

Geographic Information Systems

GEOG 1224

3 Credits

Fall 2007

M 6 – 8:30 pm

151 Deputy Hall (Super Lab)

<http://faculty.bemidjistate.edu/jueland/>

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Text

Introducing Geographic Information Systems by Michael Kennedy, Wiley Press; (2006)

More information and materials are available at the Courses D2L site and my personal website (see above)

Course Objectives

This course is an introduction to spatial analysis and mapping using computers. The majority of the class will be spent learning GIS, using ESRI's *ArcGIS* program. We will also go over basics of map use and cartographic design. Since GIS links "information to geography," we will also briefly cover data manipulation using *Microsoft Excel*. It is envisioned that you will continue to use the skills learned in this course not only after you graduate, but throughout your program of study at Bemidji State University. For this reason, we will also learn of some common sources of data for geographic applications. The goal of the course is not so much to master each application, but to understand the fundamentals of computer mapping and spatial analysis, and to develop an awareness of tools that are available for subsequent projects you may encounter.

Tentative Schedule

Week	Dates	Material	Readings
1	8/27	Introduction	Pg 3-30
2	9/3	NO CLASS MON 9/3 – LABOR DAY	
3	9/10	Introduction to cartography and map design (Project 1)	Pg 112-128
4	9/17	Work on Project 1	Pg 163-168
5	9/24	Introduction to Data Models (Raster and Vector) Vector Data (project 2)	Pg 349-363
6	10/1	Work on Project 2	Pg 403-410
7	10/8	Introduction to Spatial Data sources (Project 3)	
8	10/15	Work on Project 3	Pg 285-295
9	10/22	Digitizing / Spatial data creation (Project 4)	Pg 303-306
10	10/29	Work on Project 4	
11	11/5	Introduction to Raster Data analysis (Project 5)	Pg 449-478
12	11/12	Work on Project 5	
13	11/19	Geodatabases (Project 6)	Pg 235-241
14	11/26	Work on Project 6	
15	12/3	Public GIS participation / the KML revolution; Review for Test	HO
16	12/10	Final Exam	

HO = Handout; Pg = Reading from Kennedy

Grading Schedule

A: 90%-100%

B:80%-89.9%

C:70%-79.9%

D:60%-69.9%

F:0%-59.9%

Grading

You will complete 6 projects during the semester. Projects will be turned-in in digital format to the D2L site. Each project will consist of a single pdf document that contains the completed material. A final exam will also be given, in which you will be asked to use the skills learned in the course to complete a project during the scheduled final exam period. It is a good practice to save all of your graded and returned assignments until you receive your grade for the course. The weighting for the projects and exam will be as follows:

Project 1: Cartography 15%
 Project 2: GIS (Vector) 15%
 Project 3: Spatial Data Sources 10%
 Project 4: Digitizing 10%
 Project 5: GIS (Raster) 15%
 Project 6: Geodatabases 10%
 Final Exam: 25%

Project Due Dates:

Project 1-Cartography:	9/24
Project 2-Vector GIS	10/8
Project 3-Spatial Data Sources TBD	10/22
Project 4- Digitizing	11/5
Project 5-Raster GIS:	11/19
Project 6-Geodatabases:	12/3

Course Homepage and Email Contact

For this course all content, including lectures and handouts can be found on the D2L site created for this course. You can log onto your D2L account and find the course and all the material will be accessible to you. ***You must also use only your BSU email accounts to correspond for this course. It is also your responsibility to check the D2L site frequently as I will post all important class changes and messages at this location.*** All changes to the course schedule made in class are the responsibility of the student.

Delivery of Assignments and Late Assignments

All assignments will be turned in digitally to the D2L site preferably as PDF documents. We will discuss this in greater detail when it is time to turn in the first assignment. Late Assignments will be reduced by 20% of the assignments total grade for 5 days. If the assignment is not turned in by Friday of the week it is due it will become a zero.

Attendance

Since this course relies heavily on in-class demonstrations and project work, attendance is critical. You get one unexcused absence that will not affect grading. Each additional absence decreases your final grade by 3 percentage points. Roll will be taken in class based on a random number generated selection of dates. The following and only the following absences are eligible to be excused and properly documented: religious holidays, as specified in BSU policy; absences due to representing BSU at official functions, verified emergencies and/or illness. While one is not penalized per se for excused absences, s/he is nevertheless responsible for all content missed, including any assignments, knowledge, or skills covered or assigned in the missed class(es). If you do miss class, you should make every effort to contact me before the next class period, so that you can catch up on the missed material. No "extra" credit is available, and **all projects and the final exam must be completed to pass the course.** I will post all grades and additional handouts on D2L so make sure to check the site regularly.

Academic Honesty

Academic dishonesty will not be tolerated. Although it is expected that students will help each other while working on the projects, what you turn in should reflect your knowledge, competence, and acquired skills. *Anyone who turns in someone else's work as his/her own, copies internet materials, or plagiarizes will receive a failing grade for the course, and may be reported to the Director of University Judiciaries for further action.*

Disabilities

If you have a disability and need assistance for some of the work in the course please inform me at the beginning of the semester and we can discuss appropriate accommodations.

Computer Lab Use

Hagg-Sauer 246 is available for your use in the computer based assignments for this course. You can use the lab whenever it is open and there is not a scheduled course going on in the facility. No food or drinks are allowed and you are restricted to using this lab for only GIS and mapping activities. No word processing or paper writing. Additionally, each of the Teaching Assistants will hold office hours in this lab to provide help to students who need it. Their schedules will be posted on the D2L site during the first week of class.