

Term Information

Effective Term Autumn 2013
Previous Value Summer 2012

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Adding GE Status (Open Option-- Service Learning)

What is the rationale for the proposed change(s)?

The course has been taught as a Service learning course in the past (it already has S designation) and we are now seeking GE status for it.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

None.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Geography
Fiscal Unit/Academic Org	Geography - D0733
College/Academic Group	Arts and Sciences
Level/Career	Graduate, Undergraduate
Course Number/Catalog	5200S
Course Title	Elements of Cartography
Transcript Abbreviation	Cartography
Course Description	A study of the cartographic techniques of map compilation and presentation including generalization, symbolization, reproduction, and simple computer mapping with an emphasis on thematic mapping.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites

Exclusions Not open to students with credit for 580 or 580S.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 45.0701
Subsidy Level Doctoral Course
Intended Rank Junior, Senior, Masters, Doctoral

Quarters to Semesters

Quarters to Semesters Semester equivalent of a quarter course (e.g., a 5 credit hour course under quarters which becomes a 3 credit hour course under semesters)

List the number and title of current course being converted Goeg 580S: Elements of Cartography.

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

General Education course:

Service-Learning (new)

The course is an elective (for this or other units) or is a service course for other units

Previous Value

Required for this unit's degrees, majors, and/or minors

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

Content Topic List

- Cartographic Techniques
- Computer Mapping
- Generalization, symbolization, reproduction

Attachments

- GEOG5200_GE_Service_Learning.doc
(GEC Model Curriculum Compliance Stmt. Owner: Mansfield, Becky Kate)
- GEOG5200S_SampleSyllabus.docx
(Syllabus. Owner: Mansfield, Becky Kate)

Comments

COURSE CHANGE REQUEST
5200S - Status: PENDING

Last Updated: Haddad,Deborah Moore
01/31/2013

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Mansfield,Becky Kate	01/31/2013 10:16 AM	Submitted for Approval
Approved	Mansfield,Becky Kate	01/31/2013 10:17 AM	Unit Approval
Approved	Haddad,Deborah Moore	01/31/2013 03:07 PM	College Approval
Pending Approval	Nolen,Dawn Jenkins,Mary Ellen Bigler Vankeerbergen,Bernadette Chantal Hogle,Danielle Nicole Hanlin,Deborah Kay	01/31/2013 03:07 PM	ASCCAO Approval

GEOG 5200S – Elements of Cartography: Serving the Community through Cartography [term] Semester [YYYY]

Instructor

[name, [\[email\]](#)]

Office phone: xxx-xxxx

Office address:

Office hours:

Teaching Assistant

[name, [\[email\]](#)]

Office phone: xxx-xxxx

Office address:

Office hours:

Time and Location

Tuesdays and Thursdays 11:10 AM—12:30 PM, in 0140 Derby Hall.

Class material such as lecture notes, worksheets, lab instructions, 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.

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.

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 2011 offering is the service learning version of Geography 580. Much like Geography 580, 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. With the service learning designation, the course will provide students with opportunities to serve local community partners 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*

“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.

Texts

Required:

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 serves as a true complement to enrich the lectures, and provide more detail. (The 2nd edition is also OK but the new text is significantly re-organized and updated)

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: 032156197X , that should save you about \$20 off the total list price.

The New York Times, or other newspaper with good maps and graphics in their coverage of current events. This will be used for class discussions and student presentations during the course.

Free copies of NYT are available to students in the residence halls and student discounted personal subscriptions run ~\$20 for the quarter.

Grading Policy

Overall credits for the course are given approximately as follows:

Lab Assignments	~350 points (or ~50%)
In-class work & Homework	~40 points (or ~5%)
Term project and related work	~220 points (or ~30%)
Reading questions	~100 points (or ~15%)

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 lab, homework and an individual project.

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

92.5 <= A

90.0 <= A- < 92.5

87.5 <= B+ < 90.0

82.5 <= B < 87.5

80.0 <= B- < 82.5

77.5 <= C+ < 80.0

70.0 <= C < 77.5

60.0 <= D < 70.0

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 assignments. The main purpose of these 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!

Map presentations: You will be asked to present to the class and discuss the design of maps on current events. This activity will be ongoing throughout the quarter.

Reading Questions: 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 expected to hand in answers to reading questions provided by the instructor 1 week in advance of their due date. These are essentially take-home exams administered through Carmen.

Lab Assignments: You are welcome to discuss the labs amongst yourselves, in fact this is encouraged, but the final product you hand in *must be your own work* (see Academic Integrity Policy below). Details of the lab assignments will be posted on the course web site.

