

**Cartography & Graphics
UST 403 Spring 2005**

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or by appointment

Objectives:

This course will demonstrate how maps are important and very powerful tools for presentation. Focus will be placed on understanding the purpose served by maps, their design and analysis. Students will evaluate maps from the World Wide Web and create maps using computer mapping software. MapInfo, a Geographic Information Software (GIS), will be used to create nominal and choropleth maps. Also, graphing geographic attribute data will be completed using Excel software.

This course is recommended for those students who wish to enroll in the Introduction to GIS course, UST 434.

Required Text Readings:

Mapping: Ways of Representing the World by D. Dorling and D. Fairborn ISBN 0582289726
How to Lie with Maps by Mark Monmonier ISBN 0226534219

Assignments and Grading:

- 1. *Lab Assignments*.....(25%)
- 2. *Midterm Test*.....(25%)
- 3. *Final*.....(25%)
- 4. *Project*.....(25%)

Grading Scale: A	92.51 to 100	C+	77.51 to 79.50
A-	89.51 to 92.50	C	72.51 to 79.50
B+	87.51 to 89.50	C-	69.51 to 72.50
B	82.51 to 87.50	D	60 to 69.50
B-	79.51 to 82.50	F	< 60

The Midterm and Final Exam will be based on lecture notes and assigned text reading.

Topics to be Covered: *Lecture topic in bold; Assigned reading in (). Reading abbreviations- DF= Dorling and Fairborn Mapping Text and M= Monmonier How to Lie with Maps*
Note: All Lab work is due at the beginning of the next class.

1. January 20: **Introduction to Course**
Lab- Create a web-based portfolio to showcase your work
2. January 27: **Maps Defined- Mental Maps** (DF Introduction; M Forward, Ch. 1- Introduction)
Lab- Create a mental map
Create a cartographic map using MapQuest (Web mapping)
3. February 03: **Maps Defined- Cartographic Maps** (DF Ch. 2; M Ch. 2, 3, & Appendix)
Lab- Create maps using various map projections using a website mapping software.
4. February 10: **History of Cartography- “The Short Version”** (DF Ch. 1, 4)
Lab- Locate an “old” map on the web & explain its use and cultural influence
5. February 17: **NO CLASS**
6. February 24: **Maps on the CSU Library Website** Presentation by Bill Barrow
Lab- Exercise using CSU Library website maps
7. March 03: **Computer Mapping & GIS** (DF Ch. 7, 9; M Ch. 12)
Lab- Create a nominal map using MapInfo GIS software
8. March 10: **MIDTERM EXAM**
9. March 17: **Spatial Data & Associated Attribute Data** (DF Ch. 3, 5, 6- pp.102-109, 8)
Lab- From x,y data in a database, create a new point data layer and map in MapInfo
Download Census Data to Excel spreadsheet
10. March 24: **Spring Recess- No Class**
11. March 31: **Graphing Attribute Data** (M Ch. 10)
Lab- Graphing Census Data using Excel
12. April 07: **Map Design Issues** (M Ch. 4 – 6, 11)
Lab- Create a multi- layered data map using proper design in MapInfo.
Create a thematic ranged map using web “color brewer” and MapInfo.
13. April 14: **Map Use: Accuracy, Analysis, and Interpretation** (M Ch. 7 –9, 13)
Lab- Analyze and interpret 2 maps; Create an “improved” map in MapInfo
14. April 21: **Project Description**
Lab- Open lab time to begin Project work
15. April 28: **Project Work- Lab**
16. May 05: **Project Presentations**
17. May 12: **FINAL EXAM**

GIS Project:

Each student will be assigned a city in Cuyahoga County.

Tasks for the project will include:

- Download data from the Web
- Create 2 different graph types of the downloaded data.
- Student will explain the graphs and explain results and conclusions that can be drawn from the graphs.
- Create a nominal map and thematic map that includes a legend, title, north arrow, source and prepared by.
- Student will explain the graphs and explain results and conclusions that can be drawn from the graphs.
- Graphs and maps will be placed into student's website
- A Power Point presentation of the graphs and maps will be created and presented to the class.

Students with Special Needs:

Anyone requiring special assistance to take exams or complete assignments must identify themselves to the instructor by the end of the second week of classes. These include accommodations for physical handicaps and learning disabilities.