Geography 170: Our Digital Globe
An Overview of GIScience and its Technology
Online Course: Learn@UW (https://learnuw.wisc.edu/)

Instructors

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Basic Course Information

This is an online version of the 3-unit face-to-face course that meets twice a week for 75 min/class, not including time that is expected for studying in addition to these 2.5 hours per week. *You are expected to put in just as much time in this online offering as you would during the face-to-face offering.* This is a semester's worth of material crammed into 4 weeks so please plan accordingly. Time management and following deadlines is key!

The course materials are available through Learn@UW (UW NetID login required). Course materials will be posted on Learn@UW weekly, or more frequently if necessary.

Response time: I will respond to email twice a day during the week. Please copy both instructors into your emails and we will do our best to get back to you with assistance!

Course Overview

Geography 170 is an introduction to Geographic Information Science (GIScience). You will explore tools and technologies for acquiring, analyzing, managing, and displaying geographic information. This course introduces a variety of geospatial technologies and tools, including geographic information systems (GIS), global positioning systems (GPS), remote sensing (RS), spatial analysis, and cartography (the science and art of mapmaking). Geography 170 is a non-specialist course. It provides a foundation for various upper-level courses, which are specifically about GIS, GPS, RS, Cartography and Web-animated cartography. This (online) Summer 2015 Syllabus—Our Digital Globe: An Overview of GIScience and its Technology version of the course is based on the on-campus, lecture version delivered by Dr. Qunying Huang.

Course Goals

1. Discover the different fields in GIScience and the related geospatial technologies
2. Build a solid foundation for more specialized courses on GIS, Cartography, Remote Sensing, and GPS
3. Develop an appreciation for maps!!
4. Become familiar with several widely used geospatial software and tools

Course Requirements

No previous experience with map-making or GIS is required; however, students should be comfortable with basic mathematics and interested in working with maps (both paper and digital), satellite imagery, and related products.

Internet access is a ***requirement*** for the course. Because this is an online-only course, all assignments, discussions, quizzes, and the final exam require reliable internet access. Unfortunately, we cannot make accommodations due to computer error. If your computer / Internet is unreliable, we expect that you will find another place to complete assignments and exams. We will not accept an email sent an hour before an assignment is due asking for an extension due to computer error.

Please plan ahead for any software downloads necessary for homework assignments. For example, you will need access to Google Earth for Homework 1. It is publically available online for download.

Course Materials

No textbook required. All course materials, including lecture notes, presentation slides, lecture videos, and supplemental reading will be posted at Learn@UW.

Evaluation

Your grade will be determined based on your performance on four online quizzes, three assignments, one final exam, and active online discussion. The weights assigned to each component are as follows:

Online quizzes (4)	30%
Exam (1)	30%
Assignments (3)	30%
Weekly online discussion	10%

Grading scale

90 - 100%	A
87 - 89.9%	AB
83 - 86.99%	B
80 - 82.99%	BC
75 - 79.99%	C
70 - 74.99%	DC
60 - 69.99%	D
< 60%	F

Online Quizzes and Exam

There will be four quizzes throughout the semester. Each quiz is designed to test your knowledge on one unit (geospatial technology and representation, GPS and Remote Sensing, GIS, and cartography detailed in your tentative course schedule below). There will be one final exam at the end of the semester, which covers all topics of this course.

All quizzes and the exam will open for a **24-hour window** beginning at 12:01AM (Central time) on the day scheduled (see schedule below) and closing at 11:59 PM on the same day. You may log into the quiz or exam at any time during the scheduled window. Once logged into the quiz/exam, you have a set time limit to complete it and turn it in. Otherwise, your quiz/exam will be saved by the computer at the time limit and automatically turned in for you. **No make-ups will be given.**

You are expected to treat the online quizzes and exam, as you would in a traditional lecture class - in other words, no cheating of any kind including plagiarism. Instructors CAN and DO monitor your quiz and exam logs before, during, and after you have taken the quiz or exam - they can detect patterns consistent with cheating and have the authority to discuss the matter with you immediately and give you a ZERO if they see fit. Once you have turned in your exam, the computer automatically grades it. Your

grades are then uploaded to your personal gradebook (Report tab) in the following days. Official grades, answers, and explanations for the exam are provided on the course website about 3-4 days following the exam.

The quizzes and exam may consist of multiple-choice, some T/F, many short answer, and some essay questions. All questions are selected at random from a pool of questions. All answer options for each question are also ordered at random. Please note that your exam is unique and completely unlike any other student's exam. Attempting to cheat on these exams is a waste of time AND against University/course policy.

Assignments

There will be three assignments throughout the summer semester. Each assignment is designed to help reinforce the concepts learned through the learning units and lectures. Within each assignment, you may need to use a geospatial tool (e.g., GIS software) to import, map, visualize or interpret geospatial data. All assignments should be submitted on the Learn@UW. Please note that, each assignment is due at 11:59 PM Central Time on the indicated due date. If you are unable to complete an assignment by the deadline, the instructor *must* be noticed at least 24 hours before the deadline. Do not assume you will be granted an extension. Only in extreme cases, such as verified illness, family or personal emergencies, or other extenuating circumstances (accompanied by appropriate documentation), the late submission can be accepted without penalty. Otherwise, a late submission will be assessed a 10% penalty per 24-hour period beyond the deadline (e.g., 1 day late = -10%, 2 days late = -20%, etc.).

Weekly Online Discussion

You will be assigned a discussion group for the duration of this course. Each group will consist of roughly 15 students. Instructors will post discussion questions related to course content each week to spark thought provoking conversation, increase peer interaction, and solidify your understanding of course topics. Members of each group are expected to carry and guide the conversation by answering the initial questions, commenting on other student's responses, and asking your own questions. For full credit, you need to **write five posts each week**. Posts must be thought through and more than a sentence in length.

