Important Info

Weekly Calendar

	Mon	Tues	Wednes	Thurs	Fri
09					
10					
11		Teaching		Teaching	
12			Office Hours	Office Hours	
13					
14		Office Hours			
15	Teaching		Teaching		
16					

Point Breakdown

- Helping Neighbors 5%
- Discussions and Exercises 20%
- Final Project 25%
- Labs 50%

Grade Evaluation

| Grades	D>60	C>70	B/C	B>83	A/B	A>93
% →	60	70	80	90		100
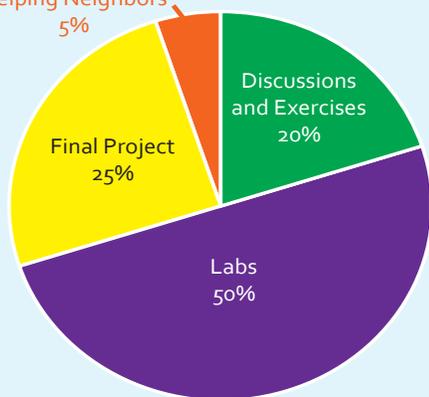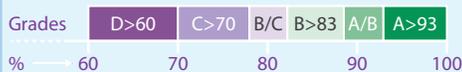
Websites & Resources

Course Twitter: @uwl_maps
Ian's Email: imuehlenhaus@uwlax...
Textbook(s): *Ware, Colin. Visual Thinking for Design. Bookstore Rental. Muehlenhaus, Ian. Web Cartography.*

Welcome to Geo/Esc 455

The revolution was not televised; it was digitized. Maps have jumped ship from the paper medium to the screen. This new medium of handheld devices, dashboard mounted highway maps, 70" HDTV displays, and multitouch everything means that maps are more powerful than ever before. Instead of being one-way communication devices, today's networked and interactive maps have become immersive environments that allow map users to load information that they want, zoom in on areas of interest, and manipulate how the information is represented. These changes are both good and bad news for cartographers (as well as map readers). Designing effective Web and mobile maps is more challenging than ever before. Yet, the results are often even more rewarding.
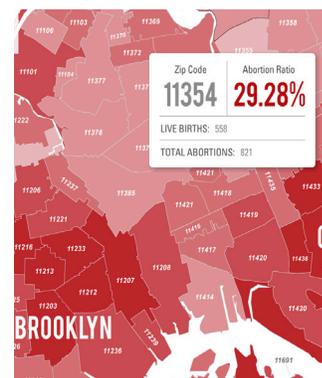
Semester Learning Objectives

In this course you will learn how to produce and design interactive Web maps for communication. Web maps take many forms and they are continually changing. Thus, the objective of this course is to do two things: (1) help you become proficient in the scripting languages and tools most frequently used to design and create these maps (i.e., JavaScript, CSS, HTML, and mapping APIs); and (2) teach you the theory and concepts underlying good Web map design so that as the technologies change in the future you will still be able to design effective Web maps. At the end of this course you will be able to design a Web map from scratch. To earn an B in the course, you will not only be able to create a Web map, but it will be user friendly, aesthetically pleasing, and useful. To earn an A, the maps you create will achieve the above, and they will be aesthetically pleasing. My goal is to make you a well-rounded cartographer.
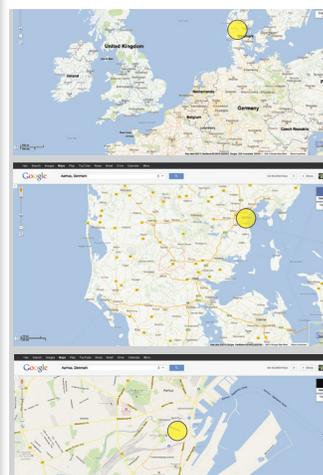
The Fine Print (i.e., Cure for Insomnia)

