Course Syllabus

Intro to Geographic Information Systems

Winter 2021 - Virtual Class

UP 6700 / GPH 3600

Credits: 4

Urban Studies & Planning

Wayne State University

Instructor: Alex Bellak

Email: af0414@wayne.edu

Due to the difficulties we are facing with COVID, I don't have in person office hours, but I will make every effort to address issues as they arrive in a timely fashion via email first. If addressing an issue or concept with the course material isn't successful through emails, I am also offering to meet virtually on Saturday's (9:00 - 2:00) where we can utilize a remote PC software to diagnose the issue you are experiencing. Dealing with homework issues should be attempted via email first before setting up an appointment as most issues can be addressed via email as long as quality screenshots and details are shared.

Appointment to meet on Saturday must be confirmed before 4:00PM Friday.

Learning Objectives

- Understand the fundamental concepts of GIS such as:
  - Components of a GIS.
  - Vector vs. Raster data.
  - Map projections and Coordinate Systems.
- ArcGIS software to perform basic GIS analyses such as:
  - Select day by attribute and location.
  - Joining and relating tables.
  - Buffering, Clip, Intersect, and Union data.
  - Produce maps.

Course Description

This course introduces the concepts and components of a geographic information system (GIS). It also teaches the essential skills of operating a functional GIS using ArcGIS software package. By completing this course, students will understand the operational processes of spatial data acquisition, editing, spatial query and display, spatial analysis and, cartographic mapping.

Textbook

Required: *Mastering ArcGIS, 8th Edition.*

Authors: Maribeth Price

Publisher: New York: McGraw Hill (2019)

ISBN-13: 9781259929656; ISBN-10: 1259929655

Materials

 You will need a Windows PC (Windows 7 or better, preferably Windows 10) to install ArcMap, <u>A Mac or Google Chromebook will not work</u>.

- The Price textbook is available at the campus bookstore and there is also an etextbook version available on Amazon for rent.
- You will be provided a license to ArcGIS software to install on a personal computer.
- A microphone for your computer integrated or external will do.

Grading

- o Weekly Assignments will consist of 60% of grade.
- o The Midterm will consist of 15% of grade.
   - Midterm will consist of a combination of Multiple Questions, Short Answers and short lab exercise.

- o Final Project will consist of 20% of grade.
  - ▪ Final project will consist of Multiple Questions and a combination of lab exercises demonstrating proficiency of ArcMap and understanding of spatial analysis problem solving.
- o Discussion sessions participation will consist of 5% of grade.

Software and Written Assignment Policies

Most assignments will be due on Canvas. Late work will be marked down 10 points for every twenty-four hours after the due date. University policies on academic honesty will be rigorously enforced. If you are not sure whether something is plagiarism or not, talk to me before submitting your assignment. The discovery of plagiarism will result in an automatic failure for that assignment, and, depending on the severity of the situation, potentially an F for the course.

Communications

Because this is an online class, I will do my best to respond to each email within 24 hours. Online or in-office office hours are the best way to get a question answered!

Collaboration

You can feel free to use canvas, email, or other means to collaboration with each other on software assignments (not written assignments!). Appropriate collaboration could include things like helping a classmate find a menu item in the program, comparing independently calculated answers to a homework question, or explaining to a classmate how you got an answer. In all these situations, though, each person must do his or her own work. Simply copying a classmate's answers to an assignment constitutes plagiarism and will be treated as such (see above). If you are concerned that you are crossing the line, or you don't understand where the line is, ask! Collaboration of any kind is not appropriate on the final project.

Module Discussion Sessions

Module discussion sessions is the method I will use to assess your participation and contribution to the class. You will find that your involvement in the discussion sessions is

highly correlated with your grades on other assignments. These Topics with be posted on the discussion board on Canvas.

Grading Rubric for Homework Assignments

Each assignment is worth a total of 50 points with each question worth anywhere from 3 to 5 points each.

Criteria of points awarded per problem

25%	50%	75%	100%
Problem attempted with demonstrating result incomplete.	Resulting answer incorrect or mostly incorrect but showing considerable work and basic level of understanding to attain answer.	Answer partially correct or answer not clearly demonstrated.	Answer correctly answered and result clearly displayed.

A minimum amount of points will be awarded for attempting the question, with a full amount of points awarded for a completely correct answer.

Grading Rubric for Discussion Boards

The maximum for each discussion session is 10 points.

Criteria

Quality of post	Appropriate comments: thoughtful, reflective, and respectful of other's postings	Appropriate comments and responds respectfully to other's postings	Responds, but with minimum effort (e.g. "I agree with Bill")	No posting

Points Awarded	4	3	1	0
Relevance of post	Posts related to discussion topic; prompts further discussion of topic	Posts topics that are related to discussion content	Posts topics which do not relate to the Discussion content; makes short or irrelevant remarks	No posting
Points Awarded	3	2	1	0
Contribution to the learning community	Aware of needs of community; attempts to motivate the group discussion; presents creative approaches to topic	Attempts to direct the discussion and to present relevant viewpoints for consideration by group; interacts freely	Does not make effort to participate in learning community as it develops	No posting
Points Awarded	3	2	1	0