Cartography & Graphics
UST 403, UST 503, or PDD 503             Spring 2006

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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 77.50
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 18: **Introduction to Course**  
   *Lab* - Create a web-based portfolio to showcase your work

2. January 25: **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 1: **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 8: **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 15: **Maps on the CSU Library Website** Presentation by Bill Barrow  
   *Lab* - Exercise using CSU Library website maps

6. February 22: **NO CLASS**

7. March 1: **Computer Mapping & GIS** (DF Ch. 7, 9; M Ch. 12)  
   *Lab* - Create a general reference map using MapInfo GIS software & MS Paint software

8. March 8: **MIDTERM EXAM**

9. March 15: **Spring Recess- No Class**

10. March 22: **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

11. March 29: **Graphing Attribute Data** (M Ch. 10)  
    *Lab* - Graphing Census Data using Excel

12. April 05: **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 12: **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 19: **Project Description**  
    *Lab* - Open lab time to begin Project work

15. April 26: **Project Work- Lab**

16. May 03: **Project Presentations**

17. May 10: **FINAL EXAM**
GIS Project:

Each student will be assigned a county within the United States.
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, including objective of the graph as well as graph interpretation and analysis.
- Create a reference map and 2 thematic maps that include a legend, title, north arrow, source and prepared by.
- Student will explain the maps, including objective of the map as well as map interpretation and analysis.
- A Power Point presentation of the graphs and maps will be created and presented to the class.
- Graphs, maps, and the Power Point will be placed into student’s website

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.

Cartography Lecture and Lab Assignments:

To view the instructor’s cartography webpage (so that you can print lectures and lab assignments):

Start the Internet browser, Mozilla.

In the URL box, type http://urban.csuohio.edu/~wyles/cartography.htm

To view the lecture or lab-
  Select the lectures and lab assignments and then select file> print

The reading assignments are located in the syllabus. You are responsible for determining the reading assignment for the next class. Questions based on reading will be “fair-game” on the Mid-Term and Final.