

Special Topics in GIS: A Web GIS @ Westfield State

GARP 0317-001 – Fall 2012 – CRN 10188

1) About this course

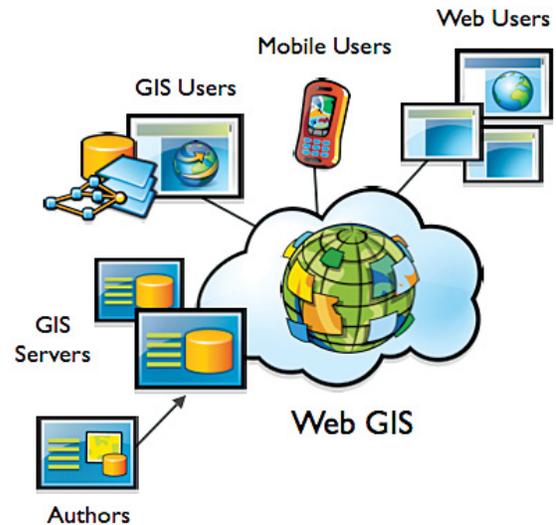
This course builds upon the skills and knowledge you learned in *Introduction to GIS*:

- How to 'drive' ArcGIS
- How to obtain and create geospatial data
- How to create professional and meaningful maps
- How to perform basic geospatial analysis
- How to share your maps with others in a variety of formats

Some of you have already taken our *Advanced GIS* course and thus have experience with some of the more advanced ArcGIS tools and capabilities.

This course is not any more difficult than GARP 0244/0344, but focuses on the network/online side/server side of GIS:

we create maps, data, tools, and services on our *local* computer, but here we will *share* them with the rest of the world via the web:



*Our data, maps = our entire GIS is stored on a server and accessible anytime from anywhere by anyone using any device running a web browser (= no special software needed).
That GIS in the 21st century!*

Online / Web GIS are everywhere: virtually every city/town/state makes their GIS data available online.

A good example is MassGIS, the online GIS for the Commonwealth of Massachusetts. Oliver, the online data viewer allows you to map and query MassGIS data, create and share maps, and download the underlying data as shapefiles.



➔ **Here we are creating an Oliver for Westfield State University!**

2) Time, Location, Numbers

- GARP 0317-001; CRN 10188, 3 credit hours
- Monday and Wednesday, 13:40 to 14:55, Bates 22 GIS Technology Center

We meet formally twice per week. Therefore, missing class (for any reason) is a big problem and should be avoided if at all possible. You will spend significant additional time each week outside of the formal class periods working with others on this project.

This is a difficult and time-consuming class that only works if you are interested and actively engaged. This is not a class where I show you how things are done and you follow along...rather we need to define the project, figure-out strategies and solutions, find resources, and solve problems – *together*.

➔ **This is not an easy course to fill-out your schedule!**

I expect a high level of individual effort and engagement. What you get out of this class is primarily a function of the amount of effort you put in. This is not a class where you can sit back and wait for 'learning to happen' – you need to be consistently and actively engaged.

This is a group effort, so you need to be willing to work with others: that means being reliable and following-through with your responsibilities – otherwise you drag everybody down – that's not acceptable.

It may be necessary to meet (occasionally) at different times and locations in order to complete some of the data collection or meet with GUS experts or stakeholders. It may also be beneficial to meet on weekends. We will make every effort to account for everyone's needs and responsibilities when scheduling extra or longer meetings.

3) Prerequisites

GARP 0244 and robust computer and mathematical/statistical skills (e.g. knowledge of Microsoft Excel)
Please consult with me if you have any concerns.

- We will not be learning basic computer skills!
- We will be learning all kind of new computer skills, tools, and programs – you have to be able to find instructions and tutorials on the web to teach yourself these skills!
- I assume that you still understand and remember all that you learned in GARP 0244. Otherwise it is your responsibility to review the material again on your own time.

If using your own computer...

- Your own computer = your own problem!
- Your own Internet connection = your own problem!
- No support from me or our IT Helpdesk!
- Problems with your own computer are NOT an excuse for late work.

4) Required Course Resources

A dedicated USB flash drive or external hard drive

- Required size: 8 GB or greater.

Standard 3-ring binder

- To organize the weekly course materials

ESRI Global Account

- ESRI Global Account at <https://webaccounts.esri.com/cas/index.cfm>
- Register the account for ArcGIS Online at <https://www.arcgis.com/home/signin.html>

Google Account

- Google Account at <https://accounts.google.com/Login>

A Blog or a Website

- For blogs use WordPress at <http://wordpress.com/>
- For Websites use Google Sites at www.sites.google.com
- If you really want to use something else...check with me first!

