

## 1. Mapping Our World

### 1.1 Basics

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**Prerequisites:** None  
**Course URL:** access via your Moodle/myU account  
**Credit:** 3 units

**Class meetings:** Lectures are MW in Blegen Hall 435; Labs are F in Blegen Hall 455.  
**Materials:** All readings are available for free via e-reserve.

### 1.2 Course overview

**Subject.** People have long used maps, ranging from scratching their view of the world on clay tablets to developing sophisticated web-based maps. We will learn about mapping our world by understanding how maps work, making our own maps online, mapping virtual worlds like Facebook and video games, and understanding how people use maps to tell stories and lies.

**Students.** Students in this course have tended to come from across the social, natural, and information sciences with no clear majority in any one area. This distribution makes for a lively and challenging meeting of the minds. The course is oriented towards undergraduate students.

**Purpose.** This course introduces mapping as a useful lens through which to understand interactions between technology and society. It also gives hands-on experience with making maps and understanding how maps are used.

**Goals.** Students who successfully complete this course will be able to read, use, and create maps against a larger backdrop of understanding how maps have long blended aspects of technology and society. Depending on student orientation, this course can be used to gain insight into the technical underpinnings of introductory spatial analysis, complement on-going interests, or provide an applied focus for research or policy.

**Prior experience.** Students should have some high-school mathematics in algebra, geometry and trigonometry.

**Structure.** This is an intensive hands-on class with a focus on reading, lecture, discussion, and applications. This translates into 30% lecture, 30% discussion and group activities, and 40% laboratory.

## 2. Schedule

<i>Date</i>	<i>Topic</i>	<i>Readings/Activities</i>
Sep 8	Course description	
Sep 10	Maps everywhere	<i>Meet in Blegen 445</i>
Sep 13	What is a map?	Monmonier 1991 Ch. 2, Charles 2005
Sep 15	Map making	
Sep 17	Lab introduction	Lab 1
Sep 20	Data sources	Schuurman 2004 Ch. 3
Sep 22	Census/Online data	<i>Meet in Anderson Hall 150</i>
Sep 24	Mapping basics I	Lab 2
Sep 27	Round Earth, Flat Maps	Krygier & Wood 2005 Ch. 5; <i>Monmonier 1991 Ch. 2</i>
Sep 29	That can't be right...	
Oct 1	Mapping basics II	Lab 3
Oct 4	Synthesis	Wood & Fels 1992 Ch. 1, Brewer 2008
Oct 6	Drawing the U	
Oct 8	Map elements	Lab 4
Oct 11	Recap	Krygier & Wood 2005 Ch. 2
Oct 13	In-class study	
Oct 15	Exam	
Oct 18	Lying with maps	Monmonier 1991 Ch. 5 & 7
Oct 20	All maps lie?	
Oct 22	Now it's our turn	Lab 5
Oct 25	Modifiable maps	Monmonier 1991 Ch. 9
Oct 27	Gerrymandering	<i>Meet in Anderson Hall 150</i>
Oct 29	MAUP Maps	Lab 6; <b>Project proposal due</b>
Nov 1	Maps in society	Okoth 2008, Gardner & Harrington 2003
Nov 3	Mapping	
Nov 5	More mapping	Lab 7
Nov 8	Surveillance society	Crampton 2010 Ch.9, Taylor 2002
Nov 10	Brave new maps	
Nov 12	Who's watching you?	Lab 8
Nov 15	Virtual worlds	Crampton 2010 Ch. 3, Vu 2008
Nov 17	Digital Nation	
Nov 19	Virtual U	Lab 9
Nov 22	Lab catch up	<i>Anderson Hall 150 available</i>
Nov 24	Thanksgiving	No class meeting
Nov 26	Thanksgiving	No class meeting
Nov 29	Recap	
Dec 1	In-class study	
Dec 3	Exam	
Dec 6	Project work	Krygier & Wood 2005 Ch. 12; <i>Meet in Anderson Hall 150</i>
Dec 8	Project work	<i>Anderson Hall 150 available</i>
Dec 10	Project work	<i>Blegen 455 available</i>
Dec 13	Project work	<i>Anderson Hall 150 available</i>
Dec 15	Project work	<b>Project due; Blegen 455 available</b>

### 3. Evaluation

Students are evaluated on their class participation, labs, exams, and a lab project. Each component is assigned a certain number of points. Points are cumulative, or in other words, each counts towards your final point total. The chief advantage of this system is that you know exactly how many points you have and how many you need to achieve a given grade level.

