

Geog320 Cartography

Spring 2012 Course Syllabus

AH 1320

1:30 – 2:45 pm MW

Instructor: Dr. Shunfu Hu

Office: AH1413 Telephone 650-2281

Office hours: 11:00 a.m. – 12:00 p.m. MW
or by appointment (shu@siue.edu)

Course Materials:

A. Map Use and Analysis. (Campbell 2001)

B. Thematic Cartography and Geographic Visualization (Slocum et al. 2005)

Computer Software

ArcGIS and Macromedia Director

Introduction and Course Objectives

The International Cartographic Association (ICA) has defined cartography as the art, science, and technology of making maps. Until the late 1960's and early 1970's, cartographers practiced their trade using "manual" techniques, employing both pen and ink methods and productions methods. In the late 1970's and 80's, the impact of the "computer assisting the cartographer" in his /her craft could be described as revolutionary.

One of the questions modern cartographers grapple with is "does the computer take the 'art' out of cartography?" Even if the answer is no, can cartographic skills still be improved in a computer based environment. Even if the cartographers' skills stified in this environment, are cartographers willing to give up the speed and flexibility with which computers can provide? With the onset of the 1990's, many cartographers' fears have been laid to rest with the advent of user-friendly software packages that allow a great deal of artistic and creative flexibility.

The purpose of this course is to develop your skills in map use and analysis as well as to develop your map-making skills by applying cartographic theory to microcomputer cartographic software. The microcomputer and associated peripherals (the graphics screen, printers and plotters) replace the pen and drafting board as the means to map productions. Through a series of lectures and lab exercises, you will not only develop your cartographic skills, but also become comfortable working in a microcomputer environment. On successful completion of this course, you will have the necessary background for subsequent courses in geographic information systems (GIS).

Lecture/Lab Schedule

Date	Topics	Reading Assignment
Jan. 9	Introduction to the course	
Jan. 11	Kinds of maps	A. Ch. 1 p. 1 – 18
Jan. 18	Lab 1: map use and analysis	
Jan 23	The size and shape of the earth Lab 2: Geographic Grid: Latitude and Longitude	A. Ch. 2 p. 19 – 36 B. Ch. 7 p. 121 – 136
Jan. 25	Lab 3: Basic of ArcGIS	handout
Jan. 30	Understanding Map Projections	A. Ch. 3 p. 37 – 47 B. Ch. 8 p. 137 – 159 B. Ch. 9 p. 160 – 179
Feb. 1	Lab 4: Create a map using ArcGIS	handout
Feb. 6	Lab 5: Map Projections Reading Assignment: Understanding and Controlling Distortion	handout
Feb. 8	Understanding Coordinate Systems	A. Ch. 4 p. 48 – 74
Feb. 13	Lab 6: Define and assign a geographic coordinate system	handout
Feb. 15	Understanding Datums and datum shifts Lab 7: Transform Coordinate Systems and datum shifts	B. Ch. 7 p. 134 – 135
Feb. 20	Project 1: Creating SIUE Campus Map	handout
Feb. 22	Project 1 continues	
Feb. 27	Project 1 continues	
Feb. 29	Mid-term Exam	
Mar. 12	Map scale, generalization concepts, and measurements from maps	A. Ch. 5 p. 75 – 86 A. Ch. 6 p. 87 – 97
Mar. 14	Color theories and principles for color thematic maps	B. Ch. 10 p. 181 - 198
Mar. 19	Elements of Cartographic Design	B. Ch. 11 p. 199 - 227
Mar. 21	SIUE Map Correction from Project 1	
Mar. 26	Base-map compilation Lab 8: Base-map preparation for thematic mapping	
Mar. 28	Choropleth Mapping, Proportional Mapping and Dot Mapping Lab 9: Choropleth, proportional and dot mapping	C. Ch. 13 p. 250 – 270 B. Ch. 16 p. 310 – 327 B. Ch. 17 p. 328 - 340
Apr. 2	Project 2: Making a thematic map	
Apr. 4	Contour Interpretation Lab 10: contour mapping	A. Ch. 8 p. 120 – 129 A. Ch. 9 p. 130 – 141
Apr. 9	Topographic Features	A. Ch. 10 p. 142 - 161
Apr. 11	Lab 11: 3-D mapping	Handout
Apr. 16	Multimedia Mapping	B. Ch.22 p. 406 -418
Apr. 18	Lab 12: Virtual Field Trip	Handout
Apr. 23	Lab 12 continues	Handout
Apr. 25	Course review	Handout
Apr. 30	Final Exam	12:00 - 1:40

Course Grading System and Requirements

1) Grading

Item	Points
Mid-term Exam	100
Final Exam	100
Project 1	20
Project 2	20
Lab Exercises	120
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Total	360

Grade	Points
A	≥ 324
B	288 – 323
C	252 – 287
D	216 – 251
F	≤ 215

2) Exams

There will be two exams for this class. The format for the exams will include any combination of the following items: fill-in blanks, short answers, and short essays. Exam dates are provided in the “Lecture and Lab Schedule” section of this syllabus. The exams will be weighted toward lecture materials and reading assignments, but may integrate techniques from the lab exercises.