➔ We will not use a textbook!

5) Learning Goals

1. GIS Knowledge – *You will be able to:*
 - Create professional web-based GIS using advanced technology to share maps, geospatial data, and analytical tools.
 - Create and maintain a professional and organized website or blog documenting and sharing your work.
2. Problem Solving and Critical Thinking – *You will be able to:*
 - Use intellectual inquiry, critical analysis, and self-study to acquire the skills and advanced computer and GIS tools needed to solve the problem(s).
 - Collaborate with others in a professional and responsible manner to achieve a common goal using advanced technology.
3. Perspective and Communication – *You will be able to:*
 - Organize and execute projects with multiple stakeholders, complex requirements, and defined deadlines using appropriate technology.
 - Effectively communicate your solution(s) to the public.

6) Course Logistics

- ➔ ***It is your responsibility to keep-up with the course material and assignments by the assigned due dates.***
 ➔ ***Professional behavior and adult manners are required in this course.***

Assessment

This is a group project where we support each other. However, you are always responsible for your own original work and due dates.

1. *You in Space* = your own Web GIS using ArcGIS Online (20 percent)
2. A series of graded assignments, bench marks, and sub-projects (20 percent)
3. Everyone is responsible for creating at least one original data layer relevant for Westfield State University as a file geodatabase with useful attribute and metadata (10 percent)
4. A professional, well-organized, and up-to-date blog or website documenting your work (10 percent)
5. A web-based user manual / tutorial / Help function for the WSU Web GIS! (30 percent)
6. Attendance, engagement, and participation (10 percent)

Grade Conversion	
A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	60-66
F	0-59

Detailed instructions and grading criteria will be provided. Professionalism and attention to details and due dates are always part of the grading.

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	Phone and office	413-572-5595, Wilson 201
	Office Hours	MWF, 12:15 to 13:15
	Web	www.westfield.ma.edu/cbraun

➔ If you feel that you are not progressing as well as you hoped, please feel free to talk to me during my office hours or a mutually convenient time – the sooner the better! Please do not wait until the end of the semester. I'm happy to support you to help you succeed.

Course Schedule

Part 1	Week 1 to 3	GIS Refresher What is Online / Web GIS? You in Space = Create your own Web GIS
Part 2	Week 4, 5	Project Organization and Definition Stakeholders, Data and Tools Requirements and Features of the Web GIS
Part 3	Week 6, 7	Data Collection, Data Creation Data Organization and Management
Part 4	Week 8 to 12	Project Execution: A Web GIS @ WSU!
Part 5	Week 13 to 15	Project Presentation Project Documentation

We will include guest speakers, meetings with GIS experts and stakeholders, field work, field trips, etc. as appropriate. Adjustments to the course schedule, requirements, and assessment may be necessary to account for situations that arise over the course of the semester.

Helpful Resources

Course website

<http://www.westfield.ma.edu/cbraun/teaching/special-topics-in-gis/>

GIS Resources

<http://www.westfield.ma.edu/cbraun/resources/gis-resources/>

ArcGIS Online Help

http://resources.arcgis.com/en/help/main/10.1/#/What_is_ArcGIS_Online/01w100000045000000/

Free ESRI Training

<http://training.esri.com/gateway/index.cfm?fa=search.results&cannedsearch=2>

The Fine Print

- Attendance is mandatory – missing class is unacceptable.
- If you have to miss class...you have to inform me beforehand.
- The required resources are mandatory.
- The due dates are mandatory, late work is graded as zero, no excuses!
- Please be on time and don't leave before the end of class.

The University *Academic Honesty Policy* can be found on page 43 of the current Westfield State University Bulletin. Students are expected to do their own work. Plagiarism and cheating are inexcusable. Any instance of plagiarism or cheating will result in no credit for the assignment or failure of the course. The *University Classroom Student Conduct Policy* can be found on page 45 of the current Westfield State University Bulletin available online at <http://www.westfield.ma.edu/uploads/registrar/bulletin.pdf>.

It is the policy of Westfield State University to provide reasonable accommodations to students with documented disabilities. Students, however, are responsible for registering with the Banacos Academic Center, in addition to making requests known to me in a timely manner. If you require accommodations in this class, please make an appointment with me as soon as possible, so that appropriate arrangements can be made. The procedures for registering your need for reasonable accommodations for disabilities can be discussed with staff at the Banacos Academic Center. Please write to banacos@westfield.ma.edu.

→ Contact me anytime help and clarification!