SYLLABUS
GEOG 2200.01-10: Mapping Our World
CRN 29123

Autumn 2024
3 credit hours – lecture based
11:10 -12:30 MW, Derby Hall 135

COURSE OVERVIEW

Instructor and Teaching Assistant (TA)

Primary instructor: Dr. Tammy E. Parece
Office: 1189 Derby Hall
Email: parece.1@osu.edu
Open Office hours: Monday 1 – 2 p; Tuesday, 11 – Noon; Wednesday 10 – 11 a
Zoom by appointment only

Teaching Assistant: Mahnoush Mostafavisabet, mostafavisabet.1@buckeye.osu.edu
Office hours are on Canvas.

If you are ill or have symptoms, please do not visit us in our offices, please email us and we can set up a zoom link for your participation during our office hours. To request an appointment outside of the above times, please send both the instructor and the TA an email with your availability up to a week ahead.

GENERAL EDUCATION: DATA ANALYSIS

This course meets the requirements of the General Education category *Data Analysis*. The intent of the Data Analysis GE is to enable students to deal with problems of data gathering, presentation, and interpretation. Students should develop an understanding of problems of measurement, be able to deal critically with numerical and graphical arguments, gain an understanding of the impact of statistical ideas in daily life and specific areas of study, and recognize the uses and misuses of statistics and related quantitative arguments.

GE Goals for Data Analysis: Students develop skills in drawing conclusions and critically evaluating results based on data.

Expected Learning Outcomes: Students understand basic concepts of statistics and probability, comprehend methods needed to analyze and critically evaluate statistical arguments, and recognize the importance of statistical ideas.

This course meets these goals and objectives by exposing students to the problems of data gathering, presentation, and interpretation, in the context of spatial, statistical maps.

Prerequisites: None

Course Description

Introduction to the power of maps, covering spatial representation, visual literacy, and geographic information technology in a global society.

Maps use a powerful language to show patterns that are not apparent in other data presentations. Corporations, government, media, and researchers use maps and geographic information technology to understand and visualize data on, for example, natural resources, flows of trade, historical events, property management, and diseases.

In this course, we will explore what makes spatial information special, how and why maps are such a powerful tool to understand an increasingly complex world, and how modern technology is currently transforming the art and science of map-making. In hands-on fieldwork, practical exercises and discussions, students will develop the knowledge, skills, and dispositions that constitute geographic information literacy. The main goal is to give students a geovisual literacy foundation (including spatial quantitative reasoning methodologies) so students can realize the value of geographic knowledge and develop their ability to analyze real-world, critical problems such as understanding international markets, demographic patterns, business locations, social and equity issues, transportation and infrastructure, natural disaster recovery and responses, and much more.

Course learning outcomes

Upon successful completion of this course, students should be able to:

1. employ basic methods of spatial data-gathering, presentation, and interpretation;
2. interpret map symbology to analyze and critically evaluate the spatial structure of and relationships among spatial phenomena;
3. demonstrate familiarity with some basic concepts of descriptive and inferential statistics in order to understand some unique properties of spatial statistics;
4. apply statistical ideas to seek explanations for unusual or interesting patterns on maps; and
5. evaluate the impact of spatial data sampling, uncertainty and scale on map use.

HOW THIS COURSE WORKS

Mode of delivery: This class is in-person. All learning materials will be uploaded on Carmen Canvas. Additional components:
- Readings
- General lectures

- Labs and exercises
- Quizzes and exams

Credit hours and work expectations: This is a **3-credit-hour course**. According to Ohio State policy (go.osu.edu/credithours), an average student should expect around 3 hours per week of time spent on direct instruction (instructor content, group and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Communications with instructors: *Email us if you have questions related to class materials and assignments. Make sure you include a detailed description of the problem and attach a screenshot if applicable.* We encourage you to help your classmates out if you know the answers, but make sure you are not violating the code of student conduct (e.g., do not upload your assignment or show them the exact answer to complete their assignments).