3) Lab Exercises

There are many lab assignments given throughout the semester. Details of the lab’s content and special grading parameters will be provided with each assignment. The labs provide the opportunity for you to develop map-making skills by applying cartographic theory to microcomputer cartographic software. **Most of the labs require you to write a short summary report (one page).** Any major write-up should be typed with double space. Please include your full name, lab number and title, and the course name (in this case, Geog320-001: Cartography). Some of the common grading parameters include: attention to cartographic convention, creativity, difficulty of the endeavor, appropriate design, and insightful analysis in the accompanying write-up. Lab assignments must be turned in on time. **Late lab will not be accepted.** In most cases, **lab due date is one week from the date when the lab is assigned.**

4) Attendance

Students need to come to class on a regular basis to master the course materials. Attendance will be taken regularly. **Each student is allowed one absence**, after which 10 points are deducted from the final score. The only exception to this rule is if the

second or subsequent absence is an “excused absence” as listed in the Student Policies of the Faculty Handbook.

5) Make-up Policy

Students must take all exams at the designated times. You must contact me as early as possible to reschedule an exam. A make-up will only be given for an excused absence (see #4 above). If you don’t come and see me or call me within one class day of the missed exam, the grade for that exam will be zero. Regardless of total points, you must take all the exams to pass this course.

6) Professionalism

This is the ability to positively and professionally engage yourself in a laboratory setting. This includes proper use and care of the lab and materials, cooperation with partners in your group when group efforts are required, and sharing computer time if necessary. In addition, it includes completing any in class assignments in a timely fashion. Although I generally do not move students “up” when it comes grading time, a 89.9% will be an “A” if you don’t have any absence or missing lab report.

7) Academic Honesty

Cheating on exams or exercises can result in the failure of this course or the work in question. Refer to the student handbook if you have questions in this area.

Note: This syllabus is tentative and subject to change. You are responsible for knowing the course content and being aware of any changes in assigned due dates, exams, and labs.

Finally... Cartography is both a fun and fascinating sub-discipline within geography. Some students may find the computer a little intimidating at first, but I am willing to work with you to get through any trouble spots that may occur. I am also committed to assisting those who want to progress further in the software packages that we will use. I am looking forward to working with each of you on an individual basis. Hope you will have a productive semester.

If you have any further question, please feel free to contact me.

Other things you need to know about this course.

- 1. Cell phones and other electronic devices including computers**
Be sure to *turn off* whatever noise your cell phones, pagers, etc. make and do not play with your phone or other electronic toys in class. Computer use is not permitted during class except with permission of the instructor.
- 2. Disability support**
I will do my best to make sure that all students have the resources needed to succeed in this class. If you need additional assistance, as a first step, contact the Disability Support Services office (Rendleman Hall, Room 1218). Please notify me no later than the end of the first week of class concerning any academic accommodations you need. You must have an ID CARD from DSS.
- 3. Email**
You are encouraged to use email to contact me (shu@siue.edu). Please include a relevant subject line (I delete all email without a subject line.), the course name and section, and your name.
- 4. Blackboard**
The syllabus, course outline, announcements, lecture notes, homework assignments, grades and other information related to the class will be available on Blackboard. Be sure to check it frequently.
- 5. Withdrawal**
Be sure you know SIUE's withdrawal policies and deadlines.
- 6. Disclosure of grades**
In accordance with the Family Education Privacy Act, I cannot disclose grades in a manner that would compromise confidentiality. Therefore, I cannot disclose grades by telephone, email or through public posting. You will be able to check your grades on Blackboard. If you wish to discuss your grade, please see me during office hours or make an appointment.
- 7. Grades of Incomplete**
Grades of Incomplete are only given for major family or medical emergencies (Documentation is required). Be sure you understand SIUE's policy on incompletes before you contact me.
- 8. Academic honesty and plagiarism**
Students are expected to behave with honesty and integrity at all times. Cheating is an act of academic misconduct for which students are subject to sanctions. For more information on SIUE's policy on cheating, see the appropriate sections of the SIUE Student Code of Conduct. <http://www.siue.edu/POLICIES/3c2.html>

The University recognizes plagiarism as a serious academic offense. Plagiarism, the act of representing the work of another as one's own, may take two forms. It may consist of copying, paraphrasing or otherwise using the written or oral work of another without acknowledging the source or it may consist of presenting oral

or written course work prepared by another as one's own. For more information on SIUE's policy on plagiarism, see the appropriate sections of the SIUE Student Code of Conduct. <http://www.siu.edu/POLICIES/1i6.html>

Students found to have cheated or plagiarized material will receive an F in this course. Additional disciplinary actions may be taken as warranted.

9. Disruption of class and uncivil behavior

Students who disrupt the functioning of the class or behave in an uncivil manner to the instructor or to other students will be asked to leave the class. Reading, surfing, texting, talking on cell phones, listening to music, talking, or doing work from other classes are considered uncivil behavior. For more information on how class disruption and uncivil behavior are handled at SIUE, see the Student Code of Conduct. <http://www.siu.edu/POLICIES/3c1.html>

10. An important “However”

This syllabus, the course outline, and all course policies are subject to modification by the instructor as conditions warrant.