

## Syllabus for Geography 321: CARTOGRAPHY

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### Instructor Information

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### Teaching Assistant Information

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### Course Information

Course GEOG 321  
Sections 002, 003  
Location – Lecture: 012 Walker; Lab: 208 Walker  
Times – Lecture: T-R 9:05-9:55; Lab: T 3:35-5:30 (S2); W 12:20-2:15 (S3)

### Required Text

Terry A. Slocum, Thematic Cartography and Visualization, Prentice Hall, Upper Saddle River, NJ, 1999.  
Other required course readings will be available on reserve in 304 Walker.

### Course Description

Mapping is crucial to exploring and understanding distributions of geographic phenomena. It is also an important phase of many database-intensive analyses because a map is often the best way to visualize results and show them to others. Our emphasis in this course will be on designing and producing both thematic and reference maps that use symbols and visual hierarchies that allow the content of the map to be readily understood. Maps are often built from existing line work and images created by government mapping programs and from GIS databases and remote-sensing software. Therefore, your hands-on computer work this semester will involve working with varied digital data sources in ArcGIS 8.3, which has sufficient design tools to allow excellence in cartographic production.

### Course Requirements

You will complete two exams, seven exercises, 5 short in-class writing assignments, 3 short out-of-class writing assignments and a final project to fulfill the requirements of this course.

Your exercise and final project maps will be made using the computers in 208 Walker Building (and other machines with sufficient software that you can access, such as computers in 123 and 229 Walker).

Instructions for each exercise will include descriptions of project goals and grading criteria. You will not be able to complete your exercises in the lab times scheduled for 208, but the lab is open many additional hours during the week (though last-minute work is always dangerous because competing classes may also have assignments due, and systems do crash). Your exercise maps will be completed using ArcGIS 8.3 software and will be delivered in digital and paper forms.

### Grading Policy

Points for each assignment:  
5 points for each: Ex. 1, 2, 4 & 6 (20 pts total)  
10 pts for each: Ex. 3, 5 & 7 (30 pts total)  
6 pts: project checks  
14 pts: final project  
1 pt for each: in-class writing assignments (5 pts total)  
5 pts for each: out-of-class writing assignments (15 pts total)  
30 pts: Exam 1  
30 pts: Exam 2

**Notes on Grading**

- If you miss class on the day of an in-class writing assignment, these points cannot be made up.
- Late assignments will be penalized 1 point.
- Makeup exams are essay exams.
- There are no options for extra points for extra work in the course.
- Late coursework will not be accepted after 5 pm on December 15.
- Your final grade is calculated on a straight scale:
  - A: 90-100%
  - A-: 86-89%
  - B: 73-85%
  - C: 60-72%
  - D: 50-59%
  - F: <50%

**Attendance Policy**

I strongly encourage you to attend every lecture and lab meeting.

**Academic Integrity**

Please act with personal integrity and be respectful of other students. Do not engage in, or tolerate, acts of falsification, misrepresentation, or deception. Your ArcMap exercises and the final project must be your own work. A first infraction will lead to a grade of zero on the assignment or exam on which you cheat; a second incident will result in course failure. The EMS College policy on Academic Integrity, that we will follow, is explained in more detail at <http://www.ems.psu.edu/admin/integ.html>.

**Additional Information**

Jon Harahush (section 2), Jessica Brennan (section 2) and Chris Dorney (section 3) are the undergraduate teaching interns that will assist Birgit in your labs.

