

**GEOM 3007A: Cartographic Theory and Design  
Section A - Winter 2019**

**Department of Geography and Environmental Studies, Carleton University**

Instructor: Peter Pulsifer, PhD  
Office: Loeb Building A327  
Office Hours: Mondays 10:00 – 11:00 AM, or by appointment  
e-mail: [peter.pulsifer@carleton.ca](mailto:peter.pulsifer@carleton.ca)

Teaching Assistant: TBA

### Course Electronic Resources:

cuLearn (<http://culearn.carleton.ca>) and log in using your student account.

### Course Calendar:

Lectures	Mondays	11:35 AM to 1:25 PM	Loeb Building A200
Labs	Mondays	2:35 to 4:25 PM	Loeb Building A200

### Calendar Description:

Principles of and issues in cartography, cartographic communication and map design; practical aspects of cartographic representation using multimedia and online mapping.

Includes: Experiential Learning Activity

Prerequisite(s): [GEOM 1004](#) or [GEOM 2007](#) or permission of the Department

Lectures and laboratory four hours a week.

### Course Objectives

- Develop both theoretical and practical knowledge in thematic cartography including descriptive statistics, data classification, mapping techniques, design concepts, multivariate mapping
- Get *extensive, hands-on practice* in making cartographically correct, attractive maps and figures incorporating maps, graphs, figures, images, etc.
- Gain exposure to the concept of critical cartography
- Gain experience in online mapping, web mapping and alternative maps.

## Required Textbook (available at the MacOdrum Library and many other sources):

How to Lie with Maps, Mark Monmonier, 3rd edition – published in 2018. **Older versions are out of date!** You can purchase this textbook on amazon: <https://www.amazon.ca/How-Maps-Third-Mark-Monmonier/dp/022643592X/> or at the bookstore.

Any additional course material will be made available on cuLearn.

## Course Evaluation:

The grade weighting will be as below:  
Lecture, lab and online participation: 12%  
Laboratory assignments: 48%  
Mid term quiz: 10%  
Final project and presentation 30%  
**Total 100%**

### *Attendance*

**Each week** attendance will be taken (at any time during the lectures or the labs). You must provide a **unique** medical note for each class that you have missed in order to not receive 0 for that week.

### Lab Assignments

**Each week** there will be a lab period that will be used to complete the lab assignments (6 assignments @ 8% each). There lab assignments may require you to spend time outside of the lab period to complete them. Due dates are indicated in the detailed schedule which follows below. The assignment reports must be submitted before the start of the lab session on their due dates. *Please note the penalty for late assignments (below).*

### Final Project

There will be a project (30%) on thematic mapping with your choice. On week 11, students will present their work during the lecture period and submit a report and all the files needed for working on the project by the last week of the classes. Please note that there will be a penalty for late project submission.

### Mid Term Quiz

A mid term quiz will occur before the reading week and will be based on the lecture material from previous lectures in the course and any reading material assigned prior to the quiz. The quiz will take 45 minutes in the lecture period. There will be a lecture after the quiz.

## Policy on late assignments/projects:

Late assignments will be marked (i.e. given comments) but no grade assigned. This means the penalty for late assignments is 100% deduction in grade, NO EXCEPTIONS, except with a **unique** doctor's note for each assignment missed. Doctors notes must be provided to the instructor prior to the last day of class in order to receive grades on missed assignments.

Standing in the course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

## Policy on Plagiarism:

Plagiarism is defined as "presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one's own. This can include:

- reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence that cannot be resolved directly by the course's instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course. Further information on the Carleton's Academic Integrity Policy is available at <https://carleton.ca/registrar/academic-integrity/>

## Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. If you have questions about policies or accommodations, feel free to contact the Department of Equity and Inclusive Communities: <https://carleton.ca/equity/contact/>. For an accommodation request the processes are as follows.

## Pregnancy obligation

Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details click here: <https://carleton.ca/equity/accommodation/pregnancy-accommodation-form/>

## Religious obligation

Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details click here: <https://carleton.ca/equity/accommodation/religious-observances/>

## Academic Accommodations for Students with Disabilities

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520- 6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable).

## Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/equity/sexual-assault-support-services>

## Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

## Course Calendar

Lecture Date	Lab Date	Lecture Topic	Lab Topic	Required Reading	Due in Lab
06-Jan	06-Jan	Introduction to the course: maps and mapping	none	Chapter 1	
13-Jan	13-Jan	Basic elements of the map: data, layers, generalization, classification, symbolization, scale, projections	Lab 1: Basic map construction using QGIS	Chapters 2,3,4	
20-Jan	20-Jan	Visit to the Map Library	Lab 2: Agile cartographic project management and design in QGIS	Chapters 2,3,4	Lab 1
27-Jan	27-Jan	Thematic mapping techniques: Choropleth maps, dot-density maps, proportional symbol maps; statistics and data classification techniques	Lab 3: Choropleth, dot density, proportional symbols, applying different classification techniques, legends	Chapters 2,3,4	Lab 2
03-Feb	03-Feb	Thematic map design: Map design process and elements of map composition, type, labeling and colour	Lab 4: Monochrome and colour, colour selection, ramps, multiscale labeling	Chapter 5	Lab 3
10-Feb	10-Feb	Mid-term test (45 minutes) + Web mapping	Lab 5: web mapping using multiple platforms (e.g. Google Maps; publishing QGIS maps)	Chapter 14, Crampton – Chapter 3	Lab 4
17-Feb	17-Feb	Winter Break	Winter Break	None	
24-Feb	24-Feb	Group “scrum” 1	Work on group project	Chapters 6,7,8,9	Lab 5
02-Mar	02-Mar	Group “scrum” 2	Work on group project	Chapters 6,7,8,9	

09-Mar	09-Mar	Group “scrum” 3	Work on group project	Chapters 6,7,8,9	
16-Mar	16-Mar	Data-driven maps and image maps	Lab 6: data-driven maps and image maps. Includes optional use of data modeling platform.	Chapters 11, 12	
23-Mar	23-Mar	Critical cartography	Work on group project	Crampton – Chapters 2, 4	Lab 6
30-Mar	30-Mar	Participatory mapping, Indigenous cartographies, language mapping, mapping texts	Work on group project	Selected readings made available on CuLearn	Lab 6 (if data platform option chosen)
6-Apr	6-Apr	Final group project presentation	Final group project presentation	none	Final group project submissions at end of lab