Your discussion groups will also be a great resource for asking questions on course materials and assignments. Please use your discussion group as a valuable resource!

Scholastic Dishonesty

Academic honesty and integrity are expected. All work, including assignments, discussions, quizzes, and exams, must be completed independently. It is expected that the work submitted by a student reflects his or her original ideas and responses. Submissions that reflect substantially similar work among more than one student, or similar to certain online sources, will be regarded as an act of scholastic dishonesty. As a result, credits will be deducted. Scholarly dishonesty includes:

> "cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas, etc."

Please refer to the "Student Academic Misconduct Policy & Procedures" document produced by Student Advocacy & Judicial Affairs division of the Offices of the Dean of Students for further information.

Plagiarism

More specifically, a very important issue with online classes is plagiarism. As defined, plagiarism is the effort to fundamentally use someone else's ideas as your own. Studies show that plagiarism is very common at most universities (including UW-Madison), but is an even bigger problem in online classes since it is easy to copy directly from the website and put those exact words, or most of the words, in an answer. This is a potential problem in the case of the exams with essay questions and in the case of writing assignments. It is essential that you provide references when needed (i.e., you cite information (not just wording) that did not originally come from you) and that your responses are phrased in your OWN, original words. This also means that "borrowing" parts of other students' responses is TOTALLY and COMPLETELY unacceptable; doing this will result in a ZERO, no questions asked. If your Instructor suspects that a part or all of an answer has been plagiarized, the student will be contacted immediately - plagiarized content is given 0 points.

Please be conscientious of this potential problem as you work through the course, and do not hesitate to contact your Instructor if you have any questions. All students are required to read this syllabus. By doing so and remaining enrolled in this course, you have agreed to uphold our policies concerning academic honesty.

Strategies for this Course

Lecture materials for each unit will be posted at the beginning of each week. The lecture materials are your primary source for course content. I suggest that you carefully read and take notes on each lecture. Supplementary readings and videos will be posted by the Instructors to reinforce complex topics. They will be clearly labeled supplementary. These supplementary items are, just that, supplementary and are not required yet.

Each Lecture has an associated self-assessment. The self-assessment is a essentially a practice quiz to help test your understanding of the corresponding lecture material. Self-assessments will NOT be graded but will help prepare you for the quizzes and exam.

Remember that 10% of your grade is participation. Use the discussion groups to interact with your peers and expand your understanding of course content. I also suggest using your discussion as a resource for questions. Of course you can always send the Instructors questions but there will be times when you may get a faster response from your 14 discussion group members. More than likely, a peer has the same question!

Time management and keeping deadlines are keys to this course and we are happy to assist you where necessary!

If you require other accommodations (ex. McBurney) or have other concerns, please email us as soon as possible so that we can make arrangements before class begins. After class is underway, we will not be able to make changes to the structure of the course.

Keep in mind that changes to the syllabus may occur throughout the semester. If changes need to be made, you will be informed via the course website and email. It is your responsibility to check the course website at Learn@UW to obtain this information.

Course Schedule

	Lecture Material	Day	Important Dates
Week 0	Syllabus: Please review before the course begins Syllabus Quiz: After reading through the syllabus, please complete the Syllabus Quiz. This quiz is worth 2% of your grade. In order to receive credit for this quiz, you must receive a grade of100%, but you may take the quiz as many times as you like. Discussion Group Introductions: Introduce yourself to you online discussion group. Please give us your name, major, and geographic location where you will be completing this course.		
Week 1 Geospatial Data and Representation July 13-19	Lecture 1: Intro to Geospatial Technology Lecture 2: Geographic Information and representation Lecture 3: Geodetics and Geometrics Lecture 4: Projections Lecture 5: Coordinate Systems Lecture 6: Map Scale	Monday 7/13	
		Tuesday 7/14	Syllabus Quiz and Discussion Group Introductions DUE
		Wednesday 7/15	
		Thursday 7/16	Weekly Discussion DUE
		Friday 7/17	**Quiz 1 DUE**
		Saturday 7/18	
		Sunday 7/19	**Homework 1 DUE**
Week 2 Remote Sensing and GPS July 20-26	Lecture 7: GPS Lecture 8: GPS Applications Lecture 9.1: Aerial Photography Lecture 9.2: Image Interpretation Lecture 10: Satellite RS Lecture 11: RS Application	Monday 7/20	
		Tuesday 7/21	
		Wednesday 7/22	
		Thursday 7/23	Weekly Discussion DUE
		Friday 7/24	**Quiz 2 DUE**
		Saturday 7/25	
		Sunday 7/26	**Homework 2 DUE**
Week 3 GIS July 27-August 2	Lecture 12: Intro to GIS Lecture 13: Geospatial Data Lecture 14: Query and Spatial Analysis Lecture 15: Applications with Spatial Analysis Lecture 16: Spatial Statistics Lecture 17: Making a Map with GIS	Monday 7/27	
		Tuesday 7/28	
		Wednesday 7/29	
		Thursday 7/30	Weekly Discussion DUE
		Friday 7/31	**Quiz 3 DUE**
		Saturday 8/1	
		Sunday 8/2	**Homework 3 DUE**
Week 4 Cartography August 3-9	Lecture 18: Thematic Maps I Lecture 19: Thematic Maps II Lecture 20: Thematic Maps III	Monday 8/3	
		Tuesday 8/4	
		Wednesday 8/5	Weekly Discussion and Quiz 4 DUE
		Thursday 8/6	
		Friday 8/7	**FINAL EXAM**
		Saturday 8/8	
		Sunday 8/9	

**Please note that this schedule is tentative. You will be notified if there are any changes!