Introduction to Cartography
GEOG 4541, Fall 2006
Georgia Southern University

INSTRUCTOR INFORMATION

Instructor: Dr. Wei Tu
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Lab Assistant
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Extended Lab Hours: TTH 6-9 pm

MEETING TIME AND LOCATIONS

	Time	Location
LECTURES	MWF: 2:00 - 2:50 pm	2112 Herty
LABS	TTh: 8:00 - 9:15 am	2204 IT

THE NATURE OF THE COURSE

This course is an introduction to the science and art of making maps. The contents of this class range from the history and principles of thematic map compilation and design, basics of map projections, data sources and processing, map color, symbolization and typography to common types and styles of thematic maps. While the lecture part of this course will cover theoretical concepts and design principles of cartography, laboratory exercises will provide hands-on experiences in using ArcGIS to design and produce a variety of thematic maps for different purposes.

LEARNING OUTCOMES

Provided that students fulfill all the course requirements, they should expect the following at the end of this semester: (1) to understand the basic principles of thematic cartography; (2) to gain working experience in using computers for map design and production; (3) to appreciate the importance of mapping to the society, (4) to be able to interpret and analyze geographical phenomena through the use of maps.

TEXTBOOK

REQUIRED

Dent, B. D. 2000. **Cartography: Thematic Map Design**. 6th edition. Dubuque, IA.: Wm C. Brown Publishers.

RECOMMENDED

Black, J. 1997. **Maps and History: Constructing Images of the Past**. New Haven, CT.: Yale University Press.

Campbell, J. 2001. **Map Use and Analysis**, 4th edition. Dubuque, Iowa: Wm C Brown.

MacEachren, A. 1995**. How Maps Work: Representation, Visualization, and Design**. New York: The Guilford Press.

Monmonier, M. 1996**. How to Lie with Maps**. Chicago: The University of Chicago Press.

Sobel, D. 1995. **Longitude.** New York. Penguin Books.

Thrower, N. 1996. **Maps and Civilization: Cartography in Culture and Society.** Chicago: The University of Chicago Press.

Winchester, S. 2001. **The Map that Changed the World: William Smith and the Birth of Modern Geology**. New York: HarperCollins.

Wood, D. 1992**. The Power of Maps.** New York: The Guilford Press.

REQUIRED SUPPLIES: One external storage media with 250 M or above storage capacity. Please also prepare a notebook for both lecture and lab sessions.

COURSE REQUIEMENTS

ATTENDANCE: I expect you to attend lectures (in both body and mind), and attendance will be recorded formally. You are allowed to miss **three** lectures/labs without penalty. If your total absences are between **four and six**, your final grade will be degraded for one letter head; if you miss **more than six** lectures/labs, you will fail the class automatically.

CLASSROOM ETIQUETTE: Students are expected to refrain from eating, drinking, talking, sleeping, making or receiving phone calls, and reading materials that are unrelated to the course while the class and the lab are in session. If you have to arrive late or leave early for a lecture, please sit at a seat closest to the door to minimize your disturbance to others.

EXAMS: All students are required to take three close-book exams. Missing an exam will result in a grade of 0 points. The only acceptable excuses for missing a test are those related to serious personal illness, a family emergency, or official school business (or any other kinds of **university-excused** absences). The reason for the absence must be documented in writing from an appropriate source, such as your physician. If you must be absent when an examination is scheduled, let me know as early as is possible. Do not wait until after the examination is given. In virtually all circumstances no make-up will

be offered. If a student is excused from an examination, that test will not be considered in determining the student's final grade.

QUIZZES/CLASS ACTIVITIES: There will be 10 quizzes/class exercises throughout the semester. The intent of these quizzes/class exercises is to ensure that students are keeping current in their study and the lecture materials well understood. These quizzes/class exercises may not be made up if you are late or absent. Quiz will cover the reading listed in the syllabus for the previous week in which the quiz is given. The quizzes will also be composed primarily of objective questions (multiple-choice and true-false). Always **read according to the schedule** in the syllabus even if I get a bit ahead or behind in class. In general, quizzes will be given during the first 10 minutes of class on Mondays. Class exercises will be given whenever the instructor thinks appropriate during the lecture sessions.

LABORATORY ACCESS AND USE: The course requires you to spend time working in computer labs. You should plan to spend at least 2-3 hours in the laboratory every week, in addition to your time in the regular lab sessions. In addition, you are only allowed to print out materials that are directly related to this course when using the printer in 2204 IT. These rules will be enforced strictly during the semester and their violation will result in loss of laboratory privileges. Even if 2204 IT will be open only during the regular lab hours, you will have the access of GIS software in the following locations: 1) Eagle lab at IT building, Computer lab in library, and 3) computer lab at Herty building (for majors only).

LABORATORY ASSIGNMENTS: All students are expected to fulfill all the requirements of lab exercises. At the beginning of each new lab session, a lab handout will be given followed by general instructions by the instructor. Students are expected to read and understand the handout before they start to work on the assignment and to remain in the lab for the full two-hour period or until the exercise is completed. Although students will be able to complete some of the lab exercises during class time, they will mostly likely to spend time outside class. Thus the extended lab hours that are maintained and supervised by the lab assistants will be provided weekly in addition to the official lab hours.