Other questions can be directed to the instructors via Outlook email or Carmen email (always include both instructor and TA in your emails, in case one of us is unavailable). If using Outlook, make sure that you put "GEOG 2200" in the subject line. Students should use their name.# Ohio State email address.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

Optional texts – available at the bookstore, as an ebook, or on Amazon:

1. *Tyner, Judith A. 2015. The World of Maps: Map Reading and Interpretation for the 21st Century. Guilford Publishing.*

Other readings will be uploaded on Carmen Canvas.

Technology skills needed for this course:

- ArcGIS Online (no previous experience is required)
- Microsoft Excel
- Basic computer and web-browsing skills

Required software:

- Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. You must complete your registration for this if you are using your personal computer. If you have a Mac, you must be sure this registration is complete as we will be using Excel in this class. Full instructions for downloading and installation can be found at go.osu.edu/office365help.

Required equipment:

- While in the classroom, you must use the classroom computer to work on assignments or exams (unless specific permission is granted by Dr. Parece).
- You may use your personal device for taking notes.
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

GRADING AND FEEDBACK

How your grade is calculated

All submissions are made via Carmen Canvas on the due date. Your due date is not an optional or suggested date, it is the last possible date you can submit an assignment and get a grade.

CATEGORY	PERCENT OF FINAL GRADE	OCCURRENCE
Quizzes	5%	8
Introductions Online	2%	Once
Lab assignments	55%	6
2 exams	23%	2
Final paper	15%	2 due dates
Total	**100%**	

Grading scale

92.5–100: A	76.5–79.99: C+	
90.0–92.49: A-	72.5–76.49: C	Below 59.99: E
86.5–89.99: B+	70.0 –72.49: C-	
82.5–86.49: B	66.5 –69.99: D+	
80.0–82.49: B-	60.0 –66.49: D	

Note: Grades are not subject to negotiation and are not eligible for rounding up; an 89.9% is not 90%.

Instructors' feedback and response time

- **Grading and feedback:** For assignments, you can generally expect feedback within 1 week, unless emergencies occur to one of the instructors.
- **Email:** We will reply to emails within **48 hours on school days when class is in session at the university**.

Attendance

Attendance will be taken each day and may impact your final grade.

Graded Assignments

All assignments, listed below, are required to be your own independent work. Do not share your work with others in this class. Use of generative artificial intelligence (AI) (e.g., ChatGPT) is not permitted in this course and use is subject to academic misconduct actions.

Failure to follow the instructions on any assignment could result in a grade reduction for that specific answer or it might result in an incorrect answer. Any assignment includes quizzes, exams, labs, and the final project. For example, if the directions state you need to round to 1 decimal place and you give no decimal points or provide 2 or more.

The schedule for this class is found at the end of this document.

Self-Introduction (2%)

During the first two weeks of class, you will participate in an online discussion. You introduce yourself to the class and respond to other students' introductions; this may help you find a partner for one lab. 1 point for your introduction and 1 point for responding to at least 3 other students' introductions.

Quizzes (5%)

Quizzes assist you in studying for the exams. Quizzes are online and untimed. See the schedule for weeks, topics and due date.

Lab assignments (55%)

You will have 6 lab assignments throughout the semester. These assignments consist of doing analysis and mapping within GIS and then submitting a written report with jpegs of your map(s). A template with specific section headings is used to complete each lab report (except the Story Map lab). The template is a word document downloadable from Canvas. Each assignment has a specific step-by-step instruction on creating a map(s) for that analysis, 3 of the lab assignments involve a mapping assignment and a related statistical analysis. Each assignment submission has an associate Rubric in Canvas for the points division. Turnitin and AI checks are enabled within Canvas for these submissions.

One lab (Story Map) involves collecting data on campus, and we recommend you work with a partner when collecting your data and completing the Story Map.

Two exams (23%)

The exams contain multiple choice, true/false, short answer, essay, and numerical answer questions. See the course schedule for the dates and times of the exams. These are held during class periods.