- Attending lab time is important since these times provide you with access to the lab instructor and to other students. Keep in mind that not all labs will necessarily be finished in the allotted lab time. Students will be expected to finish labs outside of class during posted lab room hours.
- A few words about lab grading: Given that this class has no pre-requisites, the instructor understands that many of the concepts and techniques discussed early in the course will be new. Recognizing this, the first few labs will contain more detailed instructions.

Critical Reflection Exercises: To ensure that students develop critical thinking skills about how cartography can be used in serving local communities and to ensure that the final group projects are discussed throughout the entire quarter, students will complete four critical thinking and reflection exercises. Example questions include: (1) Who benefits from the service learning component done in this class? (2) What are some of the issues that exist in the community? (3) How/why were these conditions created? (4) How does this project/class contribute to addressing the particular issue?

Final community mapping group project: Students are expected to work in small groups and with community organizations [partner names] to design maps, e.g. poster-size maps and/or brochures that explain a community issue, spatial process, or geographic phenomenon in and around [the neighborhood name]. Student groups will be expected to present their topic/map to the community partners and invited guests during the last class. In lieu of a final exam and as part of the final community mapping project, you will complete a final mapping project individual assessment. This part of the final mapping project will be completed individually, but will be based on the group map as it relates to the themes of the course.

- Some general topics that lend themselves well to mapping have already been identified (identification of historical landmarks and points of pride, music and entertainment culture, housing ownership and vacancy, safety and crime prevention, access to public transportation). Student groups, in consultation with the instructor and with the community partner, will be expected to engage in all stages of the map design process. Additional topics can be developed in consultation with the instructor and the community partner.

All course work (labs, homework, individual 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 or labs except for documented emergencies.

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.

Topical outline, readings & assignment schedule

Day	Topic	Reading	Notes
Week 1	Introduction/History of Western cartography	Slocum, Ch.1	
	Getting to know ArcGIS	Lab Guide I	
Week 2	What are maps for? What is cartography for?	Field and Demaj, 2012	
	Map elements	Slocum, pp. 188-202	
Week 3	Thinking about service learning & cultural sensitivity discussion	Norwood and Cumming, 2012; Jamie Oliver video	Reflection 1 & reading questions
	Basics of cartographic design	Slocum, pp. 211-221; Lab Guide II	Lab I due
Week 4	Symbols on maps	Slocum, Ch. 5 (skip Section 5.4)	
	Careers in Cartography		Project proposal due
Week 5	Field trip to project site	Reading specific to project	At project site
	Scale and generalization	Monmonier, 1996, Ch. 3 Lab Guide III	Lab II due
Week 6	Research, representation, and positionality	TBD based on final project ideas	Reflection 2 & reading questions
	Thinking about symbols on maps	Wood and Fels, 1986, pp. 54-61	
Week 7	Classifying data on maps	Slocum, Ch. 4 (Section 4.1 only)	Project proposal due
	Color and cognition	Slocum, Ch. 10; Lab Guide IV	Lab III due
Week 8	Designing choropleth maps	Slocum, Ch. 14 (skip Sections 14.4 and 14.6)	
	Dot density maps	Slocum, Ch. 17	Client contact due
Week 9	Proportional symbol maps		
	Political uses of maps/Update on project progress	Assigned by groups, Lab Guide V	Lab IV due
Week 10	Spring Break!		
	Spring Break!		
Week 11	Isarithmic mapping	Slocum, Ch. 16 (skip Sections 16.3 and 16.6)	Reflection 3 & reading questions
	Modeling the earth	Slocum, Ch. 7	
Week 12	Projections	Slocum, Ch. 8	
	Choosing the right projection	Slocum, Ch. 9 (Section 9.1) ; Lab Guide VI	Lab V due
Week 13	How to McGyver a map (I)		
	How to McGyver a map (II)		
Week 14	Guest lecture		Reflection 4 & reading questions
	Project work day		Lab VI due
Week 15	Project check-in		
	Project presentations		At project site
Finals week	Final Project Reporting		Final reports due

Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.”

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*, 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/>.

Service-Learning Designation Request Form

Please upload attachments to the appropriate Course Request Form in the Course and Program Entry and Approval System (curriculum.osu.edu).

1. Has this class previously received an S-Designation? Yes

2. Is this class always taught with a service-learning component? No

Comment: Geography 5200 has been taught alternately as a 'regular' and a 'service-learning' offering since WI2009 (previously Geography 580/580S). Typically the S-L version is taught in the spring semester.

COURSE CONTENT/PLANNING

3. Please describe the planned service activities to be performed by students in this course.

The existing service-learning version of this course follows a similar overall structure to the regular 5200 offering; however, students engage in service-learning through a real world community-mapping project beyond the classroom. Students have worked together with community partners in the Near East Side of Columbus and will continue to work with community partners in the Columbus area to create map products based on partner and resident needs.

