



GEOG 2000 Cartography – Fall 2025

Department of Earth and Environmental Sciences

WHEN: MON, WED, FRI: 3:35PM—4:25PM

WHERE: LSC COMMON AREA, ROOM C234

Dalhousie University acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. We are all Treaty people.

Dalhousie University also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.

COURSE INSTRUCTOR(S)/STUDENT RESOURCES

Name	Email	Office Hours
Professor: Dr. Jennifer M. Greik Martin	jgrekmartin@dal.ca	LSC Room 3079 Noon-2pm Wed, Thurs or by appt.

COURSE DESCRIPTION

This course introduces the art and science of mapmaking, from both theoretical and practical perspectives. On the theoretical side, students will explore cartographic theories from historical and contemporary lenses to critically think about map design and use. More practically, students will learn the basic skills of cartographic design and become familiar with software applications used to make contemporary maps, culminating in the making and presenting of their own computer-generated map at the end of the term.

COURSE PREREQUISITES

ERTH/GEOG1030 or ERTH1080

COURSE EXCLUSIONS

None

COURSE DELIVERY

This course is a blend of lecture and hands-on application, therefore in-person attendance is highly recommended.

Mondays and Wednesdays: Lecture and discussion, LSC Common Area, room C2324

Fridays: Practical application, Either LSC C2324 or LSC Rm B3111 (see course outline or Brightspace)

If you miss a lecture: Lectures will not be recorded, but lecture slides will be provided via Brightspace!

If you miss a practicum: You can make up the practicum assignment: it will be due the following week!

I am committed to teaching—in class, by email, in marking assignments and exams—and you can expect me to be fair and to want you to learn. I encourage questions, discussion, and a safe and inclusive learning environment. If you are having trouble, let me know!

For your part, I hope the respect will be mutual and that the next twelve weeks will be an enjoyable learning experience!

LEARNING OBJECTIVES

- Understanding of key theoretical perspectives shaping the field of cartography,
- Understanding the ways in which maps shape, and are shaped by, social processes and how maps inform how we think spatially about phenomena,
- Learn practical cartographic techniques and how to apply them via computer software applications, including how to read and evaluate cartographic images,
- Develop critical thinking and communication skills for academic and work settings.

ASSESSMENT

Assignment	Due Date	total%
in-class practica (8 @ 5% each)	Fridays	40%
Quiz 01 (in class, paper, 50 minutes)	27 October	20%
Final Project – Presentation	3/5 December	10%
Final Project - Map	10 December	30%

There is no Final Exam for this course. (You're welcome.)

Conversion of numerical grades to final letter grades follows the

[Dalhousie Grade Scale](#)

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (0-49)
A- (80-84)	B- (70-72)	C- (55-59)	

COURSE POLICIES ON MISSED OR LATE ACADEMIC REQUIREMENTS

LATE ASSIGNMENTS: Late assignments (includes practica, Final Project) will incur a mark deduction penalty of 10% per day. All assignments, including the final project, will **not be accepted later than three days after the initial deadline, unless I have approved an alternate deadline.**

MISSED QUIZ: Make-up quizzes will not be provided for any reason. If I approve your reason for missing a Quiz, I will either recalculate your Final Grade out of the missed points (e.g., I missed quiz = final grade/85 points), OR I will reweight the extant quiz (e.g., Quiz 02 = 30%), whichever results in a higher Final Grade.

COURSE POLICIES RELATED TO ACADEMIC INTEGRITY

Practica: collaboration during practica is encouraged but each submits their own work for assessment.

Final Project, Presentation, and Quizzes: Individual work only.

THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (AI) IN GEOG2000

I am interested in you. generative AI has many uses, but it cannot replace **you**.

So, while I accept that you could use generative AI to study for my tests, in this course I strictly prohibit the use of generative AI tools (including ChatGPT, Gemini, Microsoft Copilot, and other AI writing, image or map generating, and coding apps) for creating assignments and submitting the results as your own original work. Suspected use of generative AI in this manner will be considered a violation of the university's Academic Integrity policy.

I don't do this to make 'busy work'. I do this because I care about what you learn and how you learn it.

I want you to know the facts. Generative AI tells you what you want to hear, whether it is true or not.

I want you to think for yourself. Generative AI takes this away from you. It replaces your authenticity with claims of efficiency.

I want you to be able to express yourself. Generative AI makes you sound mediocre, indistinct, like everyone else. In an era where we celebrate diversity, do you really want to sound like an algorithm?

