ANTH448/689D Special Problems in Anthropology: GIS for Anthropologists

Instructors
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Office Hours: Online 30 minutes before class and 30 minutes after class.

About the course
Time and day: Mondays and Thursdays 5:30-7:30 pm
Location: Online (http://elms.umd.edu)

Description
This course is an introduction to Geographic Information Systems (GIS) designed for anthropology students. A combination of lectures and laboratory assignments will introduce the basic concepts of mapping display and spatial analysis in both archaeological and ethnographic contexts. Students will develop their own GIS research project using the skills, concepts, and models examined during the term.

Required Textbooks

There will also be additional readings distributed electronically.

Required Software/Hardware
ArcGIS (10.3.X) - Note that this program may also be available through the Ormsby et al book but you should download a trial version through ESRI at http://www.esri.com/software/arcgis/arcgis-for-desktop/free-trial.
You will also need to enable trials of the Extensions.

For system requirements see ESRI’s website – http://www.esri.com/software/arcgis/arcgis-for-desktop/system-requirements

A fairly high degree of familiarity and ease with computers and managing information is expected. You will also need a computer microphone or headset throughout the course for Q&A as well as to present your final project.

Prerequisites
An introductory anthropology class is a required prerequisite. A previous course in statistics is preferred but not required.

Course Communication
We will frequently use email for communication in the class. Be sure that the instructor has your most current email address if it is not a UMD email address.
Assignments, announcements, data sets, etc. will be made available to registered students via Canvas: http://elms.umd.edu. You are strongly recommended to log in and check the announcements regularly. You also need to check your UMD email account often so that you will get all the information sent to the class.

**Grading**

*All assignments, proposals, reports etc. will be submitted electronically via Canvas.*

50% Lab Assignments: There are a total of five lab assignments to be completed. Each of these lab assignments will count 10% of the final grade. Late submission 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.

5% Project Proposal: A proposal of your final project (1-2 pages in length). This should articulate a clear research question, explaining why GIS is useful in addressing that question, and outlining your data sources.

35% Final Project: A conference-quality poster using GIS to address a clearly articulated research question (in digital form; you need not print these out unless you wish).

5% Final Presentation: A 10 minute presentation of your research to the class (this may incorporate your poster or could be in slide format). Presentations will be given on the last day of class.

5% Participation: This class will be most successful when students participate in discussions, read the assignments, and apply themselves. Attending all classes is important but if you must miss a class, you will be able to watch the recorded lecture.

**Graduate students enrolled in 689D are required to find and read at least 5 articles pertaining to their research project and turn in an annotated bibliography at the end of the term.**

**Rules & Policies**

**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 and the instructors 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.

**Students with Disabilities**

Any students with a disability are encouraged to meet with the instructor privately during the first week of class to discuss accommodations. We will make every effort to accommodate students who are registered with the Disability Support Services (DSS) Office and who provide us with a University of
Maryland DSS Accommodation form. We are not able to accommodate students who are not registered with DSS or who do not provide us with documentation which has been reviewed by DSS.

**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**

**Class 1** (1/4/2016) – Introduction to GIS
What is your research question? How will you use GIS? What kind of data do you have? Begin to think about projects.
Lab 1 (Intro to ArcGIS for Desktop) out

**Reading assignment:**
*Getting to Know ArcGIS* – Chapters 1-4 and 13


**Class 2** (1/7/2016) - Data Management, Editing and Spatial Queries
Lab 1 due
Lab 2 (Historic and Thematic Maps) out

**Reading assignment:**
*Getting to Know ArcGIS* – Chapters 5-7, 8a & 8b, 9-10 and 14-16


**Class 3** (1/11/2016) - Data Analysis
Overlays, Proximity, Buffering and Point Pattern Analysis
Lab 2 due
Lab 3 (Basic Analysis) out

**Reading assignment:**
*Getting to Know ArcGIS* – Chapters 11-12
*ESRI Guide to GIS Analysis, Volume 2* – Pages 80-103 (available in PDF form on ELMS)

**Class 4 (1/14/2016) – Advanced Data Analysis and Modeling**
Areal Analysis: Mapping Clusters, Measuring Geographic Distributions, Analyzing Patterns
Lab 3 due
Lab 4 (Advanced Analysis) out

*Project Proposals are due on Wednesday, 1/13/2016 at midnight, to allow for instructor feedback.*

**Reading assignment:**
*ESRI Guide to GIS Analysis, Volume 2* – Pages 80-103 (available in PDF form on ELMS)


**Class 5 (1/18/2016) – Surface Analysis**
Lab 4 due
Lab 5 (Surface Analysis) out

**Reading assignment:**
*Getting to Know GIS* – Chapter 20

**Class 6 (1/21/2016) – Other GIS tools, open source GIS, cloud based GIS and data sharing through the Web.**
Project Presentations
Lab 5 due

*Project Posters are due after class, by midnight, on Thursday 1/21/16*