Course Overview

This is an advanced course in Geographic Information Systems (GIS) that focuses on some GIS concepts and technologies. It emphasizes GIS and database skills on a Windows Platform, using ArcGIS 10.2 and a variety of GIS related database and software packages, focusing primarily on ESRI products. The goal is to give a hands on experiences with a variety of GIS techniques and technologies so in future classes or job interviews students might not be able to call themselves experts but will have had hands on experience and an understanding.

This is a hands-on computer course; every week will be doing some exercises and homework on the computers. Students are expected to keep pace with lab/homework assignments, take sufficient notes and spend a lot of time on the computer – including time outside of class. The course will end with a two-week period of laboratory work on a comprehensive project. The last two sessions will consist of a presentation of the student
projects done in a conference presentation style.

Throughout the course we will also be emphasizing the importance of sound cartographic skills. Students will submit a weekly Map Journal that will be graded on its overall appearance and use of cartographic rules/concepts talked about in class.

Finally, GIS is only a tool, albeit a powerful one; in order to maximize its utility, a GIS analyst must be creative. Demonstration of creativity may influence scoring provided quality remains uncompromised.

**Final Grade Breakdown**

- **20%** Assignments  
  *Handed out in Labs & Lectures, work to build understanding of how GIS works*

- **20%** Map Journals  
  *Showcase your cartographic skills, and develop an understanding of what makes a good map*

- **10%** Challenge I  
  *Database Driven Maps*

- **10%** Challenge II  
  *GeoDatabase Design*

- **40%** Final Project and Presentation  
  *Presentation about your semester long project, along with short paper and multiple maps*

**Class Structure & What to Expect?**

- Class will start with a Internet GIS site or two of the week
- A weekly map critique of cartographic skills showcasing good/bad maps
- Captivating lectures will get you excited to dig into that weeks Lab activities
- Fun Labs will guide and enforce GIS concepts and techniques used by today professionals
- Assignments will help enforce the labs and lectures are due before the next class starts
- Students will be required to do two short presentation about a final project

**Software Recommendations**

- ArcGIS Pro Version > 2.4
- Adobe Photoshop
- Adobe Illustrator
## SCHEDULE

### Semester Quick Look

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Final Project Idea Presentation

Expectations - Week 6 - 2/27/2020

2 - 3 Minute Presentation

No Media Presentation

Outline The Following for your Project

  Idea - What is your Idea?

  Data - What Data do you think you will need?

  Potential Hurdles - What will stop you from achieving this goal?
FINAL PRESENTATION

Expectations

Final Project Measurable's

- Written Report 5-10 pages
  - Intro to your project
  - Process used
  - Issues or Setbacks
  - Results
- 10 Minute Presentation
  - Goal of your Project
  - Data Sources
  - Issues or Setbacks
  - Processes Used
  - Map Examples
  - Some sort of Digital Presentation
- 3 or More Polished Maps (Paper or Interactive)
1. Students with disabilities. Notice to these students should appear prominently in the syllabus so that special accommodations are provided in a timely manner. [http://uw.edu/arc/](http://uw.edu/arc/)

2. Religious observances. Accommodations for absences due to religious observance should be noted. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-2.%20Accommodation%20of%20Religious%20Beliefs.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-2.%20Accommodation%20of%20Religious%20Beliefs.pdf)


4. Incompletes. A notation of "incomplete" may be given in lieu of a final grade to a student who has carried a subject successfully until the end of a semester but who, because of illness or other unusual and substantiated cause beyond the student's control, has been unable to take or complete the final examination or to complete some limited amount of term work. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-13.%20Incomplete%20Grades.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-13.%20Incomplete%20Grades.pdf)

5. Discriminatory conduct. Discriminatory conduct will not be tolerated by the University. It poisons the work and learning environment of the University and threatens the careers, educational experience, and well-being of students, faculty, and staff. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%205-1.%20Discriminatory%20Conduct%20Policy.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%205-1.%20Discriminatory%20Conduct%20Policy.pdf)

6. Title IX/Sexual Violence. Title IX is a federal law that prohibits sex discrimination in education program or activities, and UWM policy prohibits such conduct (see Discriminatory Conduct, above). This includes sexual violence, which may include sexual harassment, sexual assault, relationship violence, and/or stalking in all educational programs and education-related areas. UWM strongly encourages its students to report any instance of sex discrimination to UWM’s Title IX Coordinator (titleix@uw.edu). Whether or not a student wishes to report an incident of sexual violence, the Title IX Coordinator can connect students to resources at UWM and/or in the community including, but not limited to, victim advocacy, medical and counseling services, and/or law enforcement. For more information, please visit: [https://uw.edu/sexual-assault/](https://uw.edu/sexual-assault/)

7. Academic misconduct. Cheating on exams or plagiarism are violations of the academic honor code and carry severe sanctions, including failing a course or even suspension or dismissal from the University. [https://uw.edu/deanofstudents/conduct/academic-misconduct/](https://uw.edu/deanofstudents/conduct/academic-misconduct/)

8. Complaint procedures. Students may direct complaints to the head of the academic unit or department in which the complaint occurs. If the complaint allegedly violates a specific university policy, it may be directed to the head of the department or academic unit in which the complaint occurred or to the appropriate university office responsible for enforcing the policy. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%205-1.%20Discriminatory%20Conduct%20Policy.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%205-1.%20Discriminatory%20Conduct%20Policy.pdf)

9. Grade appeal procedures. A student may appeal a grade on the grounds that it is based on a capricious or arbitrary decision of the course instructor. Such an appeal shall follow the established procedures adopted by the department, college, or school in which the course resides or in the case of graduate students, the Graduate School. These procedures are available in writing from the respective department chairperson or the Academic Dean of the College/School. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-10.%20Appeals%20by%20Students.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-10.%20Appeals%20by%20Students.pdf)

10. LGBT+ resources. Faculty and staff can find resources to support inclusivity of students who identify as LGBT+ in the learning environment. [http://uw.edu/lgbtq/](http://uw.edu/lgbtq/)

11. Smoke and Tobacco-Free campus. UWM prohibits smoking and the use of tobacco on all campus property. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%2010-8.%20Smoke%20and%20Tobacco-Free%20Campus%20Policy.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%2010-8.%20Smoke%20and%20Tobacco-Free%20Campus%20Policy.pdf)

12. Final Examinations. Information about the final exam requirement, the final exam date requirement, and make-up examinations. [https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-9.%20Final%20Examinations.pdf](https://apps.uwm.edu/secu-policies/storage/other/SAAP%201-9.%20Final%20Examinations.pdf)