Geography 370 Introduction to Cartography

Instructor

Meghan Kelly, Cartographer and PhD Candidate, UW–Madison Department of Geography

Course Overview

Welcome to Geography 370–Introduction to Cartography! This is a 4-credit online course introducing the art, science, technology, and ethics of mapmaking. If you love maps and want to learn how to make beautiful ones yourself, you've come to the right course! At the end of this course, you'll have the conceptual and technical skills to design exactly the type of map you need to communicate almost any kind of geographic information. Additionally, you will understand the power of mapping skills and will be able to critically think and reflect about the mapping process from data collection to the final design.

Specific topics include the basics in mapping (e.g., scale, spatial reference systems, projections), data acquisition, key techniques for thematic mapping, and principles of cartographic abstraction and design.

Course Learning Objectives Upon completion of the course modules, you will be able to:

Design maps. Specifically, you will be able to understand and apply principles of:
- Map projections and the geographic coordinate system.
- Map generalization across map scales.
- Map typography and the design and placement of text onto maps.
- Visual hierarchy and map layout.
- Map symbolization and design considerations for thematic maps.
- Statistical mapping, including levels of measurement, enumeration, normalization, and classification.

Produce maps. Specifically, you will be able to:
- Execute original map designs from conceptualization to delivery.
- Estimate and manage your time needed for an open-ended design project.
- Design within client-defined constraints.
- Acquire and prepare geographic datasets.
- Follow and deviate from a cartographic workflow using ArcGIS and Illustrator.

Critique maps. You will reflect on your design and production to:
- Consider cartographic design within its broader historical and social contexts.
- Deconstruct maps by their elementary design components to identify opportunities and alternatives.

- Provide constructive feedback for peers during the process of design.
- Self-critique and edit your own designs using professional standards.

Communication

Course communication will occur through Canvas (email and discussion boards), Skype, and #Slack.

- To contact me directly, please email me through the Canvas Portal. I will send all course emails through Canvas as well. Check your Canvas inbox regularly!
- We will use Canvas discussion boards to ask/answer questions about the course and specifics about lecture materials and labs (see Modules > Questions). You will also be asked to post and respond to Discussion boards as part of course activities.
- For office hours, we will use Zoom—a free web application that supports calls, video chats, and screensharing. Please email me at least 24 hours ahead to schedule a 15-minute appointment. If you can't make it to the scheduled appointment, please let me know as soon as possible!
- #Slack is a communication and collaboration tool that is frequently used in the mapping industry. This will be **your space** to collaborate with one another and ask questions in real time using #Slack's instant messaging. I will have access to #Slack but will not check it in real-time. You will be invited to the course #Slack workspace once the semester begins. If you do not receive an invitation, contact me via Canvas email and ask for one.

I will respond within 24 hours during the week (Monday through Friday). I will do my very best to respond on weekends.

Course Materials

The examples and exercises in this course require specific software (ArcGIS for data display and analysis, as well as Adobe Illustrator for graphic design). There is no required textbook in this course. Required and supplemental reading material will be provided as needed in the modules. You will install the following programs during Week 0 and Week 1 of the course.

- **ArcGIS (free student license):** ArcGIS will run only on the Windows operating system, and therefore the course assumes you are using a Windows computer or have a Mac that allows you to run the Windows operating system (OS). If you use another operating system for part of the course, please remember that it will not work for some topics and that you will need to have access to the Windows OS, properly configured with the course software, for those topics. There are open source mapping alternatives (QGIS), however, course modules do not support their usage. You will be

on your own to figure it out. Your grade for each lab assignment will be based on meeting the expectations of the assignment regardless of which GIS software you use.

- **Adobe Illustrator (student <u>discounted</u> price):** Adobe Illustrator and its broader package, the Adobe Creative Cloud, are standard tools for professional cartographers. As such, you will need to subscribe to use this software out-of-pocket. UW–Madison has arranged a permanent reduced cost ($214) for students who buy a one-year subscription (https://wiscsoftware.wisc.edu/wisc/). There are also options, online via Adobe, to pay by-the-month, at a higher rate but a lower overall cost (https://www.adobe.com/creativecloud/buy/students.html)

UW-Madison Credit Hour Policy Standard

The credit standard for this course is met by an expectation of a total of 180 hours of student engagement with the course's learning activities (at least 45 hours per credit), which include regularly scheduled instructor/student meeting times (virtual office hours, discussion forum, weekly communication, and instructor feedback), online lectures and readings, mapping activities, quizzes, labs, and a Final Project as described in the syllabus.