I want you to do good things for the planet. The environmental costs of Generative AI are immense and more varied than you might think. <https://news.mit.edu/2025/explained-generative-ai-environmental-impact-0117>

My use of generative AI: all course materials, including lectures, lecture slides, assignment guidelines, and tests, **have been created by me or another human without the use of generative AI.**

COURSE MATERIALS

Some readings will be provided via pdf on Brightspace; the 'textbooks' can be accessed through the links below to OER Commons. I will refer to readings for this resource as *MST* + Chapter number.

Manson, S. M. (ed) (2017). *Mapping, Society, and Technology*. Minneapolis, Minnesota. University of Minnesota Libraries Publishing. URL: <https://oercommons.org/courses/mapping-society-and-technology>

For Students with Accommodations through Student Accessibility Centre:

I support students with accommodations and believe everyone has the right to learn! I will post my slides by the start of each lecture, which allows you to download the pdf and annotate it/take notes on each slide. If this does not satisfy your accommodation ('Access to Materials'), please see me after class or email me to discuss further options.

Note on GIS Lab Use:

Students in this class may work in LSC B3111 on weekdays from **7:30 am to 9:00 pm from Monday to Friday IF** the lab is not scheduled for class use or events. Use of the lab is not permitted on weekends. Attempting to use the space outside of these posted hours WILL TRIGGER AN ALARM.

Students may use the Elizabeth May Centre for Geocomputation (LSC B2012) on weekends from 7:00 am to 10:00 pm except on university holidays. The door code for LSC B2012 will be provided to students in the classroom setting.

COURSE CONTENT/OUTLINE: THIS OUTLINE REFLECTS THE COMPRESSED TERM OF FALL 2025

Readings and course topics subject to changes: check Brightspace often!

24 Sept	Lecture01: Introduction/Maps as Science? readings: Godlewska & Grek Martin (2011); MST Ch. 1.1; Turnbull exhibit 2 (1989), Belyea (1996), MST Ch. 1.1, 2.1-2.3, 9	WEEK01
26 Sept	Lecture02: History of Cartography — Wayfinding & Cosmography readings: readings: Woodward (1985), Turnbull, exhibits 3, 4, 5 (1989), MST Ch. 1.2	
29 Sept	Lecture03: Maps & Power Guest lecture — Jason Grek Martin (professor, SMU) readings: Harley (2001b)	WEEK02
1 Oct	Lecture04: Reading and Critiquing Maps readings: Harley (2001a), MST Ch. 2.3, 7	
3 Oct	Practicum01: Reading Maps (LSC C234)	5%
6 Oct	Lecture05: Generalization & Scale; (<i>Intro to GIS</i>) readings: MST Ch 3, 5	WEEK03
8 Oct	Lecture06: Maps in Film & Literature (& Gaming) readings: Hassan (2005), Wood (2004), Mills (2010)	
10 Oct	Practicum02: Sketch maps (LSC C234)	5%
13 Oct	<i>University Closed: Thanksgiving Day Observed</i>	WEEK04
15 Oct	Lecture07: Critical Cartography and Countermapping readings: Crampton & Krygier (2015)	
17 Oct	Practicum03: Final Project Ideas Workshop (LSC B3111)	5%
20 Oct	Lecture08: Guest Lecture: Jennifer Strang, Dalhousie GIS Centre, Data & data sources, Pt I readings: Monmonier pp.123-129 (1991), MST Ch 2	WEEK05
22 Oct	Lecture09: Data & data sources, Pt. II	
24 Oct	Practicum04: Bringing Data into a GIS (LSC B3111)	5%

