Computer Applications in Geography

GEOG 268
4 Credits
Spring Quarter 2005
M/W 9:10-11pm
105 Clippinger Labs
http://oak.cats.ohiou.edu/~ueland/

Jeff Ueland
105A Clippinger Labs
Office Hrs: T 8-10
Ph: (740) 593-0304
ueland@ohio.edu

Text: *Getting to Know ArcGIS Desktop: The Basics of ArcView, ArcEditor, and ArcInfo Updated for ArcGIS 9,* by Tim Ormsby, Eileen Napoleon, Robert Burke. ESRI Press; 2nd edition (2004), ISBN: 158948083X.

Each student should strongly consider purchasing a 512K or larger USB Flash drive.

More information and materials are available at blackboard and my personal website

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 Ohio University. For this reason, we will also learn of some common sources of data for geographic applications, and introduce you to *Microsoft PowerPoint* presentational software, as well as basic webpage design. 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.

Grading: You will complete 5 projects during the quarter. Projects will be turned-in in digital format (electronically). Each project will consist of a single word 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: Excel 10%
Project 2: Cartography15%
Project 3: GIS (Vector) 20%
Project 4: PowerPoint 10%
Project 5: GIS (Raster) 20%
Final Exam: 25%

Grading Schedule:

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
% Range	100-94	93-90	89-87	86-84	83-80	79-77	77-74	73-70	69-67	66-64	63-60	59 or less

Seventy percent of success in life is showing up - Woody Allen. Since this course relies heavily on in-class demonstrations and project work, attendance is critical (although not a direct basis for grading). If any topic is unclear after lecture, please do not hesitate to see me as soon as possible. If you are unable to attend any class (e.g., because of an OU-sanctioned activity), please notify me ASAP. You will be held responsible for all material covered in class, and deductions will be imposed for projects turned in late (⅓-letter grade per day). 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 blackboard so make sure to check the site regularly.

Proposed Schedule:

Week No.	Dates	Topics Covered	Readings
1	Mar 28-30	Course introduction; Computer lab use, Introduction to Geographic Data; Introduction to Excel (Project 1)	HO 1
2	Apr 4-6	Work on Project 1	HO 2
3	Apr 11-13	Introduction to GIS; Introduction to ARCGIS	CH 1
4	Apr 18-20	Introduction to cartography and map design (Project 2)	CH 3, CH 18, CH 19
5	Apr 25-27	Work on Project 2; Introduction to Data Models (Raster and Vector) Vector Data (Project 3)	CH 5, CH 6, CH 8, CH 9
6	May 2-4	Work on Project 3; Introduction to Coordinate systems, datums, projections and scale	CH 10, CH 11, CH 12, CH 13
7	May 9-11	Introduction to PowerPoint (Project 4)	HO 3
8	May 16-18	Work on Project 4; Introduction to Global Positioning Systems (GPS)	HO 4
9	May 23-25	Introduction to Raster Data analysis (Project 6); Work on Project 6	CH 12, CH 13
10	May 30 – Jun 1	**NO CLASS May 30 – Memorial Day**; Final test review	
11	June 7	**Final Exam: Tuesday, June 7 @ 12:20 pm in Clippinger Labs Room 105**	

HO = Handout; CH = Chapter

Project Due Dates:

Project 1-Excel:	April 13 at the end of class
Project 2-Cartography:	April 27 at the end of class
Project 3-Vector GIS:	May 11 at the end of class
Project 4-PowerPoint:	May 18 at the end of class
Project 5-Raster GIS:	Friday, June 3 at 5 pm

TA: Carolyn Rizzuto

cr330603@ohio.edu
Grad Office (102 CLIP): 593-1141
Office Hours TBA

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 own will receive a zero for the assignment, and may be reported to the Director of University Judiciaries for further action.

Disabilities: If you have a disability that may hinder your performance in the class please inform me at the beginning of the quarter.

Computer and Lab Use: You will need to use the computers outside of the regularly scheduled class time to work on projects and explore the functionality of the software. Dedicated lab times have been established for our class use; I will be present at this time to help answer your questions. You may use the computers at other times during the week except during designated lecture/lab times for other Geography courses (a schedule is posted on the lab door). The lab is not intended for general use, and entrance to the lab is restricted. To enter, punch in the last 6 digits of your PID and then press the * key (the keypad "beeps" with every button pushed). The green light will flash and the door will unlock. Do not leave the door propped open. Please see handout # 1 for additional information about logging on and computer lab use.

IMPORTANT: The computer lab is your resource for the quarter so please abide by its rules and limit your printing to class projects. Below are some basic tips to keeping your data safe and backed up.

1. Copy all your data and do all processing on your local machine. It is much faster and more reliable for data analysis.
2. When working on a local machine put your data in C:\Workspace
3. In doing the above, **MAKE SURE TO COPY ALL YOUR DATA BACK TO YOUR Z: DRIVE** after working in the lab. The machines may be gutted at anytime so any work that is not backed up to the Z drive will be lost.