

Geography 475: Computer Cartography

Instructor: James Tedrick
E-mail: james@tedrick.org
Office Hours: M 2:30 - 4:30, LEF 1113

TA: Tom Fitzwater
E-mail: fitzh2o@umd.edu
Office Hours: TBD

Course Synopsis:

Cartography the set of tools used to make maps. These tools include math, science, graphic design and, of course, geography. The goal is to synthesize these diverse skills together to make a product that conveys a message- ideally, the message that you want to present! This course will cover the basic use of these skills, including appropriate design/placement of map elements; how to appropriately display a variety of information in map form; selecting an appropriate projection; the different types of media (paper, online, animation) that you may want to use to distribute your map.

Why is this course important?

Maps are a visual form of communication. Being able to make a map that is easy to understand and conveys the information you want will make your geographic analyses easier for your audience to understand. In the same manner, the more critically you examine a map and understand what is being presented, the better you can understand the argument being presented, including it's strengths & weaknesses.

Class resources:

- 2 textbooks (one copy each on course reserves):
Slocum, T.A., et al. (2008). *Thematic Cartography and Geovisualization*. Upper Saddle River, NJ: Prentice Hall. ISBN 0-13-229834-1
Brewer, C.A. (2005). *Designing Better Maps*. Redlands, CA: ESRI Press. ISBN 1-58948-089-9
- Additional readings as required, posted on ELMS.
- ELMS: You should be enrolled for the course's website on ELMS. If not, contact Tom & the OIT Help Desk.
- Software: The labs will be completed with ESRI ArcGIS 9.3. The software is available in the Open Lab & student copies are also available.

Grading:

Assignment Type	Number of Assignments	Points Per Assignment	Total Points (sums to 100)
1 week labs	8	5	40
Multi-week lab	1	10	10
Final Project	1	15	15
Map Critiques	2	5	10
Exams	2	10	20
Attendance Quizzes	5	1	5

- All 1 week labs will be due by the end of the Monday following the lab release.
- The multi-week lab will be due end of day, March 13.
- The final project will be due the same day as the final exam (tent. May 18).
- A map critique is due by 3/27; the second by 5/12.
- If you have a valid, University-approved excuse, please notify me in advance.
- If you need additional time to complete an assignment, notify me as soon as possible.

Student & Faculty Expectations

I expect students to be ready to engage material being presented that day during class. As part of this readiness, students should read the materials for a class prior to the presentation (full understanding of the reading material is not required) and projects will be completed by the time due. In return, you should expect me to present the material in a clear manner, answer questions during class time (though I may wait to complete a slide or section before addressing the question) and be flexible with assignment scheduling if it is clear that a major, class-wide problem occurs with the material.

You should also expect a respectful classroom attitude from all participants in the class, the instructor, teaching assistant and your fellow classmates. Disruptive behavior of any kind will not be tolerated. Students are expected to adhere to the Code of Student Conduct; instructional faculty will be held to at least that standard as well.

Students with Disabilities

I will make every effort to accommodate students who are registered with the Disability Support Services (DSS) Office and who provide me with a University of Maryland DSS Accommodation form that has been updated for the Spring 2009 semester. This form must be presented to me no later than March 1, 2009. I am not able to accommodate students who are not registered with DSS or who do not provide me with documentation that has been reviewed by DSS after March 1, 2009.

Academic Honesty

The University of Maryland, College Park, has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student, you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit www.shc.umd.edu.

Note: Within our class, you may work together to discuss concepts and design ideas, but you must then produce maps that are original and individual unless otherwise specified.

Course Schedule

This schedule may change as needed:

Week	Date	Subject	Lab	Reading
1	1/26	Course Introduction, Mapping Basics & History	Lab 1: ArcMap design basics	S: Ch 1-2
2	2/2	Projections & Coordinate Systems	Lab 2: Multiple Frames & Projections	S: Ch. 7 - 9
3	2/9	Symbolization, Scale & Generalization	Lab 3: Scale & Symbolization	B: Ch 6 S: Ch 5 - 6
4	2/16	Color & Typography	Lab 4: Color & Typography	B: Ch 2 - 5 S: Ch 10 - 11
5	2/23	Cartographic Design	Multi-week Lab: General Reference Map	B: Ch 1, 7 S: Ch 12 - 13
6	3/2	Terrain Visualization		S: Ch 20
7	3/9	Midterm Exam		
3/16 - Spring Break / TUGIS				
8	3/23	Statistics refresher Classifying Data Choropleth & Dasymetric Mapping	Lab 5: Choropleth Mapping	S: Ch 3 - 4, 14 - 15
9	3/30	Isarithmic, Proportional Symbols, Dot Density Mapping	Lab 6: Proportional Symbols & Dot Density Maps	S: Ch 16 - 17
10	4/6	Multivariate, Flow Maps, Cartograms	Lab 7: Multivariate Map	S: Ch 18 - 19
11	4/13	Multimedia: 3-D Maps, Animation, Web Mapping	Lab 8: Web Mapping	S: Ch 21, 24, 25
12	4/20	Uncertainty & Mapping	Final Project Work Time	S: Ch 23
13	4/27	Organizing data for cartography		
14	5/4	Final Project Presentations		
15	5/11			
5/18*		Final Exam & Final Project Due		

*The final exam time has not yet been set. Anticipate both the exam & final project to be due on the 18th, though it may change (both will be due the same day, whenever the final is scheduled).