

INTERNET GIS

Urban Planning 794 | Monday's 5:30 - 8:10pm | SARUP 158

Schedule

Class/Lab - Mondays
5:30pm - 8:10pm

Office Hours - By Appointment

Mid-Term - TBDs

Final - TBD

Instructor

Paul Vepraskas, GISP
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Lab Instructor

Kurt Meingast
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Prerequisites

None - even though this class will expose you to a lot of programming it is done with the understanding that students entering this class have zero programming experience & help is always available & encouraged



Course Overview

This course focuses on emerging technology in geographic information systems (GIS): Specifically Internet Based GIS. Internet GIS is a network-centric GIS technology that uses the Internet and the World Wide Web as a primary means of providing access to the functionality (i.e., analysis tools, mapping capability) of GIS and to the spatial data and other data needed for various GIS applications. It provides users capability to work interactively with maps and conduct spatial analysis on the Web.

There are two goals of the course. The first is to give you a background in Internet GIS models, procedure, and vocabulary so that you will have a better understanding of the concepts of Internet



Class Structure & What to Expect?

- Class will start with a Internet GIS site or two of the week
- A weekly code debug session will help you understand how to read HTML/JavaScript
- Captivating lectures will get you excited to dig into that weeks Lab activities
- Fun Labs will build off of one another guiding you through the process of developing a GIS website, along the way teaching proper data setup, UI Planning & Layout, and Programming
- Assignments will help enforce the labs and lectures are due before the next class starts

Software Recommendations

- ArcGIS Pro
- Aptana, Visual Studio or Sublime Text
- Adobe Photoshop*
- Chrome
- Fiddler

*Cost Involved

GIS, and the technology/languages currently used in the industry. The second is to expose you to internet GIS software and procedure through hands-on experience so that you can gain necessary skills to work with Internet GIS programs and develop Internet GIS Applications.

We will explore what is currently possible when GIS leverages the internet by working with the most current software and development standards used by professionals. Through hands on training you will be exposed to the procedures and languages needed to utilize the web. This training will include setting up data for the web, publishing options, security, target platforms, web site design, and basically everything Web GIS! We will cover the basic techniques in HTML, CSS, JavaScript, ArcGIS Server, ArcGIS Online, and a variety of other technologies.

Final Grade Breakdown

- 10% Assignments
Handed out in Labs & Lectures
- 5% Code Assignments
Handed out in Labs & Lectures
- 5% Project Design Framework Presentation
Short 5-10 Min Presentation of Project Ideas with time for questions
- 30 % Midterm Exam
ESRI JavaScript API Site created with the JavaScript Builder (No Customization)
- 50 % Final Project and Presentation
Evolution of the Midterm Site with measured levels of customization and sound UI



FINAL PROJECT IDEA PRESENTATION

Expectations - Week 4

5 - 10 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?

UI Tools - What Tools do you think users will need or want?

MID-TERM

Expectations

For the Mid-Term you will build a Site Using the JavaScript Builder in ArcGIS Online that utilizes the data for your final and demonstrates a well thought out approach to displaying that data and how the end user will experience it.

Mid-Terms will be done individually, but you can use the help of any professor, TA, or students in creating your site.

Mid-Term Measurable's

- ArcGIS Online JavaScript Builder Site
- At Least Four tools incorporated into the site
- Custom graphics and Color Scheme

FINAL PRESENTATION

Expectations

For the Final you presentation you will download the code created by the Mid-Term and install it as a stand alone website on the Universities System. You will then make changes to the HTML/JavaScript to enhance the look of the site, and its functionality. A landing page will also be created to inform users what to expect from the site and inform them of the project. The landing page will also have a help section.

At the presentation you will give a short 5 minute media presentation about the components and changes you made to the site, what tools you used, what data was consumed, & what services you created. Following the presentation you will demonstrate the GIS site and its landing page.

Final Projected will be done individually, but you can use the help of any professor, TA, or students in creating your site.

The site will be graded on creativity, level of customization, simple and easy to use UI, a pleasant UE, and approach to simplifying complex analysis.

Final Project Measurable's

- Landing Page
 - Intro to your project
 - How to or Help Guide to the Site
- HTML/JavaScript Site Installed on UWM Servers
 - Some Customization from the JavaScript Builder