that the classroom is an environment that requires respect for all participants. Therefore, students are expected to conduct themselves in a considerate manner. Disruptive behavior of any kind will not be tolerated. Students who are unable to show civility with one another, the teaching assistants, or myself will be subject to being referred to the Office of Student Conduct or to Campus Police. You are expected to adhere to the Code of Student Conduct.

Medical Excuses

Campus Senate policy requires students who are absent due to illness/injury to furnish documentary support to the instructor. I require students to contact me by email or by phone prior to class time in which you indicate that you have an illness or an injury. You must provide written documentation verifying your illness/injury immediately upon your return to class. You will not be allowed to turn in missed assignments or make up quizzes, tests, papers, etc. if you have not provided this documentation. Documentation not presented to me in a timely manner will not be accepted. In addition, if it is found that you have falsified the documentation provided, I will refer you to the University's Student Conduct Office.

Students with Disabilities

Any students with a disability in this class are encouraged to meet with the instructor privately during the first week of class to discuss accommodations. I will make every effort to accommodate students who are registered with the Disability Support Services (DSS) Office and who provide me with a University of Maryland DSS Accommodation form which has been updated for the Winter 2008 semester. This form must be presented to me no later than December 31, 2008. I am not able to accommodate students who are not registered with DSS or who do not provide me with documentation which has been reviewed by DSS after December 31, 2008.

Religious Preference Absence

Please refer to the Online Undergraduate Catalog Policy on Religious Observance.

Academic Dishonesty

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 at Maryland for all undergraduate and graduate students. As a student, you 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>.

Course Schedule

This is a tentative schedule and may be adjusted to suit our class.

Week	Date	Lecture Topics	Readings	Assignments
1	Dec 3	Course Overview Introduction to Internet GIS - What is Internet GIS? - Why do we need Internet GIS? - Demonstrations and Examples	Chapter 1	
2	Dec 10	The Internet - Network Environments - Network Communication Models - Protocols	Chapter 2	Lab 1 posted
3	Dec 17	Client/Server Computing and Distributed Component Framework	Chapter 3	Lab 1 due Lab 2 posted
4	Jan 7	Framework of Distributed Geographic Information Services	Chapter 5	Lab 2 due Lab 3 posted
5	Jan 14	Markup Languages - HTML - XHTML - XML - GML	Chapter 7	Lab 3 due Lab 4 posted
6	Jan 21	Geospatial Standards for Distributed GIServices	Chapter 6	Lab 4 due Lab 5 posted
7	Jan 28	Web Mapping Programs - ArcIMS - ArcGIS Server - Manifold - GeoMedia - MapExtreme - MapGuide	Chapter 8	Lab 5 due
8	Feb 4	ArcGIS Server (guest lecturer from ESRI)	Assigned Reading	
9	Feb 11	Mobile GIS Applications and Case Studies of Internet GIS	Chapter 9	
10	Feb 18	Project Presentation		Final project due