Please also **notice** that the loss of data due to disk damage, failure, or misplacement will not be accepted as a reason for grade alteration or deadline extension. Routine data backups are recommended for your own protection.

GRADING: A total of 950 points may be earned for this course. The final grades will be assigned on the scale of A (> =90%), B (80 – 89%), C (70 – 79%), D (60 – 69%), and F (< 60%). The cut-offs for final grades will almost certainly be a few percentage points less than these values. However, the 50% rule for failing grades is absolute. You will not pass the course unless you earn at least half of the available points. Contributions to the grades will be weighted as follows:

	Points	Note
Exam 1	100	Non-cumulative
Exam 2	100	Non-cumulative
Exam 3	150	Cumulative
12 Labs	550	11 best will count
10 Quizzes/class activities	50	
Total possible	**950**	

LATENESS POLICY: Assignment due dates are listed at the top lab handouts. Twenty percent will be taken off for each day (weekend will count) for which a lab assignment is late. All exercises and **late exercises** must be handed in before the last class period to receive a passing grade, regardless of how many points have been taken off for tardiness. In case of a emergency situation, see Dr. Tu to reschedule due dates. All emergencies (i.e. medical and family) must be documented in writing.

SCHOLASTIC DISHONESTY

Please read the University Student Conduct Code on scholastic dishonesty carefully. Cheating and plagiarism are serious offenses, they will not be tolerated. If you are unsure what constitutes plagiarism, please see me.

"Prefer a loss to a dishonest gain; the one brings pain at the moment, the other for all time" –Chilton

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COPYRIGHTS

The materials used in this course are copyrighted. By "materials," I mean everything prepared and used for this class, which includes but are not limited to syllabus, lecture notes, quizzes, exams, in-class materials, review sheets, and the project guideline. Because these materials are copyrighted you do not have the right to copy them, unless I expressly grant permission.

STUDENT SERVICE

The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Student Disability Resource Center (SDRC).
Tel: 912-871-1566. Website: http://students.georgiasouthern.edu/disability/

SOME IMPORTANT DATES

08/14: First day of class
08/14-17: Drop/Add
08/21: Attendance Verification deadline
09/04: Labor Day, No classes
09/29: Mid-semester grades due in Registrar's Office by noon.
10/09: Last day to withdraw without academic penalty
11/22-24 Thanksgiving Break, No classes
11/30: Last day of classes
12/4: Final exam
12/8: Commencement
12/9: Final Grade Due

TENTATIVE COURSE SCHEDULE AND TOPICS

Date	Weekly Topics	Reading	Lab
Week 1 8/14 (M) 8/16 (W) 8/18 (F)	Course Overview History of Cartography	Chapter 1	***Lab exercise 1*** Good or Bad Map?
Week 2 8/21 (M) 8/23 (W) 8/25 (F)	The Nature of Geographic Phenomena	Chapter 4	***Lab exercise 2*** Maps Designed to Persuade and Mislead
Week 3 8/28 (M) 8/30 (W) 9/1 (F)	Processing Geographic data	Chapter 5	***Lab exercise 3*** Statistics/graphing
Week 4 9/4 (M) 9/6 (W) 9/8 (F)	**Labor Day, No Class** Map Projection Revisit	Chapter 2-3	***Lab exercise 4*** Map Projections Revisit
Week 5 9/11 (M) 9/13 (W) 9/15 (F)	Map Design and Visual Variables	Chapter 13	***Lab exercise 5*** Map Design
Week 6 9/18 (M) 9/20 (W) 9/22 (F)	**Exam 1 (9/18)** Typography	Chapter 14	
Week 7 9/25 (M) 9/27 (W) 9/29 (F)	Color	Chapter 15	
Week 8 10/2 (M) 10/4 (W) 10/6 (F)	Choropleth Maps	Chapter 7	***Lab exercise 6*** Mapping Census Data (1)
Week 9 10/9 (M) 10/11 (W) 10/13 (F)	Census Mapping	Chapter 4	***Lab exercise 7*** Mapping Census Data (2)
Week 10 10/16 (M) 10/18 (W) 10/20 (F)	Proportional Circle Maps	Chapter 9	***Lab exercise 8*** Proportional Symbol Mapping
Week 11 10/23 (M) 10/25 (W) 10/27 (F)	Isarithmic Maps	Chapters 10	***Lab exercise 9*** Contour Mapping
Week 12 10/30 (M)	**Exam2 (10/30)** Dot Map		***Lab exercise 10*** Dot Map

11/1 (W) 11/3 (F)			
Week 13 11/6 (M) 11/8 (W) 11/10 (F)	Multimedia and Interactive Cartography	Supplemental materials	***Lab exercise 11*** Animated Map
Week 14 11/13 (M) 11/15 (W) 11/17 (F)	Flow Map/Cartogram		***Lab exercise 12*** Flow Map
Week 15 11/20 (M) 11/22 (W) 11/24 (F)	TBA **Happy Thanksgiving** **Happy Thanksgiving**		
Week 16 11/27 (M) 11/29 (W) 12/1 (F)	Course debriefing The Future Trend of Cartography	Supplemental materials	
12/6 (W)	**Final Exam 2 (3-5 pm)**		