Do not cheat! Cheaters will suffer severe consequences and depending on the egregiousness of the crime, may receive an F in the class. **Laptops are to be used for taking notes, not for entertainment.** Please don't come and expect to surf through class. Turn off your cell phone ringers, please! I reserve the right to ridicule any obnoxious Lady Gaga ringtones. **Read what I ask you to.** Not reading will hurt your grade in this course. **Attend class.** I don't take attendance but in this class it is mandatory. If you are missing, I will notice and you will be docked points. You must come to class to pass. **Participate regularly!** Unfortunately, attendance does not equal participation. I know it can be very difficult to raise one's hand in class and speak in front of a bunch of people, but I want the class to be open and fun, not dreary and boring. So speak up and say what you are thinking. **Come ready to think!** Please don't come to class as a passive learner. Engage with the material and try to relate it to your own life. **I do not accept late assignments** unless you were abducted by an UFO, in which case I will need a note from the mothership. If you would like to dispute a grade or test score, see me as soon as possible; do not wait for several weeks. **If you have a documented disability,** please contact both myself and the Disability Resource Services Office (165 Murphy Library, 785-6900) at the beginning of the semester. Please visit: www.uwlax.edu/drs for more information.

Ian's Quick Bio

Ian is from Duluth, Minnesota. His research on maps has been published in many different cartography and visualization journals. He is also the author of a new textbook, *Web Cartography* (2014). He loves seeing what students can do in this class! **Twitter:** @iMuehlenhaus

TENTATIVE SCHEDULE (i.e., with the best of intentions)

Week	Monday	Wednesday	Lab Work & Readings
1	Introduction to Web Maps	Web Mapping Technologies	HTML & CSS, Chapter 1
2	Map Interactivity	Introduction to JavaScript	**Lab Quiz,** JS, Chapter 2
3	Map Elements & GUIs	JavaScript, Continued	**Lab Quiz,** JS, Chapter 3
4	Visual Hierarchy & Layout	Leaflet.js API	**Lab Quiz,** Leaflet, Ch. 4
5	Leaflet.js API	Leaflet.js API	**Lab Quiz,** Leaflet, Ch. 5
6	Web Map Aesthetics	CartoDB API	**Lab 1 Due,** CartoDB, Ch. 6
7	CartoDB API	Selecting Visual Variables	**Lab Quiz,** Chapter 7
8	**Spring Break**	**Spring Break**	**Spring Break**
9	Thematic Visualization	Thematic Visualization	CartoDB API, Chapter 8
10	Animation	Animation and Sound	CartoDB API, Chapter 9
11	**// AAG // No Ian //**	**// AAG // No Ian //**	**Lab 2 Due**
12	Other APIs (ArcGIS Online)	Non-HTML Web Mapping	SVG Graphics
13	Lab Work	Lab Work	Ware, Chapters 1 & 2
14	Lab Work	Lab Work	Ware, Chapters 3 & 4
15	Lab Work	**Map Coding Test**	**Final Project Due**

Final Project Presentation   Monday, May 12, 12:15-2:15 p.m.

USEFUL RESOURCES

HTML Tutorials: http://www.w3schools.com/html/default.asp

CSS Tutorials: http://www.w3schools.com/css/default.asp

JavaScript Tutorials: http://www.w3schools.com/js/default.asp

SVG with CSS Tutorial: http://css-tricks.com/using-svg/

Book Resources: www.ian.muehlenhaus.com/webcartography

Incredible YouTube Web Tutorials: http://goo.gl/JNSL2U

API Sites

Leaflet.js: http://leafletjs.com/examples/quick-start.html

CartoDB: http://developers.cartodb.com/tutorials.html

D3: https://github.com/mbostock/d3/wiki

Google Maps: http://goo.gl/uc8nL

ArcGIS Online: https://developers.arcgis.com/javascript/

Mapublisher Web Map CSS: http://goo.gl/AoKrb3

ACTIVE LEARNING GUIDE

The process for getting an "A" in this course is easy. However, it will require a lot of work and participation on your part to earn an "A." Refer to the following list throughout the semester to stay on track and do well in this class (and all of your other classes for that matter!):

- Always attend class. Don't miss a single one.
- Take lots of notes (preferably with pen and paper).
- Stay focused during lecture (i.e., ditch your phones, computers, and tablets!)
- Participate actively and ask lots of questions
- Complete all of the readings
- Begin critiquing each Web map you encounter, examine what technologies were used to make it, and think about how it might be designed better.
- Have fun! You will likely become more frustrated during this course than any other you take at UWL. Keep things in perspective... *It will get easier!!!*