

UAPP 655-010 GIS Applications in Public & Nonprofit Sectors

Syllabus, Spring 2008

Location and Time

Room 218 Pearson Hall
Tuesday 9 AM – 12 PM

Instructors

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Office Hours:	By Appointment	

Course Objectives: To provide the student with a foundation in the theory and techniques of Geographic Information Systems (GIS). The student will gain experience in the application of GIS-based analysis in the fields of Planning and Public Policy.

Prerequisites: An interest in public policy issues and the basic skills necessary for utilizing a Microsoft Windows-based PC

Textbook: *Getting to Know ArcGIS Desktop: The Basics of ArcView, ArcEditor, and ArcInfo Updated for ArcGIS 9*

Assignments and Grading: Grades will be issued according to the successful completion of a policy memo and presentation, a midterm exam, a mapping exam, attendance and participation, and a final policy paper/presentation:

Policy Memo	30%
Midterm Exam	10%
Mapping Exercise	10%
Final Policy Paper	40%
Attendance and Participation	10%

Class Mailing List: Go to www.udel.edu/pobox, log in, and follow the instructions to mail the class. All announcements, etc., will be sent through this list.

Class Policies

- Please make every attempt to arrive to class on-time. Late arrivals are disruptive and may affect your grade negatively, as will excessive unexcused absences. Exercises or other assignments not completed in the course of class time are the responsibility of the student to complete.
- Notify the instructors via email if you are unable to attend a class session. Unless absolutely unavoidable, this should be completed prior to the class session missed.

Exams or graded assignments missed due to absence are subject to the same grade penalty as late assignments.

- While it is acceptable for you to seek help and guidance from instructors or classmates when completing assignments, written papers and memos should reflect your own efforts. We will abide by the “Student Guide to University Policies: Code of Conduct” (www.udel.edu/stuguide/07-08/code.html) in dealing with matters of Academic Honesty.
- Late assignments will be penalized one step letter-grade for each day an assignment is submitted past the due date (e.g., A becomes A-, A- becomes B+, etc.), up to a full-letter grade penalty per week.

Course Outline

February 12: Introduction to GIS and Public Policy

Lecture/Discussion:

Introduction to GIS
Memo and Final Project Discussion

Exercise: *GIS Basics: An Introduction to ArcGIS*

Assignments:

ESRI Virtual Campus Intro to GIS Course
USGS web reading on GIS- (http://erg.usgs.gov/isb/pubs/gis_poster/)
Chapters 1-4

February 19: Mapping, Data, and the Application of Common GIS Techniques

Lecture/Discussion:

Projections and data types
Basic GIS tools and functions

Exercise: *GIS Techniques—The Building Blocks*

Assignments:

Finish exercise 2, if necessary.
earthobservatory.nasa.gov/Library/RemoteSensing/remote.html
www.colorado.edu/geography/gcraft/notes/datum/datum_f.html
(modules on Datums, Coordinate Systems, and Map Projections)

February 26: Application of Common GIS techniques

Lecture/Discussion:

Hand out and discuss the Policy Memo assignment
Guest Lecture: Tina Callahan: *The future of GIS*
Census Data

Exercise: *Working with the U.S. Census*

Assignments:

Chapters 5-7
Work on Policy Memo (due March 11)
Final project topic due next week

March 4: Mapping/Cartography

Lecture/Discussion:

Hand in final project topic

Guest Lecture: Nicole Minni: *Mapping Demo*

Exercise: *Mapping and Cartography*

Assignments:

Chapters 10-12

Policy Memo due next week

March 11: Policy Memo Presentations and Midterm Review

Lecture/Discussion:

Memo presentations and discussion

Midterm Review- concept study sheet handed out

Assignments:

Prepare for Midterm exam

March 18: Midterm and Continue Policy Memo Presentations

Midterm Exam

Lecture/Discussion:

Continue Policy Memo presentations

Discuss Final Projects (how is everyone doing?)

Assignments:

Chapters 15-16

Interconnectivity reading

Final projects: List of data sources

March 25: Transportation Issues

Lecture/Discussion:

Return and discuss midterm exam and Policy Memo

Hand in list of data sources for final project

Guest Lecture: B.J. DeCoursey: *Interconnectivity and Mobility Friendly Design*

Exercise: *Interconnectivity and Networks in GIS*

Assignments:

Chapters 18-19

Reading: State Strategies Executive Summary

(www.state.de.us/planning/strategies/exec_summ.shtml)

April 1: Spring Break -- No Class

April 8: Regional Planning

Lecture/Discussion:

Guest Lecture: Ed O'Donnell *What is LULU/NIMBY?*

Exercise: *Spatial Analysis*

Assignments:

Short write-up of spatial analysis exercise

Final project detailed outline due April 15

April 15: Watersheds

Lecture/Discussion:

Hand exercise write-up

Hand in final project detailed outline

A Watershed Approach to Environmental and Public Policy

Exercise: *Watershed Delineation and Analysis*

Assignments:

Readings in cartography

Work on final projects

April 22: Mapping Exercise

Map preparation

Lecture/Discussion:

Map critique/peer review

Assignments:

Finalize map based on critique, to hand in next week.

April 29: Land Use and Change Detection

Lecture/Discussion:

It's the land use, dummy!

Exercise: *Land Use/Land Cover Change Mapping*

May 6: Raster Analysis

Exercise: Location Analysis and Modeling

May 13: Final Presentations

May 20: Final Presentations

Final Papers Due by 5PM on May 27