THE OHIO STATE UNIVERSITY

SYLLABUS
GEOG 5200 Cartography & Map Design
3 Credit Hours
Lecture –Online
Recitation Sections: Derby Hall 0135, Tu or Th 8 – 9:20 a.m.

Course overview

Instructor and Teaching Assistant (TA)

Primary instructor: Dr. Tammy E. Parece
Email: parece.1@osu.edu
Office Location: Derby Hall 1189
Open Office hours: Monday 1 – 2 p.m.; Tuesday & Friday 10 – 11 a.m. in person. Please check for any notes on my door that indicate I am in the computer lab for office hours on that specific day.

Dr. Parece holds a BS in Interdisciplinary Studies, a Graduate Certificate in GIS, an MS in Geography, and a PhD in Geospatial and Environmental Analysis.

You can generally expect a reply to e-mails within **48 hours on school days.**

TA: Oluwadamilola Salau

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

Course description

A study of the cartographic techniques of map compilation and design including generalization, symbolization, reproduction, and GIS-based mapping with an emphasis on thematic mapping.

Course learning outcomes

By the end of this course, students should successfully be able to:
- Explain the relevance of cartography in the present day.
- Tailor a cartographic representation according to purpose, audience, and medium.
- Differentiate between types of maps, especially thematic map forms.
- Prepare geospatial data and corresponding text and visuals for cartographic representation.
- Demonstrate familiarity with coordinate systems and projections, making

appropriate choices based on scale, location, and extent.
- Communicate geospatial information using evidence-based cartographic principles.
- Critically examine cartographic presentations for strengths and weaknesses, providing specific suggestions for improvement.

How This Course Works

Mode of delivery: All learning materials will be uploaded on Carmen Canvas. Additional components:
- General lectures – online
- Labs – Tuesdays or Thursdays
- Office hours in-person with Teams option.

Credit hours and work expectations: This is a 3-credit-hour course. According to Ohio State policy, an average student should expect around 3 hours per week of time spent on direct instruction (instructor content 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.

Do not expect to complete entire lab assignments during the scheduled lab time. Lab sessions are 80 minutes, and it takes longer than 80 minutes to complete a lab. Therefore, you will need to either 1) finish the lab using software installed on your own computer, or 2) return to the computer lab when it is not being used for other classes.

Course materials
- All required reading materials are available with direct links in Carmen Canvas
- Optional reading materials/videos are also on Canvas.

Course technology

For help with your password, university e-mail, Carmen, Buckeye Pass authorization, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Support for urgent issues is available 24x7.

- **Self-Service and Chat support:** http://ocio.osu.edu/selfservice
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

Baseline technical skills
- Basic computer and web-browsing skills
- Navigating Carmen: see the Canvas Student Guide.
- CarmenZoom virtual meetings

IMPORTANT: The next two sections indicate equipment and software that you must be able to access to complete lab assignments for this course. You have access to these items in Derby 0135, but if you install the software on your own computer, you will be able to finish GIS assignments at

home.

Hardware

- Computer: PC compatible with running ArcGIS Pro
- USB Drive
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Software

Please remember you are NOT required to purchase any software for this class. You will use a word processing program, a spreadsheet program, Adobe Reader, and ArcGIS Pro. If you need assistance with installing ArcGIS Pro on your personal computer, do not contact IT, contact Dr. Parece and she will put you in touch with our GIS IT person.

Computer Lab Access

BuckID access is required for DH 0135. The instructor and/or TA will be present during scheduled class times. You will need to use your BuckID outside of normal class times. Derby Hall doors are locked on the weekends and after 7 p.m. on scheduled class days.

Grading scale

92.5–100: A
90.0–92.49: A-
86.5–89.99: B+
82.5–86.49: B

80.0–82.49: B-
76.5–79.99: C+
72.5–76.49: C
70.0 –72.49: C-

66.5 –69.99: D+
60.0 –66.49: D
Below 59.99: E

Note – I do not round up. An 89.99 does not round up to 90%. If you want an A/A-, you must achieve 90% or better.