<i>Component</i>	<i>Points</i>
Participation	50
Labs	200
Exams	120
Exam 1	60
Exam 2	60
Project	80
Proposal	20
Final report	60
<b><i>Total</i></b>	<b><i>450</i></b>

#### 3.1 Components in detail

##### Participation

The key to a successful class experience is participation, which in turn relies on students reading the materials, attending class meetings, completing work in a timely manner, and discussing the material and related issues. Please also consult the course policies on class meetings. Working in groups on in-class activities also constitute a major form of participation.

***Deliverables:*** points for participation are based on: demonstration that the student has read and understood class material; discussion arguments that evidence creativity and logical structure; consistent participation without monopolizing the discussion; constructive examination of issues couched in an atmosphere of civility and mutual respect; and working in groups on in-class activities.

##### Project

Students will develop a short project that uses internet mapping software to create a map on a topic of interest to them. Students will develop project ideas in consultation with the instructor.

***Deliverables:***

1. Project proposal of around 100 words that specifies a project topic and plan.
2. Project report of two pages; the first page is a map, the second a reflection on the project.

##### Labs

Labs are a prime focus of class, where students learn by applying topics developed from readings, lectures, and discussion. Labs are designed to be done independently and online, which means students can work on lab assignments *where* they want: in the Blegen computing labs, other places on campus, home, in a coffee shop, or wherever you have a computer with net access. Similarly, students can work on labs *when* they want, so long as they submit their completed lab assignments when they are due.

Notes:

- On some occasions, students will attend a specific lab location at a given time (e.g., the entire class will meet together for the first lab of the semester in Blegen 455 during the normal Friday 1010-1100a time). The instructor will give notice about these required meetings.
- Note that the scheduled lab time and place—Fridays 1010-1100a in Blegen 455—is the primary venue where students can work with the TA on lab assignments. The TA can provide limited help during office hours or via email on minor issues, but if students find that they are consulting with the TA more than a few times outside of the Friday lab session, they will be encouraged to attend the Friday lab in person to get intensive one-on-one assistance.
- The flip-side of having lots of flexibility in when and where to do lab assignments is getting little flexibility in when the lab assignments are due. Late assignments will be accepted but they will incur a penalty of 20% of the assignment total for a week and then 100% thereafter. Plan for the fact that problems can crop up without warning: computers break, the net goes down, people get locked out their apartments, and so on. Start early and do not leave final touches until the last minute.

**Deliverables:** Lab assignments will specify the deliverable for each lab.

### 3.2 Grading Criteria

The following criteria are used in grading written work, including labs and final projects. Consult the course website for pointers on the research process and writing. Note that these criteria may not apply to all projects, so ask your instructor when uncertain.

<i>Grade</i>	<i>Style</i>	<i>Substance</i>
A	Clear and novel organization Accessible and concrete language Few mechanical errors Noteworthy graphics	Well supported arguments Use of pertinent examples and facts Awareness of complexities Appropriate use of sources
B	Clear and competent organization Few sentence errors Well-prepared graphics	A few incorrect statements Adequately supported statements Appropriate secondary sources
C	Clear organization Adequate content Adequate graphics	Several incorrect statements Major arguments supported Inconsistent use of sources
D	Unclear organization Many mechanical errors Incomplete visual graphics	Many incorrect or unclear statements Unsupported arguments Irrelevant or misapplied examples

### 3.3 Final grade determination

Each evaluation component is assigned a certain number of points. Points are cumulative, and per the table below, you need to reach a certain point threshold. To get an A-, for example, you need to accumulate at least 367 points while a C+ requires 233 points.

<i>A-F</i>	<i>N-S</i>	<i>Points</i>	<i>Description</i>
A	S	400	Achievement that is outstanding relative to the level necessary to meet course requirements
A -		367	
B+		333	Achievement that is significantly above the level necessary to meet course requirements.
B		300	
B -		267	
C+	C	233	Achievement that is in keeping with the course requirements in every respect.
C		200	
C -		167	
D+	N	133	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
D		100	
F		0	Work that was either completed but not worthy of credit or incomplete (I) without a student-instructor agreement.