The estimated average workload for this course is 12–15 hours per week.

Course Assignments

Course content, activities, assignments, and materials will be released each week through Canvas. I will send out weekly summaries every Monday. You will be assessed using the following percentages:

Assignment	Percentage	Description
Mapping Activities (~16)	15%	Throughout the semester, you will complete a range of mapping activities to support your learning (discussions, reflections, timed software explorations, etc.). These activities will help you learn tips, tricks, and techniques within software, explore lecture topics in a low stake's way, and reflect on your cartographic process. These are largely graded by participation and will be completed weekly.
Quizzes (6)	15%	There will be numerous text-based quizzes, usually consisting of short answer, multiple-choice, and true/false questions. These will be short (5–10 questions) and based on the lecture material. I recommend you take the quiz immediately after completing the material. The quiz period closes at midnight one week after the day of opening.

		Once you begin a quiz, you will have 60 minutes to complete it. Though the quizzes are only worth 15% of your final grade, the goal is to make sure you're thinking about the course material and actually reading it so you can apply what you've learned to your labs. You may use course materials, books and internet resources to answer quiz questions. However, you may not consult with other individuals either in person by other means (such as the internet).
Lab Assignments (4)	55%	Labs assignments are designed to apply the lecture material to hands-on mapping experiences based on real-world problems. In addition to lecture notes, you may use the course readings, mapping activities, and any other resources you find online to complete your labs. However, you may not copy the design of any maps you find online that look similar to the lab assignment product. Outright plagiarism will result in an "F" for the assignment and will be reported to the Dean. Each lab will take 12–20 hours to complete, so please plan accordingly.
Final Project	15%	The last two weeks of the course will be used to apply everything you've learned to an individual final project. This is your chance you make something you're passionate about! More information on final projects will be provided in the first month of the course.

Late Assignments Late lab assignments will be accepted, but will be penalized 10% per day, including weekends. Assignments will not be accepted more than 4 days after the due date. If you cannot submit a lab by the deadline because of a valid excuse or emergency, you must contact me beforehand. Late quizzes will not be allowed without a prior excuse.

Grades Listed below are the minimum percentages required for each letter grade, after rounding. Requests for grade changes must be submitted in writing (via Canvas email) within 48 hours of receiving your feedback.

A	> 90
AB	87–90
B	80–87
BC	77–80
C	70–77

D	60–70
F	< 60

Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to
https://conduct.students.wisc.edu/academic-integrity/.

University Policies

The University of Wisconsin–Madison is dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding Network Use, Disability Accommodations, Diversity and Inclusion, Academic Misconduct, Religious Beliefs Accommodation, FERPA, and Copyright.

Network Use Policies Please read the UW-Madison's Responsible Use of Information Technology Policy (https://www.wisconsin.edu/regents/policies/acceptable-use-of-information-technology-resources/)

Accommodations For Students With Disabilities McBurney Disability Resource Center syllabus statement: "The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA." http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

Diversity & Inclusion Institutional statement on diversity: "Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

Academic Misconduct The University believes that academic honesty and integrity are fundamental to the mission of higher education and of the University of Wisconsin System. The University has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards are subject to disciplinary action. UWS Chapter 14 identifies procedures to be followed when a student is accused of academic misconduct. For additional information, please refer to the section in the Student Handbook entitled Student Academic Disciplinary Procedures.

Please review the Student Academic Misconduct Policy and Procedures and the Student Nonacademic Misconduct Policy.

Religious Beliefs Accommodation Board of Regents policy states that students' sincerely held religious beliefs shall be reasonably accommodated with respect to scheduling all examinations and other academic requirements. Students must notify the instructor within the first three weeks of the beginning of classes (or within the first week of summer session and short courses) of the specific days or dates on which they will request accommodation from an examination or academic requirement. For additional information, please refer to Chapter UWS 22: Accommodation of Religious Beliefs.

FERPA FERPA—the Family Educational Rights and Privacy Act of 1974, as amended—is a federal law that governs the privacy of student educational records, access to those records, and disclosure of information from them. For more information, please refer to Student Privacy Rights (FERPA).

Note: The specifics of the syllabus and schedule are subject to change. I will notify you with changes!

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