GGS 411-001: ADVANCED DIGITAL CARTOGRAPHY

George Mason University 12299

Syllabus for Spring 2015
Exploratory Hall, room 2310
Mondays 1:30-4:10pm

Professor Hallden
Email: jhallden@gmu.edu
Office: Exploratory Hall, room 2219
Office Hours: Monday and Wednesday 10-11:30am. Can also meet after class on Monday. Always ok to send an email. ☺

Course Description:
Advanced Digital Cartography takes the fundamentals learned in GGS 310 and expands into animated and interactive maps, web mapping, and new visualization techniques. It is a lab intensive course that guides students through designing and producing non-static maps. Coding will be required for most labs but no prior experience is necessary. The end of the semester focuses on final projects consisting of a web-based animation, visualization, and/or interactive map that students individually research, design, develop, and present.

Class websites:
Blackboard: mymason.gmu.edu/
This will serve as the formal website for the class. It will hold the syllabus, lab assignments, grades, and pertinent class information.

Blogger: 411ggs.blogspot.com
The blog is the real heart of the class – the place to look for answers, to post questions, to interact with the rest of the class. Have a question? Discovered a time saving trick? Post a comment on the blog. If you know the answer to someone's post, please take the initiative and post a response. Check the blog for news and updates (key messages will also be sent out via email to your GMU account).

GMU email: You must activate and use your MasonLive email account to receive important class and university information, including messages relating to this class. Send all academic emails from this account, as well, to help maintain student privacy. If class is cancelled or the university is opening late, I will send an email as soon as I hear. See http://masonlive.gmu.edu for more information regarding your MasonLive account.

Supplies:
There is no textbook required for 411. All information will be posted online or handed out in class.

For the lab component, you must bring a flash drive for saving your assignments. Please save frequently while working in the lab and definitely keep a backup copy of your work! Uploading a copy of finished labs to your GMU Web space (or Dropbox) is strongly recommended. Flash is complicated and can be buggy so I recommend saving a new version of your file after major steps are completed (example: Lab2a, Lab2b, etc).

Software: Adobe Flash is required for this course — it is used for half of the lab assignments and may be used for the final project. We will also be experimenting with Photoshop, Google Maps Javascript API's, Leaflet, D3 and geoJSON among others. No prior exposure to these programs or coding is expected.

Computer Lab:
Class will meet in Exploratory Hall room 2310. This computer classroom will have the software we're using. Students will also get access to the GGS dept computer lab in Exploratory Hall to do work outside of class time.

Classroom/Lab Expectations:
1. <u>You are expected to attend and be on time for class each week</u>. We only meet once a week so it is critical you are there to learn what we are tackling.
2. Stay on top of the material — finish the labs promptly, make comments and post online. Class participation is important.
3. Do not eat or drink in the lab or classroom.
4. Plan to spend real time outside of class to finish weekly lab assignments.
5. In the event of a cancelled class (for snow, for example), the class will resume where we left off. Please check the class website, GMU website, and your GMU email for announcements.

Personal Class Blog:
Each student will set up their own 411 blog to house their work this semester. Google's Blogger site is free and easy to use. Although it does not directly accept Flash files, we can store the files on sites such as Dropbox and link to them for easy playback.

Weekly Blog Post:
One of the best ways to expand your Cartographic knowledge is to examine maps — to analyze them and critique them. With each week's topic, find a high caliber example on the web. Track down a map/graphic/visualization of the same style as the lab, post a link to it on your blog, and write a paragraph explaining why it is noteworthy. Really search for a quality example — something that impresses you (and something that has not been posted already). Posts are assigned on the blog each Monday.

Labs:
Labs will all be digital — either an interactive map or movie file that is posted to your personal 411 blog. Make sure you answer any lab questions in the accompanying blog post.

Lab assignments will be handed out each Monday and are due the following Monday. <u>Lab assignments must be uploaded and working on your blog at the start of class (1:30pm)</u>. If for some reason (sickness, power outage, jail time, etc.) you are unable to upload your lab on time, you get an automatic extension until noon Tuesday. <u>After noon on Tuesday, you will receive no credit</u>. There are no make-ups!