Course prerequisite: Geography 121, Mapping our Changing World

## Course Schedule

<b>9/4</b> Introduction; <i>Readings: Slocum Chapter 1 (p. 1-16)</i>	<b>10/21</b> Map Compilation and Copyright
<b>Lab: Intro to Lab and Learning ArcGIS</b>	<i>Readings: Monmonier "Mapping It Out" (p. 121 -56)</i>
Please be sure your Geography computer account functions before this lab meeting.	
	<b>10/23</b> Typography; <i>Readings: Monmonier Mapping it Out (p. 105-117)</i>
<b>9/9</b> Design for Map Purpose	<b>Lab: Lab 5 – Choropleth cont.</b>
<i>Readings: Slocum Chapter 2 (p. 33-8); Monmonier "Mapping it Out" (p. 93-105)</i>	
	<b>10/28</b> Label Placement
<b>9/11</b> Layout and Visual Hierarchy	<b>10/30</b> Final Project Proposal Presentations
<i>Writing Assignment 1 Assigned.</i>	<i>Final project proposals due in class.</i>
<i>Readings: One chapter (assigned in class) from Monmonier "Drawing the Line"</i>	<b>Lab: Lab 6 – Type</b>
<b>Lab: Lab 1 – Layout</b>	<b>Lab 5 due at the beginning of lab.</b>
	<b>11/4</b> Terrain Representation
<b>9/16</b> Visual Variables	<i>Readings: Slocum Chapter 9 (p. 153-66)</i>
<b>Writing Assignment 1 Due.</b>	
<i>Readings: Slocum Chapter 2 (p. 18-33)</i>	<b>11/6</b> Terrain Representation (continued)
<i>Writing Assignment 2 Assigned.</i>	<b>Lab: Lab 7 – Terrain</b>
	<b>Lab 6 due at the beginning of lab.</b>
<b>9/18</b> Visual Variables and Choosing Symbols	
<i>Readings: Monmonier "Mapping it Out" (p. 57-89)</i>	<b>11/11</b> Isolines and Interpolation
<b>Lab: Lab 2 – Legend Design</b>	<i>Readings: Slocum Chapter 8 (p. 136-151)</i>
<b>Lab 1 due at the beginning of lab.</b>	
	<b>11/13</b> Isolines and Interpolation (continued)
<b>9/23</b> Proportional Symbols	<b>Lab: Final Project Work Session</b>
<b>Writing Assignment 2 Due.</b>	
<i>Readings: Slocum Chapter 7 (p. 118-35)</i>	<b>11/18</b> Multivariate Symbolization
	<i>Readings: Slocum Chapter 12 (p. 193-208)</i>
<b>9/25</b> Proportional Symbols (continued)	
<b>Lab: Lab 3 – Proportional Symbols</b>	<b>11/20</b> Other Map Types
<b>Lab 2 due at the beginning of lab.</b>	<i>Writing Assignment 3 assigned.</i>
	<i>Readings: Slocum Chapter 11 (p. 177-91)</i>
<b>9/30</b> Color basics	<b>Lab: Final Project Work Session</b>
<i>Readings: Slocum Chapter 5 (p. 83-103)</i>	<b>Final project data check (in lab or before break (sec 3)).</b>
<b>10/2</b> Color schemes	<b>11/25</b> Map Projections
<i>Readings: Slocum Chapter 6 (p. 106-116)</i>	<b>Lab 7 due in class, both sections.</b>
<b>Lab: Lab 3 cont.</b>	<i>Readings: Monmonier "Mapping it Out" (p. 31-53)</i>
<b>10/7</b> Classification	<b>11/27</b> No Class: Thanksgiving Break
<i>Readings: Slocum Chapter 4 (p. 60-81)</i>	<b>Lab: Final Project Work Session / Final project draft critique.</b>
<b>10/9</b> Exam 1	<b>12/2</b> Map Projections
<b>Lab: Lab 4 – Color</b>	<b>Writing Assignment 3 Due.</b>
<b>Lab 3 due at the beginning of lab.</b>	<i>Readings: ACSM Publication (link in ANGEL)</i>
	<i>Chapters 1, 5, 9</i>
<b>10/14</b> Classification (continued)	
	<b>12/4</b> Exam 2
<b>10/16</b> Discuss Exam 1	<b>Lab: Final Project Work Session</b>
<i>Final Project assigned.</i>	
<b>Lab: Lab 5 – Choropleth</b>	<b>12/9</b> Discuss Exam 2
<b>Lab 4 due at the beginning of lab.</b>	
	<b>12/11</b> Final Project Gallery / <b>Final Projects due in class.</b>