Incompletes: If an emergency prevents you from finishing a course, you may request an "Incomplete" from the instructor. (https://advising.osu.edu/grades-and-grade-forgiveness)

Grades and feedback
You can expect grades and feedback to be returned within 1 week once the assignment's deadline has passed, depending on the complexity of the assignment.

Grading

Assignment or category	Percentage
Labs	55
Project	15
Exams	24
Discussion Participation (5 discussion posts)	06
Total	100

Assignment information

Failure to follow the instructions on any assignment will result in at least a 10% grade reduction for that specific answer (it might result in an incorrect answer). Any assignment includes exams, labs, and the final project. As examples, if the directions state you need to round to 1 decimal place and you give no decimal points or provide 2 or more; instructions state a screenshot of your login area, and you provide a screenshot of the entire ArcGIS Pro window.

2 Exams (12% of total grade each for a total of 24%)

Each exam will be…
- *Available for more than 1 day.* You may take the exam any time during the week it is open. Late exams are not accepted.
- *Timed.* Exams are 55 minutes. This means the timer starts to run as soon as you open the exam. However, if you wait and open it 30 minutes before it is due, the exam will close and submit at the due date time. If you are registered with SLDS for extended time accommodations, please confirm that time has been granted before you begin the exam.
- *Open-note.* You can use the lecture slides, the handouts, your notes, the textbook, etc. But this does not mean you can get assistance from another student, the instructor, or the TA. You cannot copy and paste any answers from any medium nor can you use AI to complete the exam. Such actions can result in an academic misconduct report.
- *Completed independently.* You should complete the exam by yourself. Collaboration with one or more other persons is considered academic misconduct.
- *Allowed only one attempt.* The exam must be completed in one sitting.
- Do your best to ensure that you have a reliable internet connection and a reliable device (desktop, laptop, tablet, or phone) for accessing the exam *before* you get started.
- 2nd exam is cumulative.

Discussions (6% of total grade)
You have five required discussion posts.
- 1st Post: Introductions – introduce yourself to the class and post replies to other students. Find something in common with others, you may find a study partner. (1% of grade)
- 2nd Post about Datums (1% of grade)
- 3rd Post about Projections (1% of grade)
- 4th Post about Thematic Maps (1% of grade)
- 5th Post is Practical Applications of GIS (2% of grade)

Final Project (15% of total grade)
You will create and design a series of maps for a tourism brochure. More information about the project is available on Carmen. No late submissions are accepted.

Labs (55% of total grade)
You will have multiple lab assignments. Remember that completing any lab may not go as smoothly, plan for unexpected challenges. Set a goal to submit each lab before the deadline. Some labs are written documents, some are submitted in a quiz-like format. These are not timed quizzes, just a mechanism to easily submit your answers. Some questions are graded

automatically, and some require manual grading.

Late assignments

Late submissions for any assignments are not accepted in this course.

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

Accommodations for religious holidays will be considered. A request must be submitted prior to any assignment due date that conflicts with such holidays. Please provide information on the holiday and its date and the number of days requested in the extension.

Additionally, 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. 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 the TA) and the email must contain the following information:

Course Name and Code (GEOG 5200 Cartography and Map Design)
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.

Attendance
Attendance is not taken in this class.

Discussion board Q&A
There are two additional discussion boards for course questions. One is for general questions and the other is for questions on Lab Assignments. You can expect a reply to these Q&A posts within **48 hours during normal business hours**. Although you might receive replies outside of those hours, please do not expect this. The determination of urgency is ultimately at the discretion of the instructor/TA. If you wait until the day an assignment is due to post a question, we cannot guarantee an immediate reply.

Course Academic Integrity Policy

Turnitin (https://www.turnitin.com/) is a plagiarism and AI verification platform. This check is set to automatically review any written documents submitted in an assignment folder. Please note that any assignments with a score of 25% or more 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 a written report, it increases the Turnitin and AI score. Avoid these when possible.

