

GEOG 5200S – Elements of Cartography: Serving the Community Through Cartography – Spring 2016

Instructor

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Teaching Assistant

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Course Description

“Show me a geographer who does not need them [maps] constantly and want them about him, and I shall have my doubts as to whether he has made the right choice in life.” Carl O. Sauer (1889-1975)

The Spring 2016 offering is the service learning version of Geography 5200. This is an introduction to the art, craft, and science of cartography. We will emphasize important aspects of cartographic communication, including: map purpose, geographic phenomena and their measurement, data collection and creation, data manipulation such as classification and generalization, and various map design issues such as color choice, typography, and layout.

“Learning map craft is like learning to ride a bicycle. You cannot learn from a book. You take a bicycle, with an experienced friend to guide, encourage, and assist you, and you try...” British War Office Information Handbook, ca 1945.

Much emphasis is put on hands-on experience for you to learn to apply visual and cartographic techniques to spatial information.

The course goal is that students learn basic principles of cartographic communication. More specifically, the objectives are that after successful completion of the course, students know:

- how to produce maps
 - Know about elements of cartographic communication
 - How and when to use different types of maps
 - Make informed decisions about map design in a given situation
- how to consume maps
 - Be able to read and understand different types of maps
 - Critically evaluate maps and be able to articulate why it is good or bad

With the service learning designation, the students will reach those objectives while also serving our local community through cartography.

Service Learning: *“A form of experiential education characterized by student participation in an organized service activity that: 1) is connected to specific learning outcomes, 2) meets identified community needs and 3) provides structured time for student reflection and connection of the service experience to learning”* --OSU Service Learning Initiative

General Education (GE) statement

This course fulfills GE requirements for the Open Option Service-Learning category.

Goals:

Students gain and apply academic knowledge through civic engagement with communities.

Expected Learning Outcomes:

1. Students make connections between concepts and skills learned in an academic setting and community-based work.
2. Students demonstrate an understanding of the issues, resources, assets, and cultures of the community in which they are working.
3. Students evaluate the impacts of the service learning activity.

Schedule

The most up to date schedule will always be posted on [Carmen](#) under Course info. Any significant changes to the schedule will be announced well in advance.

Lectures & exercises

Tuesdays 08:00 AM — 09:20 AM in 1005 Smith Lab.

Class material such as lecture notes, worksheets, handouts will be made available through [Carmen](#) under the heading Lectures.

During lectures we will often spend some time to work with sample problems and discuss practical applications. These activities are meant to build a deeper understanding of the subject matter but it also relies heavily on your active participation. You will also sometimes have work to prepare before classes or other types of homework assignments.

Labs

Thursdays or Fridays 08:00 AM — 09:20 AM in 0140 Derby Hall.

There are weekly lab sessions and you should be signed up for one of them, either on Thursdays or on Fridays. These are led by the course TA, and they offer a critical opportunity to practice cartography and get hands on experience with a lot of the concepts that is covered in lecture. Details on the labs will be posted on Carmen under the Labs heading.

Service

As part of this course, you will engage in service that addresses a community need. This aspect of the course is usually the most engaging and impactful of all activities.

Our partner for this semester is the Columbus Metropolitan Libraries and you will be doing a mapping project in collaboration with their Homework Help Centers (HHCs). Their branch locations are off campus and most of them will be most conveniently reached by car, but bus & bike transportation is an option too. It is the student's responsibility to arrange their own transportation to and from volunteer activities. No transportation or reimbursement for related expenses will be provided by the University.

To prepare for the service, students will have to attend a Cultural Competence training session at the AAAS Community Extension Center under the supervision of Prof. Linda James Myers. There will be a separate sign-

up for these events.

The service activity will be ongoing throughout the semester and is a way to understand the course topics by applying what you are learning in a real-world setting. Starting in February you will serving in the HHCs and develop a map-based learning activity. The service will be a minimum of 15 hours total spread across the semester. You will have the opportunity to schedule a time that fits with the HHCs operating hours Monday-Friday 3-7pm. To be able to do the service, you must have a criminal background check done. The cost for this will be covered by the CML. If running a criminal background check will be a concern for you, please come see me to discuss your options. The libraries don't allow anyone to work with them who has a felony of any kind or charges related to theft, assault, concealed carry, crimes of a sexual nature, or arson.

Geography 5200S – Spring 2016 schedule			
Tuesday	Lecture	Same week Thursday/Friday lab	Service
12 Jan	Course introduction + Thematic mapping [Ch. 1, 2]	Lab 1 - Getting started with ArcMap	n/a
19 Jan	Symbolization [Ch. 5]	Lab 1 continued	Project introductions
26 Jan	Earth coordinates [Ch. 7]	Lab 2 - Projections	Cultural competency training
2 Feb	Map projections [Ch. 8, 9]	Lab 2 continued	HHC - general
9 Feb	Statistical foundations & Data classification [Ch. 3 pp.34-41, Ch. 4]	Lab 3 – Choropleth mapping	HHC – general
16 Feb	Choropleth mapping [Ch. 14], Color [Ch. 10]	Lab 3 continued	HHC – general
23 Feb	Map elements & design [Ch. 11, 12]	Lab 4 – Map design	HHC – general
1 Mar	Typography	Lab 4 continued	HHC – general