27 Oct	Quiz01 (Material covered: 23 September – 22 October)	WEEK06
29 Oct	Lecture10: Projections readings: Dickinson (1969), “Map Projections”, <i>MST</i> Ch 3	
31 Oct	Practicum05: Projections	5%
3 Nov	Lecture11: Art & Ethics: Use of colour & pattern readings: Brewer website, <i>Elements of Cartography</i> Ch 21 (1996), <i>MST</i> Ch 4	WEEK07
5 Nov	Lecture12: Art & Ethics: Iconology & symbology; Map critique readings: G.N.G. Clarke (1988), <i>MST</i> Ch 4	
7 Nov	Practicum06: Working with Colour and Symbol (LSC B3111)	5%
10-14 Nov	<i>Fall Study Break! No classes...</i>	WEEK08
17 Nov	Lecture13: Elements of a map: Figure/ground & Placement readings: <i>MST</i> Ch 4	WEEK09
19 Nov	Lecture14: Typography & Lettering readings: Monmonier (1993); Krygier “Push-Pin Maps” (2010)	
21 Nov	Practicum07: Working with Layout and Type (LSC B3111)	5%
24 Nov	Lecture15: Map Types: Isolinear and dot maps readings: Koch (2004), McLeod (2000), <i>MST</i> Ch 5	WEEK10
26 Nov	Lecture16: Map Types: Choropleth maps & cartograms readings: Monmonier pp. 129-146 (1991), <i>MST</i> Ch 5	
28 Nov	Practicum08: Creating Different Types of Maps (LSC B3111)	5%
1 Dec	Lecture17: Crafting a Design Argument; Citing Maps and Geospatial Data	WEEK11
3 Dec	Final project presentations: 3-minute Lightning Talks	
5 Dec	Final project presentations: 3-minute Lightning Talks	
8 Dec	Practicum9: Final Project Open Lab (LSC B3111), not graded	WEEK12
10 Dec	No formal class:	Final Project Maps Due at 11:59 pm

University Policies and Statements

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit or e-mail the Indigenous Student Centre at 1321 Edward St or elders@dal.ca. Additional information regarding Mi'kmaq and Indigenous Relations (including the Elders in Residence program, Land Acknowledgements, Understanding Our Roots, and much more) can be found at: <https://www.dal.ca/about/mission-vision-values/mikmaq-indigenous-relations.html>

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at: <https://www.dal.ca/about/mission-vision-values/global-relations.html>

Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. Additional academic integrity information can be found at: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (https://www.dal.ca/campus_life/ssc.html).

Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives

are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: <https://www.dal.ca/about/mission-vision-values/equity-diversity-inclusion-and-accessibility/about-office-equity-inclusion.html>

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner - perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution. The full Code of Student Conduct can be found at: <https://www.dal.ca/content/dam/www/about/leadership-and-governance/governing-bodies/code-student-conduct.pdf>

Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie. Additional information regarding the Fair Dealing Policy can be found at: <https://www.dal.ca/content/dam/www/about/leadership-and-governance/university-policies/fair-dealing-policy.pdf>

Student Use of Course Materials

Course materials are designed for use as part of this course at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading to a commercial third-party website) may lead to a violation of Copyright law.

Student Resources and Support

University Policies and Programs

Important Dates in the Academic Year (including add/drop dates):

http://www.dal.ca/academics/important_dates.html

Classroom Recording Protocol: https://www.dal.ca/dept/university_secretariat/policies/academic/classroom-recording-protocol.html

Dalhousie Grading Practices Policies: https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Grade Appeal Process: https://www.dal.ca/campus_life/academic-support/grades-and-student-records/appealing-a-grade.html

Sexualized Violence Policy: https://www.dal.ca/dept/university_secretariat/policies/health-and-safety/sexualized-violence-policy.html

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Learning and Support Resources

General Academic Support – Advising (Halifax): https://www.dal.ca/campus_life/academic-support/advising.html

General Academic Support – Advising (Truro): <https://www.dal.ca/about-dal/agricultural-campus/ssc/academic-support/advising.html>

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness.html

On Track (helps you transition into university, and supports you through your first year at Dalhousie and beyond): https://www.dal.ca/campus_life/academic-support/On-track.html

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Indigenous Connection: <https://www.dal.ca/about-dal/indigenous-connection.html>

Elders-in-Residence (The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit the office in the Indigenous Student Centre or contact the program at elders@dal.ca or 902-494-6803: <https://cdn.dal.ca/content/dam/dalhousie/pdf/academics/UG/indigenous-studies/Elder-Protocol-July2018.pdf>

Black Student Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre.html

South House Sexual and Gender Resource Centre: <https://southhousehalifax.ca/about/>

LGBTQ2SIA+ Collaborative: <https://www.dal.ca/dept/vpei/edia/education/community-specific-spaces/LGBTQ2SIA-collaborative.html>

Dalhousie Libraries: <http://libraries.dal.ca/>

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Dalhousie Student Advocacy Services: <https://www.dsu.ca/dsas?rq=student%20advocacy>

Dalhousie Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Human Rights and Equity Services: <https://www.dal.ca/dept/hres.html>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Study Skills/Tutoring: http://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Faculty of Science Advising Support: <https://www.dal.ca/faculty/science/current-students/undergrad-students/degree-planning.html>

Safety

Biosafety: <http://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <http://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Laser Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety/laser-safety.html>