1. Map exam is closed-book, closed-note, and timed. (11.5% of grade)
2. Statistics exam – timed and you are allowed a one-page cheat sheet to use during the exam. You can use a calculator. (11.5% of grade)

Final Project Paper (15% of total grade)

You will turn in a short proposal (5 points) and final paper (100 points) for grading. The theme of your paper is your choice, but it must involve mapping data, some statistical analysis, and will be at least 1500 words. The report form is slightly different than the lab assignment template (see the final instructions). More detailed instructions for the paper are posted on Carmen Canvas, which include possible themes and details on assistance in finding data for your analysis. Turnitin and AI checks are enabled within Canvas for these submissions.

Late submissions

Late submissions for assignments are not accepted in this course.

You have 1 chance to extend your deadline for 1 calendar day during the semester, applied to a lab assignment of your choice. No permission is required, use this opportunity wisely, it can only be used once.

Accommodations for religious holidays will be considered in accordance with OSU policies – see more details below. Please provide information on the holiday and its date and the number of days requested in the extension. You must make this request in advance of the due date, not after.

Accommodation will be made in case of personal and family emergencies. Please notify us as soon as possible so that we can work out a submission timeline. Such extensions may or may not be granted, it is decided on a case-by-case basis at instructor discretion. Extensions are not granted after the fact, e.g., you cannot ask for an extension on an assignment that was due two weeks before or wait until the end of the semester to submit assignments you missed. To request an extension for one of these emergency conditions, you must put the request in writing to Dr. Parece (cc to the TA) and the email must contain the following information:

- Course Name and Code (GEOG 2200 Mapping Our World)
- Reason for the extension request:
- The specific assignment:
- Specific extension requested:
- Attach documentation of the reason for the extension

Any emails requesting extensions without this information will be returned with a request to provide this information.

OTHER COURSE AND UNIVERSITY POLICIES

Academic Misconduct

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 3335-5-48.7 (B)). For additional information, see the Code of Student Conduct | Ohio State (osu.edu).

Turnitin has been enabled for the lab and final paper submissions (https://www.turnitin.com/). Turnitin is a plagiarism and AI verification platform. This check is set to automatically review your paper when you submit it on Canvas. Please note that any assignments with significant scores may result in reporting a code of conduct violation to OSU's Committee on Academic Misconduct (please see the Academic Integrity Policy below).   Please note that when you use quotes or repeat the assignment instructions within your written report, it increases the Turnitin and AI score. Avoid these when at all possible.

To maintain a culture of integrity and respect, generative AI tools should not be used in this complete of course assignments including lab reports, quizzes, exams, and final paper unless specifically authorized by Dr. Parece.

There has been a significant increase in the popularity and availability of a variety of generative artificial intelligence (AI) tools, including ChatGPT, Sudowrite and others. These tools will help shape the future of work, research and technology but when used in the wrong way, they can stand in conflict with academic integrity at Ohio State.

All students have important obligations under the Code of Student Conduct to complete all academic and scholarly activities with fairness and honesty. Our professional students also have the responsibility to uphold the professional and ethical standards found in their respective academic honor codes. Specifically, students are not to use unauthorized assistance in the laboratory, on field work, in scholarship or on a course assignment unless such assistance has been authorized specifically by the course instructor. In addition, students are not to submit their work without acknowledging any word-for-word use and/or paraphrasing of writing, ideas or other work that is not your own. These requirements apply to all students undergraduate, graduate, and professional.

To maintain a culture of integrity and respect, these generative AI tools should not be used in the completion of course assignments unless an instructor for a given course specifically authorizes their use. Some instructors may approve of using generative AI tools in the academic setting for specific goals. However, these tools should be used only with the explicit and clear permission of each individual instructor, and then only in the ways allowed by the instructor.

Disability Services

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let me know immediately. In cases where

illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or **Disability Services (osu.edu)**.

Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Office of Institutional Equity. (Policy: Religious Holidays, Holy Days and Observances | Office of Academic Affairs, The Ohio State University (osu.edu).