	[Ch. 11, 12]		
8 Mar	Data sources	Lab 5 – Map data	HHC – prepare prog.
15 Mar	Spring	Break	
22 Mar	Proportional symbol & dot maps [Ch. 17]	Lab 6 – Dot density and prop. symbol mapping	HHC – prepare prog.
29 Mar	Data & generalization [Ch. 6]	Lab 7 – Map library	HHC – prepare prog.
5 Apr	Effective graphing [Dent, Ch. 18]	Lab 6 continued / Project work	HHC – deliver prog.
12 Apr	Project work (design reflections)	Project work	HHC – deliver prog.
19 Apr	Project work (peer-review)	Project work	
26 Apr		Wednesday 8:00-9:45 Final reporting back	

Texts

Required:

Goodes's World Atlas, 22nd Ed., Rand McNally.

The atlas is used for illustration and for class exercises. It is also a valuable source for good design practice, one of the few things where I encourage copying work of others.

There is a bundle of these two items - ISBN-10: 0321784162 - that should save you about \$20 off the total list price.

Recommended:

Slocum T. et al., 2009, Thematic cartography and geovisualization, 3rd ed., Pearson Prentice Hall, 561p.

Lectures will cover the most of the book topics but in a different fashion so the text can serve as a complement to enrich the lectures, and provide more detail. (The 2nd edition works too but the newer text is re-organized and updated so any references to it may be off)

Grading Policy

Overall credits for the course are given approximately as follows:

Practice Assignments	~350 points (or ~45%)
In-class work & other homework	~90 points (or ~10%)
Service and term project	~200 points (or ~25%)
Exams	~160 points (or ~20%)

The credits given to each course component reflects my notion that I can only facilitate for you to acquire theoretical and practical knowledge. *Only you can learn* what we want you to. Consequently, assessments relate mainly to your own learning, such as demonstrating practical use of the covered topic matter in class, homework and an individual project.

Final letter grades will be assigned based on how many percent of total points available you have earned.

93.0 <= A
 90.0 <= A- < 92.9
 87.0 <= B+ < 89.9
 83.0 <= B < 86.9
 80.0 <= B- < 82.9
 77.0 <= C+ < 79.9
 73.0 <= C < 76.9
 70.0 <= C- < 72.9
 67.0 <= D+ < 69.9
 60.0 <= D < 66.9
 F < 60.0

Attendance, Timeliness & Examination Policy

Lecture, in-class work & homework: You are expected to attend lectures twice a week on basic cartographic principles and map design. Most classes have time allotted for discussions, in-class work and other activities. Your contribution in these and in class generally, will be noted, and used to determine part of your final grade, just showing up won't count a whole lot toward this component! Obviously, you will receive no credit for in-class work if you are not present.

During the quarter, there will be several homework assignments. The main purpose of the homework is to provide an opportunity to learn how to apply and reflect upon the things we cover during the lectures. If you are having difficulty with assignments you should ask for assistance, whether from fellow students, from the course TA, or from me. Whatever you do, ask someone but please note the academic integrity policy!

Exams: You will complete readings on cartography, map design and/or service learning principles each week,

most from the textbook. To ensure that the reading assignments are completed, you will be assigned to complete five online quizzes. These are essentially take-home exams administered through Carmen.

Practical Exercises: There will be 7 graded Practical Exercises. Details of the assignments will be posted on the course web site.

Attending class is important since these times provide you with access to the instructors and to other students. Keep in mind that not all assignments will be possible to finish in the allotted class time. Students will be expected to assignments outside of class during posted computer room hours.

You are welcome to discuss the exercises amongst yourselves, in fact this is encouraged, but the final product you hand in *must be your own work* (see Academic Integrity Policy below).

Term project – service-learning: In lieu of a final exam and as part of the service-learning portion of the course, students will engage in a service-learning activity and complete a final project. This project and service activity is graded both on your participation at the HHCs and the mapping project you develop. Further details on the mapping project will be posted on Carmen.

Grading: Given that this class has no pre-requisites, we understand that many of the concepts and techniques discussed early in the course will be new. Recognizing this, the first few assignments will contain more detailed instructions.

All course work (practical exercises, homework, service and project work) are expected by the due date. A late penalty of at least 10 percentage units will be taken off each day after the due date.

If you have a genuine reason (known medical condition, a pile-up of due assignments on other courses, ROTC, athletics teams, job interview, religious obligations etc.) for being unable to complete work on time, then some flexibility is possible. However, if in my judgment you could reasonably have let me know *beforehand* that there would likely be a delay, then a late penalty will still be imposed if I don't hear from you until *after* the deadline has passed. For unforeseeable problems, I can be more flexible.

If there are ongoing medical, personal, or other issues that are likely to affect your work all semester, then please arrange to see me to discuss the situation.

There will be no make-up exams except for circumstances like those above.

Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's [Code of Student Conduct](#) and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

What this really means is: If I suspect that a student has committed academic misconduct in this course, *I am obligated* by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM

determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University. Please do not put yourself in that situation.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) can be found on the Committee on Academic Misconduct web pages (oaa.osu.edu/coam/home.html)

Disability Services

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.