### 4. Bibliography

- Brewer, C. A. (2008). *Designed Maps: A Sourcebook for GIS Users*. Redlands, Calif.: ESRI Press.
- Charles, D. (2005). Do Maps Have Morals? *Technology Review*, 108(6), 77-79.
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- Gardner, J., & Harrington, T. (2003). Putting health on the map. *American City & County*, 118(11), 30-34.
- Krygier, J., & Wood, D. (2005). *Making maps: a visual guide to map design for GIS*. New York: Guilford Press.
- Monmonier, M. (1991). *How to lie with maps*. Chicago: University of Chicago Press.
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- Schuurman, N. (2004). *GIS: a short introduction*. Malden MA: Wiley-Blackwell.
- Taylor, Jr., S. (2002). How Civil Libertarian Hysteria May Ruin Us All. *National Journal*, 35(8), 564-5.
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<http://www.indyweek.com/indyweek/what-google-earth-doesnt-show-you/Content?oid=1208525>
- Wood, D., & Fels, J. (1992). *The Power of Maps*. New York: Guilford Press.

### 5. Policies

**Class meetings.** You are expected to attend all class meetings and take notes. You are expected to fully participate by joining in discussions and by actively asking and answering questions to the best of your ability. During discussion, differences of opinion are expected and in many respects encouraged, but at all times participants must maintain a professional atmosphere of civility and mutual respect. In case of a missed class meeting, you should arrange to obtain notes from another student. Notes are not available from the instructor apart from materials posted to the course web site.

**Readings.** Everyone is expected to complete assigned readings before the pertinent class. Remember, if you do not understand some point, then it is likely others in the class had a tough time with it as well, so bring it up! I expect you to read everything assigned as required reading.

**Class materials.** I post lecture materials after lectures. Research on learning holds that note taking is useful for ordering short term memory and essential for the long term recall necessary for activities such as exam taking, project research, and for activities after the course is over. Each class is just one part of an overall body of thought that each student builds over the course a degree and beyond. Research also shows that handing out notes before the lecture can inhibit initial in-class processing of the information, and more importantly, prevents incorporating the lecture substance into overall student understanding. In many respects, the learning process is less about reproducing the lecture as such and more about incorporating the lecture into a larger architecture that is specific to each student. Once a student has had a chance to digest and order the lecture in a way that makes sense to him or her, it is far more effective at that point to take another look at the instructor's material to fill in gaps or amplify points.

**Office hours.** Office hours provide an opportunity to discuss material, get assistance, or talk informally about the class and other topics. I am not a mind reader – seek assistance from me when problems arise, and preferably before! The times noted elsewhere in the syllabus are when I am available in my office, barring unforeseen circumstances. I am also generally available Monday through Friday for appointments. To arrange a time, speak with me after class, call my office phone number, or email me.

**Exam consultation.** The instructor will not be available for consultation on exam topics 48 hours before an exam is given. If you have questions, be sure to ask them well ahead of time. This measure is intended to both encourage students to plan their studying and, more importantly, ensure equal access to the course instructor.

**Emergency contact.** If you urgently need to get a hold of me, call my office number (612 625-4577) or the main Department of Geography office (612 625-6080). The definition of urgent generally applies to when you cannot attend an exam due to special, documented circumstances.

**Workload.** Under UMN policy “one semester credit is to represent, for the average University of Minnesota undergraduate student, three hours of academic work per week (including lectures, laboratories, recitations, discussion groups, field work, study, and so on), averaged over the term, in order to complete the work of the course... All grades for academic work are based on the quality of the work submitted, not on hours of effort. It is expected that the academic work required of graduate and professional students will exceed three hours per credit per week...”

**Labs.** For courses with a lab or computational component, pay attention to lab rules. Students must often have a valid university ID card to use computing facilities. Eating, drinking, or smoking is not allowed in labs. A lab should be a quiet place for students to work; thus, noise should be kept to a minimum. Students should not store information on the hard disks in public computing facilities; be sure to maintain personal copies of data and backup copies. It is ultimately your responsibility to ensure your data is safe.