Mental Health Statement

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about

the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 **by dialing 988 to reach the Suicide and Crisis Lifeline**.

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu.

Diversity and Inclusion

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin*, race, religion, sex, sexual orientation, or veteran status, is prohibited.*

Inclement Weather

Should in-person classes be canceled, we will meet virtually via CarmenZoom during our regularly scheduled time. I will share any updates via [CarmenCanvas, email or other mode of communication].

Course Schedule

Disclaimer: This course syllabus provides a general plan for the course; deviations may be necessary. Any changes that affect the entire class will be announced by the instructor with as much advance notice as possible.

Week & Dates	Topics and Assignments
Week 1 August 20 – 24, 2024	Introduction to class; Introduction to cartography and GST Online Self-introduction due 8/26, responses due 8/28 Quiz 1 due Monday, 8/26 Optional Readings: Tyner Chapter 3.
Week 2 August 25 – 31, 2024	Scale & Coordinate Systems; Projections Quiz 2 due by Tuesday, 9/3 Lab 1: Mapping Detroit Public Schools due 9/4

	Optional Readings: Kimmerling, et al. Chapters 1 – 4
Week 3 September 1 – 7, 2024 Labor Day Monday, September 2 – No class	Wednesday: Thematic Map types, variables, and measurements Optional Readings: Tyner Chapters 8 – 11 in Carmen: Kimmerling Chapters 7 & 8
Week 4 September 8 – 14, 2024	Monday: Finish Thematic Map Types Wednesday: Managing data in ArcGIS, geoprocessing tools (buffering, overlaying, dissolving boundaries) Quiz 3 Map Types in Class on Wednesday, 9/18 Lab 2: Wind Farm Suitability Analysis due 9/18
Week 5 September 15 – 21, 2024	Monday: Exam Review Wednesday: Map Exam
Week 6 September 22 – 28, 2024	Data collection 2: GPS, observational data; Formulation of groups and preparation for Lab 3: Creating a Story Map (due 10/4) Quiz 4 GNSS due 9/27 Optional Reading: Tyner Chapter 1
Week 7 September 29 – October 5, 2024	Working with Census Data, ACS, Modifiable Areal Unit Problem (MAUP), Map uncertainty and accuracy Quiz 5 in class 10/2 Lab 3: Story Map due 10/4
Week 8 October 6 – 12, 2024 Fall Break October 10 & 11	Monday: Descriptive Statistics Wednesday: Descriptive Statistics Practice Problems; Introduction to Lab 4: US Health Disparities (due 10/22) Quiz 6 due Monday, 10/14
Week 9 October 13 – 19, 2024	Monday: Probability, Distributions, Central Limit theorem Wednesday: Probability Practice Problems Quiz 7 due 10/21 Lab 4: US Health Disparities due 10/22
Week 10 October 20 – 26, 2024	Monday: Hypothesis testing, gathering data, testing hypotheses Wednesday: Practice Hypothesis testing examples Quiz 8 due 10/28
Week 11 October 27 – November 2, 2024	Monday: Correlation, Spatial Autocorrelation, Outlier/cluster analysis Lab Assignment 5 Earthquakes Dashboard due 11/5

Week 12 November 3 – 9, 2024	Monday: Final Lecture: Hotspot Analysis, Kernel Density, Interpolation Wednesday– Guest Speaker – finding data for your final paper Final Paper Proposal Due November 12
Week 13 November 10 – 16, 2024 Veteran's Day Monday, November 11 – No Class	Lab 6 Analyzing Patterns of Traffic Crashes & Volumes around Public Schools due 11/19 Wednesday: Review for Statistics Exam
Week 14 November 17 - 23, 2024	Monday: Statistics Exam Wednesday: Final Project work time
Weeks 15 & 16 November 24 – December 4, 2024	Thanksgiving Break: November 27 – 30 11/25, 12/2 & 12/4: Final project work time Final paper due Wednesday, December 4, 2024 Last Day of class: Wednesday, December 4, 2024