Example service activities to be completed by students:

(1) Creating maps to enhance existing community partner information material and brochures for distribution to community members, for hanging as posters in community venues, and other similar products.

(2) Locating, downloading and utilizing existing datasets from the web and from local government offices as well as creating primary datasets through a variety of techniques, including Global Positioning System (GPS) data collection. The created maps are provided to the community partners and the public through the <http://www.geography.osu.edu/maps2serve/> website, and when funding allows, the course provides printed copies of selected maps for use by the partners and residents served.

(3) Meeting with the community partner to discuss their involvement in and progress with the project through which students learn about the community and how the maps can have a positive impact on the neighborhood.

(4) Presentation of findings to forum of community members and organizations.

4. Please describe how the planned service activities reflect priorities and stated goals/needs of the community partner(s).

Activities serve to support the community partner's mission by addressing pressing issues that impact the quality of life for people who live and work in the neighborhoods served by the partner organizations. These issues are preliminary identified by the faculty/instructor together with the

partners before the course starts and then further developed and specified together with students, partners, and the instructor as the course unfolds.

In the past, community members have expressed that accessibility to primary healthcare, public transportation, recreational and physical fitness opportunities, and after-school activities are all topics that need to be identified and mapped to further improve conditions in the community. Maps created by students in collaboration with partners can help in this exploration and analysis. Some maps have also been helpful in identifying populations that are in need of certain services. Moreover, these maps have helped partners glean some insight into what ways their resources can be best put to use.

5. Service-learning activities are all based on an agreement between three parties, each of whom has specific goals/expectations/responsibilities that are necessary to make it an effective service-learning experience.

Please describe goals/expectations/responsibilities for:

a) Faculty

Coordinate course instruction and community partner contacts before, during and after the course. Work with partners to identify potential mapping projects that address a community need. Ensure that student get opportunities to reflect on how their service activities address a community need and how it ties in with the process of making maps.

b) Students

Attend course lectures and labs, as well as necessary time to visit community partners for data collection and mapping project related work. Participate in reflection activities and assignments to connect their service with the theory and practice of making maps and to evaluate the impact of those products on the community.

c) The community partner(s)

Participate in coordination of service activities before, during and after the course. Help faculty/instructor and students to identify mapping projects that have relevance to their mission and the communities they serve.

6. Please describe your plans for sustainability and departmental support for offering this service-learning course on a continuing basis.

The course has been offered as a service-learning course once per year since 2009. The course has no prerequisites and is open to all majors. It is a required part of the Major in GIS (BS) and Aviation (BA) programs and an elective in the Geography Major (BA/BS) program.

COURSE GOALS

7. How does the service activity connect with the academic content of the course and how is this content in turn enhanced by the service component of the course?

The following course goals have been specified for the course:

Students will:

- 1) learn cartography and map design elements, including the use of GIS software for basic cartographic purposes.
- 2) apply the basics of cartography and map design to a local real world project.
- 3) engage with a local community partner in a mutually beneficial collaborative manner in which a mapping project is completed.

The service connects to the academic goals of the course in a variety of ways. In general, students will apply cartographic concepts learned in the course to a real world project. In-class labs will teach an important concept for map design (such as map symbology, map projections, dot mapping, etc.) that can also be applied toward the final project. The final mapping projects where students apply core cartographic concepts will result in maps that address community issues identified by partners and students in a collaborative service-learning experience. The project thus helps students realize the practical importance of their studies while providing useful information that addresses a pressing issue in the community.

Lectures and discussion

In addition to the regular lecture structure, an introductory lecture on community mapping and service learning is added in the beginning of the course. In following weeks, a portion of the week's lecture time will be used for linking the cartographic principles discussed in class to the community project. In addition, one class meeting will take place at a community site; include a community tour and presentations by community members and course partners. Time will be allotted for questions and answers.

Course readings

Introductory readings on service learning and community mapping is assigned and discussed in class to help students understand these concepts. In addition, 1-2 readings on the local neighborhood mapping site is assigned when available. The readings are determined ahead of the course start in collaboration with the partner(s).

Lab exercises

Current lab exercises are designed to give students practice in performing various parts of the cartographic process and they build on concepts and theory presented in the lectures. In the service-learning course, labs cover the same topics but some labs have been modified to address a specific issue (e.g. accessibility), or uses the area of interest as example. Thus, techniques completed in lab helps students get oriented to the area and its. In addition, the lab material can sometimes be directly applied and used in the final small group project.

Final project

Students will be divided into groups and be asked to complete a mapping project from its ideation to the final map product and a written report documenting the purpose of their map and the motivation

for the topic's research and mapping. At the end of the semester students will present their mapping project and results to the community partner and invited community members.