If you are having problems with your lab/blog, please contact the professor **prior** to the due date. Don't wait until the last minute to seek help! I have more help options before the due date. Do not underestimate the time it can take to complete a lab assignment!

Group Demos:
In order to increase our exposure to handy new mapping and visualization techniques, small student groups will present to the class an overview of a digital tool/utility/script/function that they find interesting and useful. Can use any software or simply a browser -- topic just needs to relate to

mapping or aid in the construction of maps. In addition to the summary, the group will give the class a quick demo of the tool and then step the class through a brief exercise using the tool.

Final Project:

In place of a final exam, there will be a final project. It will consist of an original web-based animation, visualization, and/or interactive map you select, research, design, and develop. Specific details will be discussed during the semester. The Final Project is due at the final exam period and will be shown to the class as part of the Final Project Presentation.

Final Project Proposal:

A Final Project Proposal is due on Monday, April 6th. In addition to the written proposal posted on the blog, students will present a brief overview of their concept to the class with online examples.

Final Project Critique:

On April 27th and May 4th students will present their in-progress final project to the class for constructive feedback. The critique stage is a key component of professional map development. In addition to presenting, students will be graded on the comments they offer their classmates. Attendance is key.

Student Responsibilities:

To successfully complete this course, you must attend class, participate in discussions, and complete the lab assignments. Since the artistic component of Cartography is as important as the technical/scientific side, you'll need to spend time approaching your maps from a creative perspective in addition to making them clear, accurate and functional. This is especially true for the final project. Class participation is important — make comments, ask questions, help your fellow classmates. Each map must be individual, but the development process can be communal.

Academic Integrity:

Academic Integrity is essential and each individual is expected to do his/her own work and to correctly cite all sources. Violations of the University Honor Code will not be tolerated and will result in course failure. **Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work**. Please familiarize yourself with the Honor Code policies: http://oai.gmu.edu/the-mason-honor-code-2/

Office of Disability Services:

If you are a student with a disability and are in need of academic accommodations, please see me and contact the Office of Disability Services (ODS). I am happy to work with you but accommodations must be arranged through the ODS: http://ods.gmu.edu

Grading Scheme and Policy:

Grades will be assigned for the completion of this course based on the combination of the following scores:

Lab assignments:	500 (10 labs at 50 points each)
Group Demo:	100
Weekly Blog Posts	50 (5pts for each of the 10 lab topics)
Final Project Proposal & Presentation:	50
Final Project Critique & Comments:	100 (20 Critique, 40+40 for comments)
Final Project & Presentation:	200
Total:	1000 (plus extra credit)

Course Schedule: Version 1 (as of Jan 26, 2015)

Week	Date	Topic	Lab Assigned	Lab Due	Notes
1	M 1-26	Class Intro	Set up Blog	**Blog**	
2	M 2-2	Photoshop Primer; Flash Metaphor	Lab 1: Static map		2-3 Last day to add class AND the last day to drop with no tuition liability.
3	M 2-9	Animation Basics; Adding interactivity Timeline Design	2: Buttons	**1**	
4	M 2-16	Toggling layers; Using Transparency	3: Faux-GIS	**2**	
5	M 2-23	Moving and morphing objects through time.	4: Tweens	**3**	2-21 Last day to drop with no academic liability.
6	M 3-2	Splash screens, links, rollovers	5: Adding Polish (building on Lab 4)	**4**	
7	M 3-9	--	--		*No Class all week! Mid-Semester Break*
8	M 3-16	Moving to Google Maps	6: Google Maps JavaScript API	**5**	
9	M 3-23	D3	7: Intro to D3	**6**	
10	M 3-30	D3 and thematic maps	8: Thematic D3 with hover-overs	**7**	
11	M 4-6	**Final Project Proposal Presentations**			**Final Project Proposal Due**
12	M 4-13	Intro to Leaflet	9: Leaflet Tiling/ Pan/Zoom	**8**	
13	M 4-20	Mapping with Leaflet	10: Leaflet Heatmap	**9**	
14	M 4-27	**Final Project Critiques**		**10**	
15	M 5-4	**Final Project Critiques**			Last class
16	M 5-11	**Final Project Presentations**	**10:30am-1:15pm**		**Final Project Due at 10:30am!**