**Mental health:** University can be stressful, so keep in mind that you can access mental health services at the U. The Mental Health Clinic at Boynton Health Service provides phone and walk-in assessment on an urgent basis, as well as scheduled medication evaluations and management, chemical health assessment and counseling, and therapy. The University Counseling & Consulting Services provides confidential counseling for students dealing with academic stresses, personal and relationship concerns, or feelings of anxiety or depression. Also see [www.mentalhealth.umn.edu](http://www.mentalhealth.umn.edu).

**Disabilities.** Students with disabilities that affect their ability to participate in class or meet all course requirements are encouraged to bring this to the attention of the instructor during the first week of class.

They are also encouraged to consult with Disability Services. It is University policy to “provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact their instructor early in the quarter to discuss their individual needs for accommodations.” (UMN)

**Syllabus changes.** Every effort will be made to follow the course syllabus; however, it is subject to change as the needs of the course demand or due to unforeseen circumstances.

**Wireless and electronic devices.** Please mute or turn off your wireless device unless you are expecting a very important communication. Under no circumstances may you engage in an email, voice, or IM exchange while in class, and only under extenuating circumstances may you leave the class to have such an exchange. Similarly, under no circumstances can you use a wireless device of any kind while sitting an examination. “Every instructor has the authority to restrict or prohibit the use of personal electronic devices in his or her classroom, lab, or any other instructional setting. It is expected that instructors will make reasonable accommodations for students with disabilities by working with Disability Services.” (UMN).

**Submitting assignments.** Due dates for assignments are specified in the course schedule or they are given when assignments are given in class. All assignments are submitted in electronic format barring explicit directions to the contrary.

**Late assignments.** No-cost extensions are granted only for reasons applicable to absences as explained in the paragraph below, which details UMN policies. Otherwise, one of two different policies will apply to late assignments. The instructor may either 1) specify that no late assignment will be accepted, in which case a late assignment is worth zero points; or 2) specify that late assignments will be accepted but that they will incur a penalty specified in the assignment or syllabus.

**Absences.** In case of absence, students are responsible for acquiring class notes, completing assigned readings and exercises, and scheduling alternative exam dates with the instructor. Legitimate reasons for absence “include, but are not necessarily limited to, verified illness, participation in athletic events or other group activities sponsored by the University, serious family emergencies, subpoenas, jury duty, military service, and religious observances. This policy does not extend to voting in local, state, or national elections.” (UMN) In case of illness, students must have a signed letter from his or her doctor, stipulating the nature of the student's illness and when the physician thought the student would be well enough to finish the work.

**Scholastic dishonesty.** Although group discussion of assignments is encouraged, all materials submitted by you must be your original work. Unless explicitly allowed for by the instructor in group assignments, submissions of substantially similar work by more than one student will be dealt with as acts of scholastic dishonesty... broadly defined as “any act that violates the rights of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, (but is not necessarily limited to): cheating on assignments or examinations; plagiarizing, which means misrepresenting as you own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student's work.” (UMN) Note: scholastic dishonesty will be reported to the Office for Student Conduct and Academic Integrity (OSCAI), which keeps track of repeat offenders and preserves the student's rights through appeal procedures. Please see their web site for information on scholastic dishonesty and how to avoid making a mistake. Scholastic dishonesty will result in penalties ranging from receiving no grade for an assignment to expulsion from the course.

**Incomplete grades.** Incompletes (I) are granted only when a student is forced to miss several weeks of class due to extraordinary circumstances such as a documented confining illness or family emergency. To receive an incomplete grade, students must obtain approval from the instructor before the last day of class. No incompletes will be given unless you have a prior written agreement with the instructor in the form of a CLA “Agreement for the Completion of Incomplete Work.”

**Grade disputes.** If you wish to dispute the grade assigned to any part of an assignment or exam, you must establish your dispute in writing within 48 hours after the grade has been given to you. You must include a specific rationale for why you deserve a higher grade. In particular “I think I deserve a better grade” or “I need a higher grade” are not adequate rationales. Email this rationale to the instructor or deliver a printed copy to the instructor's mail box in 414 Social Sciences (and inform him by email that you have done so). If you are unsatisfied with any part of the dispute process, please contact the Student Dispute Resolution Center.

**Extra credit.** There are no extra credit assignments.

**Work retention.** “Any unclaimed final examinations or other major submitted student work should be retained by the department for at least one year so that they may be reviewed and/or claimed by students” (UMN). Exams and other course materials will not be retained for longer than one year.