Service-Learning GE-specific questions

1. Course Request Form

Entered in curriculum.osu.edu

2. Syllabus

Attached separately

3. GE rationale

- a) **What processes are in place to allow students to reflect on and make connections between concepts and skills learned in an academic setting and community-based work?**

Critical thinking and reflection exercises: Four to five critical thinking and reflection exercises will occur throughout the semester to help students reflect on the service in relation to the project and the content of the course. One example activities is a cultural sensitivity discussion around the first episode of the ABC show "Jamie Oliver's Food Revolution" and how the experiences of the main character could be similar or different to what we might encounter in our service activities. Another exercise asks students to reflect upon and think critically about the fieldtrip and meeting experience with questions like: "why do you think we are doing this service for this community?", "After seeing some of the neighborhood and hearing about it from our partners, did your perception of the neighborhood (consult your pre-fieldtrip notes) change?"

These reflection exercises use a combination of in-class discussions and individual writing assignments that are turned in for grading.

- b) **What aspects of the course insure that the students learn about the issues, resources, assets, and cultures of the community in which they are working?**

Students will be trained for service-learning as most lectures seek to relate lecture topics to the service learning mapping project. Two lectures early in the quarter contain material and exercises dedicated specifically to community mapping, the study area, and cultural competency.

Students will also meet with the community partner(s) on two occasions to learn about the community. As described above, one class early in the quarter will take place at a community site; include a community tour and presentations by community members and course partners to learn about the history of the community.

Also described above, 1-2 readings on the local neighborhood, a pertinent topic, or other subject are assigned to help the students get an orientation to the project and service context.

c) **How does the course promote reflection on and evaluation of the impacts of the service-learning activity?**

Some of the reflection activities mentioned above particularly ask for students own perception and thinking around community impacts. The final reflection assignment asks students to think through and answer the following questions:

1. You should by now recognize that any map could be interpreted/used in unintended ways. Explain the major purpose of your map and describe at least one way in which your map could be used for a purpose other than what you intended.
2. Other than the fact that you are in this service learning class and required to complete the mapping project, explain 2-3 reasons why you chose to map your particular topic?
3. Explain how your particular map can benefit your client and/or the community.

Part 2 of the final individual project report template asks each student to address the following:

Part 2: Assessment of Community Issues and Final Map Product

11. Your group map addresses a particular topic, has a particular purpose, and has a particular audience (we have discussed this throughout the quarter). In this question, explain the specific community issue(s) that served as the major motivation for your group map (thinking back to the fieldtrip and initial meeting might help here). Also, be sure to address why the topic is so important to be discussed in regard to [the neighborhood name]. (4 points)
12. We presented our maps on [Date MM/ DD] to the community partners. How do you feel your group's map was received by the community partner(s)? What specific feedback did you get? Do you think the map met their goals? Explain why or why not. (4 points)
13. Based upon the presentations to the community partners, do you think that your final group map is useful to its intended audience? Explain in detail why or why not? (4 points)
14. If you had to do the group map all over again in this service learning class for the same community partners, how and why would you change the mapping process? Be sure to explain in detail how and why. (4 points)

In addition, an end-of-course survey, used to assess results from courses over time (IRB approved for a comparison between regular and service-learning version 2010-2011), asks students to self-assess on a number of dimensions, and some example questions are:

- Although this is hard, please try to evaluate if your project work can have some form of impact outside of this classroom. (rated 1-10, Not at all--A lot)

- To what degree do you think your experiences from this course will be useful in your future career? (rated 1-10 as above)
- Who do you think could benefit from your mapping project?

4. GE Assessment Plan

The course ends with a final presentation of the mapping project to the community followed by submission of the final map product and a two-part individually written report including the following sections: Part 1: Assessment of Map Design Choices, Part 2: Assessment of Community Issues and Final Map Product.

The final individual project report will be used as the GE end-of-course assignment and specifically question prompts 11-14 (see section 3.c. above) address to varying degrees all three GE ELOs. These four questions will therefore be assessed and scored holistically against all three ELOs using the GE Scoring Rubric.

Once you collect the data on student achievement, how will you use it to make course improvements?

The GE specific scores will be evaluated together with a similar evaluation of the cartography-specific learning goals addressed by Section 1 in the individual report and a map design assessment. A summary narrative reflection will be done by the instructor including a reflection on student scores, engagement, and any changes to be made in the course, et c.

How will the information be archived and made available to future instructors?

The GE specific scores will be evaluated by the instructor and kept in the Geography office together with three sample assignments (one low score, one average score, and one high score) and the instructor's narrative reflection, for other instructor's access. Copies of these records will be forwarded to the ASC Curriculum and Assessment Services electronically within a month of completing the class.