

Applications of GIS

GIS 3048-01

Spring 2018

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SIPA office 306

Office hours: T/Th 3:15 – 5 in GIS lab

Book

Title: GIS Tutorial 1: Basic Workbook (w/CD & DVD) , Author: Gorr

Grades

Lab exercises	25%
Quizzes	25%
XY points project	10%
Qualifying assignment	10%
Qualifying assignment	10%
Final Project	20%

Flipped style class

What is a flipped (or inverted) class? We do the "lecture" part of this course at home and we do the homework part of this course in the classroom. Why? 1. My goal is for everyone to leave this course knowing ALL of the content that I have selected. Not 75% to pass, not 89% and beg for a point to get an A, definitely not 64% and barely fail. 2. If this was an office or a research team we would all contribute and work together so that we collectively complete what we are working on. 3. And mainly because...what is learning anyway. You – the student – must do all of the tutorials in the book on your own time (it's best to just be in open lab Tuesdays and Thursdays) Me – the professor – will display during class time what the assignments should look like and help you make your maps look like mine. Along the way I will show you tricks and efficient ways that people who work in the industry actually do things and how what we are doing is applied

Outcomes

1. Map making
 - Understand the basics of building a readable map.
 - An understanding of the methods of Geographers in terms of this application: GIS
 - How is GIS used in the world. How is this tool vital to fields outside of Geography
 - Understanding spatial relationships through using maps for conceptual exercises
2. Analyze data
 - Gaining tools of research in social science methodology
 - Applying the knowledge gained this semester into a final project used in actual research
 - How to understand spatial relationships and correlations of data
3. Compliment your major

- How is GIS going to benefit you in your major and your career
 - Future research projects in other classes
4. Prepare for entry level job
- GIS internship
 - Graduate School

Overview

This course will be in a format called the “inverted classroom”. This means that generally for homework you will be doing the lessons and in the classroom we will be doing the homework. Please google what inverted classroom means and why it is so beneficial for interactive learning. If you do not do the lessons on your own time it will be a very frustrating use of class-time to do the homework. There is a separate document that has the schedule of all assignments. Make all maps excellent, to the caliber of the first assignment. NO LATE WORK.

Lab Exercises

Lab exercises are daily. The assignments are at the end of each chapter. There are a total of 8 lab exercises. I will be in the GIS lab to assist students with their assignments but students can also assist each other with their assignments.

Quizzes

For each chapter that we cover I have created a “quiz”. These are generally easy if you have done all of the tutorials and assignments.

XY PROJECT

This is an extremely easy assignment. When you have completed it you will wonder if you did it correctly because it is worth 10% of your grade and it is easier than any other assignment all semester. Use either one of FIU’s GPS units or download an app on your phone. Collect points of something, anything, that is relevant, then upload these points to a base map. Why? There are many entry level jobs in which this is what you would do daily, but it doesn’t exist in the book so I want everyone to be able to truthfully say in a cover letter that they know how to do it and have experience.

Qualifying Assignment

The qualifying assignment is similar to the lab assignments but it is not in the book. I have created this assignment. This assignment is to ensure that students leave this class with the fundamentals of GIS. You will be given a data set. With this data set you must;

1. locate the address on a map
2. build a buffer around each location
3. create shape files of the areas of concentration of this data
4. use census to find more ideal locations for this data group
5. create new shape files of the ideal locations for this data group

Final Project

The final product will be a scientific research poster.

Unlike research in most of your majors, this poster will be mostly the maps that you

make with limited if any lit review. The other sections should be there; Abstract, Methods, Conclusions, and citations, your maps should speak for themselves as the data analysis section.

You will be graded on the;

1. Research on collecting data and using data
2. Use of the skills you have learned in GIS
3. the appearance of the poster.

It is always good to have more data than you use.

<https://www.youtube.com/watch?v=MqgjgwIXadA>

Attendance

Attendance is mandatory. This is a small class and I will know when you are not here

Academic Honesty

Cheating and plagiarism will result in a failing grade for the course. All work submitted for credit in this class must be original and may not be submitted for credit in any other course. Resubmitting course work that was submitted for credit in another course will result in a failing grade for that assignment and possibly for this course.

ADA Statement:

If you have a documented disability as described by the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973, Section 504, you may be eligible to receive accommodations to assist in programmatic and/or physical accessibility.

Academic Dishonesty

Cheating and plagiarism will be reported to Judicial Affairs. An appointment should be made before a grade is assigned for the assignment to include the course instructor, a departmental representative, and the student who has been accused of cheating.