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*

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**Class Structure & What to Expect?**

- Class will start with an 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 week’s Lab activities
- Fun Labs will guide and enforce GIS concepts and techniques used by today’s 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
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<tr>
<th>Weeks</th>
<th>Title</th>
<th>Map Journal</th>
<th>Assignment</th>
<th>Presentation</th>
<th>Challenge</th>
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<td>What Makes a Good Map</td>
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<td>GIS Project Design How To</td>
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<td>Introduction to Geo Data</td>
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<td>Final Presentations</td>
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FINAL PROJECT IDEA PRESENTATION

Expectations - Week 6

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 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)