To maintain a culture of integrity and respect, generative AI tools should not be used in the completion of course assignments, quizzes, discussion posts, and exams unless specifically authorized by Dr. Parece.

Participation, discussions, and notifications

Student participation requirements

The following is a summary of student's expected participation:

- All work in this class must be your own.   There are no joint assignment submissions for this class on any assignment!
- *In-person attendance at labs is strongly recommended*.
- Participating in discussion forums: see requirements above.
- Logging in: Be sure you are logging in to the course in Carmen each week. During most weeks you will probably log in many times. If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible.*
- Confidential Questions: Don't post questions online that may indicate answers to graded assignments and questions regarding your own grades. The former is an academic integrity concern, and the latter is a privacy concern.

Discussion and communication guidelines

The following are expectations for how we should communicate as a class. Please remember to be respectful and thoughtful.

- **Writing style**: While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. (Note: Excessive grammar, spelling, or punctuation errors in discussions or any other assignment submissions will be penalized at the discretion of the instructor/TA.) A more conversational tone is fine for non-academic topics.
- **Tone and civility**: Maintain a supportive learning community where everyone feels safe, and people can disagree amicably. Remember that sarcasm doesn't always come across online. Be respectful to other students, the TAs and the instructor. Treat others as you would want yourself treated.
- **Citing your sources**: When we have academic discussions, please cite your sources. This is especially true when creating maps as you are using someone's data.

Managing notifications

How can I manage notifications about course activity?

You can tailor your notifications by going to Account > Notifications. You can choose Email

and/or Push notifications. You can choose what types of activity you want to follow.

If you want email notifications but you're not getting any at all, regardless of activating email notifications, then you may need to go Account > Settings and verify your email address.

COURSE AND UNIVERSITY POLICIES

Academic Misconduct, Artificial Intelligence and Academic Integrity

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/.

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.

For more detailed information on Academic Misconduct, see:

- Code of Student Conduct | Ohio State
- Committee on Academic Misconduct | Office of Academic Affairs

Disability Statement (with Accommodation for Illness)

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If students anticipate or experience academic barriers based on a disability (including mental health and medical conditions, whether chronic or temporary), they should let their instructor know immediately so that they can privately discuss options. Students do not need to disclose specific information about a disability to faculty. To establish reasonable accommodations, students may be asked to register with Student Life Disability Services (see below for campus-specific contact information). After registration, students should make arrangements with their instructors as soon as possible to discuss your accommodations so that accommodations may be implemented in a timely fashion.

If students are ill and need to miss class, including if they are staying home and away from others while experiencing symptoms of viral infection or fever, they should let their instructor

know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations.

For more information: slds@osu.edu
https://slds.osu.edu/
098 Baker Hall, 113 W. 12th Ave
614-292-3307 phone

Religious Accommodations

This course adheres to The Ohio State University's policy on religious accommodations. Please note the late policy above for specifics on how to request accommodation for a specific assignment in this course. The University's policy can be found here: Religious Holidays, Holy Days and Observances | Office of Academic Affairs

Intellectual Diversity

Ohio State is committed to fostering a culture of open inquiry and intellectual diversity within the classroom. This course will cover a range of information and may include discussions or debates about controversial issues, beliefs, or policies. Any such discussions and debates are intended to support understanding of the approved curriculum and relevant course objectives rather than promote any specific point of view. Students will be assessed on principles applicable to the field of study and the content covered in the course. Preparing students for citizenship includes helping them develop critical thinking skills that will allow them to reach their own conclusions regarding complex or controversial matters.

