

## UST 403/503 CARTOGRAPHY & GRAPHICS

Day & Time: Thursdays, 6-9:50 p.m.  
Location: UR 40  
Instructor: Dr. Sung-Gheel Jang  
Office: UR 349  
E-mail: [s.jang75@csuohio.edu](mailto:s.jang75@csuohio.edu)  
Phone: (216) 687-5597  
Office Hours: Tuesdays and Thursdays, 11:00 a.m. to noon, or by appointment  
Course website: CSU Blackboard (<http://www.csuohio.edu/elearning/blackboard/index.htm>)

### Course description

UST 403/503 introduces the principles of map-making and the use of presentation graphics in urban planning and research applications; the use of maps and graphics in the analysis of social, economic, and demographic associations of the built environment; and basic elements of geographic information systems. The use of computers as tools for data analysis and mapping is emphasized. Particularly, ArcGIS 9.2 (a well-known commercial GIS software) and GeoDa (open source software) will be utilized.

The course consists of two sessions: lectures and lab exercises. Lectures and computer lab exercises will start with introductory material and will gradually add new layers of information. Therefore, it is very important to follow all reading assignments (the assigned chapters), lectures, and lab exercises to complete the requirements of this course successfully.

### Required textbooks

- Terry A. Slocum et al. (2005). *Thematic cartography and geographic visualization*. 2nd edition. Upper Saddle River, NJ: Prentice Hall. ISBN 0-13-035123-7 [TCGV]
  - Supplement web resources: <http://www.prenhall.com/slocum/>
- Mark Monmonier (1996). *How to lie with maps*. 2nd edition. Chicago, IL: the University of Chicago Press. ISBN 0-226-53421-9 [HLM]

### Recommended book

- Krygier, J. and Wood, D. (2005). *Making Maps – A Visual Guide to Map Design for GIS*. New York, NY: The Guilford Press. ISBN 1-59385-200-2 [MM]
  - John Krygier's Web Blog: <http://makingmaps.wordpress.com>

### Grading

The course grade will be determined as follows:

5%	Class participation
30%	Lab assignments
20%	Midterm
20%	Final project
25%	Final exam

### Grading scale:

A = 94-100, A- = 90-93, B+ = 87-89, B = 83-86, B- = 80-82,  
C+ = 77-79, C = 70-76, D = 60-69, F < 60

**Tentative Class Schedule (Subject to Change with Notice)**

	<b>Lecture</b>	<b>Lab</b>
Week 1 (1/17)	Course overview and introduction	Lab introduction
Week 2 (1/24)	Symbolization ( <b>TCGV</b> Ch. 4)	Using ArcGIS Desktop (1)
Week 3 (1/31)	Map design process & map elements ( <b>TCGV</b> Ch. 1 & 11; <b>MM</b> Ch. 2)	Using ArcGIS Desktop (2)
Week 4 (2/7)	Geographic Coordinate Systems; scales; map projections ( <b>TCGV</b> Ch.7 & 8; <b>MM</b> Ch. 5)	Map projection
Week 5 (2/14)	Mappable data ( <b>MM</b> Ch. 3; <b>TCGV</b> Ch. 3)	Handling tabular data
Week 6 (2/21)	Exploring data; data classification ( <b>TCGV</b> Ch. 5)	Exploratory data analysis using GeoDa
Week 7 (2/28)	<b>Midterm exam</b>	
Week 8 (3/6)	Choropleth mapping ( <b>TCGV</b> Ch. 13)	Choropleth mapping
Week 9 (3/13)	<b>Spring recess (No class)</b>	
Week 10 (3/20)	Isarithmic mapping ( <b>TCGV</b> Ch. 16)	Isarithmic mapping
Week 11 (3/27)	Proportional symbol mapping ( <b>TCGV</b> Ch. 16)	Proportional symbol mapping
Week 12 (4/3)	Dot and dasymetric mapping ( <b>TCGV</b> Ch. 17; <b>HLM</b> Ch. 10)	Dot and dasymetric mapping
Week 13 (4/10)	Other mapping techniques ( <b>TCGV</b> Ch. 18 & 19)	Multivariate mapping; cartograms
Week 14 (4/17)	Final project description – begin project planning (Dr. Jang out of town, the AAG Conference)	
Week 15 (4/24)	Final project work	
Week 16 (5/1)	Final project presentation	
Week 17 (5/8)	<b>Final exam (cumulative)</b>	

- Note 1: Final project guideline will be distributed after midterm exam.
- Note 2: Graduate students (UST 503) will have one more lab assignment. Its detail will be announced after midterm.

## Class Policies

- **You are responsible for changes to this syllabus and the course schedule as announced in class.**
- Students should refer to the information from the Office of University Registrar (<http://www.csuohio.edu/registrar>) regarding administrative procedures related to drop, add, withdrawal, and incompletes.
- Any form of academic misconduct will earn an immediate grade of **F** for the course. In addition, your name will be forwarded to the Academic Misconduct Review Committee, for a hearing concerning your suspension from the University. You should familiarize yourself with the University Policies such as Student Conduct Code and Academic Regulations and Procedures, which can be found at <http://www.csuohio.edu/studentlife/conduct/index.html>.
- Educational access is the provision of classroom accommodations, auxiliary aids and services to ensure equal educational opportunities for all students regardless of their disability. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Disability Services at (216) 687-2015. The Office is located in UC304. Accommodations need to be requested in advance and will not be granted retroactively.
- Lab assignments **must be turned in no later than one week** from when started. Late submissions will result in a penalty on your grades except for any prudent and documented reasons. It will be 10% reduction of your grade per one day late, and you will not receive any grades after one week late.
- Technical excuses for late maps/papers will not be accepted. This means that work has to be done several days before a deadline and that proper precautions should be taken to make backups.
- There is **no make-up exam** except for emergent and medical circumstances with official documents. Except in the rare circumstances, students will earn score of zero on missed exams, regardless of circumstance.