Grievances and Solving Problems

According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, take your case to the department chairperson, college dean or associate dean, and to the provost, in that order. Specific procedures are outlined in Faculty Rule 3335-8-23. Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Counseling and Consultation Services / Mental Health Statement
Columbus:

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 through the 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a welcoming community. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office (CRCO):

Online reporting form: http://civilrights.osu.edu/
Call 614-247-5838 or TTY 614-688-8605
civilrights@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Civil Rights Compliance Office to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

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 – on the following pages

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.

Course Schedule

Week & Dates	Topics and Assignments	Weekly Learning Objectives
Week 1 August 26 – 30	Introduction to Course, Cartography & GIS Lab 1 Getting started with ArcGIS Pro due 9/3 Introductory discussion posts due 9/3	Compare and contrast cartography with geographic information systems
Week 2 August 31 – September 6	Datums, Coordinate Systems & Projections Lab 2 Coordinate Systems and Projections due 9/15 Datum Discussion Post due 9/16	Interpret and discuss different datums, coordinate systems and projections
Week 3 September 7 - 13	Mapping Concepts: Types of Maps, Scale, Qualitative vs Quantitative Data Discrete vs. Continuous Data Lab 3 Cartographic Creations due 9/25	Differentiate between types of scale in maps Identify data as qualitative or quantitative Identify different map types Describe thematic maps
Week 4 September 14 - 20	The Language of Maps & Map Elements Lab 3 Cartographic Creations due 9/25	Identify all map elements Demonstrate different scenarios where different map elements map or may not be required
Week 5 September 21 - 27	Types of Data, continued Locating Secondary Data Lab 4 Types of Data due 10/3 (2 components)	Differentiate between various types of data Identify specific data as discrete or continuous Locate data that can be used in a GIS
Week 6 September 28 – October 4	Exam 1 due by noon on Monday, 10/6	
Week 7 October 5 - 11	Ethics in Mapping, Statistics in Mapping Projections Discussion Post due 10/10 Lab 5 Downloading & using secondary data due 10/15	Describe ethics and identify ethical principles Demonstrate the use of ethics in the cartographic process Differentiate between methods of displaying descriptive statistics in maps
Week 8 October 12 - 18	Cartographic Design & Text and Typography Lab 5 Downloading & using secondary data due 10/15	Describe the communication process in the design of maps Recognize characteristics of successful maps. Explain visual and written hierarchy as it pertains to maps. Utilize guidelines for lettering to differentiate good/poor lettering choices.
Week 9 October 19 - 25	Color Thematic Maps – Choropleth Lab 6 Ethics due 10/27	Differentiate between color models. Identify the most appropriate color scheme for types of data (qualitative vs quantitative)

Week 10 October 26 – November 1	Thematic Map Types – Cartogram, Dot Density, Proportional Symbols, Flow Lab 7 Introduction to QGIS due 11/3 Final Project Proposal due 11/13	Identify appropriate/inappropriate data for a specific type of thematic map. Recognize proper symbolization of enumeration units in a specific type of thematic map. Identify appropriate visual variables for bivariate and multivariate maps.
Week 11 November 2 - 8	3D, Animated & Web Cartography; Scholarly Research Thematic Maps Discussion Post due 11/10 Lab 8 Creating a Multivariate Thematic Map due 11/14	Demonstrate how the mapping process changes when completing online maps
Week 12 November 9 - 15	Tuesday, 11/11 Veteran's Day Holiday – no class Final Project Proposal due 11/13 Exam 2 due Monday, 11/17 Lab 9 Earthquakes Dashboard due 11/24	Demonstrate the use of constructing an online Dashboard that provides information on real time data
Weeks 13 & 14 November 16 - 25	Practical Applications Lab 9 Earthquakes Dashboard due 11/24 Practical Applications Discussion Post due 11/25	Identify and describe specific situations where GIS is used to help solve real world situations
Thanksgiving Break 11/26 – 11/30		
Weeks 15 & 16 November 30 – December 18	Final Project Work time Last Day for this Class 12/9 Last Day of classes 12/10 Final Projects are due 12/15	Demonstrate the ability to apply all GIS and cartographic techniques learned in this class