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  

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 is 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):


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 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.
<table>
<thead>
<tr>
<th>Lecture Date</th>
<th>Lab Date</th>
<th>Lecture Topic</th>
<th>Lab Topic</th>
<th>Required Reading</th>
<th>Due in Lab</th>
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<tbody>
<tr>
<td>06-Jan</td>
<td>06-Jan</td>
<td>Introduction to the course: maps and mapping</td>
<td>none</td>
<td>Chapter 1</td>
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<tr>
<td>13-Jan</td>
<td>13-Jan</td>
<td>Basic elements of the map: data, layers, generalization, classification, symbolization, scale, projections</td>
<td>Lab 1: Basic map construction using QGIS</td>
<td>Chapters 2,3,4</td>
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<td>20-Jan</td>
<td>20-Jan</td>
<td>Visit to the Map Library</td>
<td>Lab 2: Agile cartographic project management and design in QGIS</td>
<td>Chapters 2,3,4</td>
<td>Lab 1</td>
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<td>27-Jan</td>
<td>27-Jan</td>
<td>Thematic mapping techniques: Choropleth maps, dot-density maps, proportional symbol maps; statistics and data classification techniques</td>
<td>Lab 3: Choropleth, dot density, proportional symbols, applying different classification techniques, legends</td>
<td>Chapters 2,3,4</td>
<td>Lab 2</td>
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<td>03-Feb</td>
<td>03-Feb</td>
<td>Thematic map design: Map design process and elements of map composition, type, labeling and colour</td>
<td>Lab 4: Monochrome and colour, colour selection, ramps, multiscale labeling</td>
<td>Chapter 5</td>
<td>Lab 3</td>
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<td>10-Feb</td>
<td>10-Feb</td>
<td>Mid-term test (45 minutes) + Web mapping</td>
<td>Lab 5: web mapping using multiple platforms (e.g. Google Maps; publishing QGIS maps)</td>
<td>Chapter 14, Crampton – Chapter 3</td>
<td>Lab 4</td>
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<td>17-Feb</td>
<td>17-Feb</td>
<td>Winter Break</td>
<td>Winter Break</td>
<td>None</td>
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<td>24-Feb</td>
<td>24-Feb</td>
<td>Group “scrum” 1</td>
<td>Work on group project</td>
<td>Chapters 6,7,8,9</td>
<td>Lab 5</td>
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<td>02-Mar</td>
<td>02-Mar</td>
<td>Group “scrum” 2</td>
<td>Work on group project</td>
<td>Chapters 6,7,8,9</td>
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<td>Date</td>
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<td>09-Mar</td>
<td>09-Mar</td>
<td>Group “scrum” 3</td>
<td>Work on group project</td>
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<td>Chapters 6,7,8,9</td>
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<td>16-Mar</td>
<td>16-Mar</td>
<td>Data-driven maps and image maps</td>
<td>Lab 6: data-driven maps and image maps. Includes optional use of data modeling platform.</td>
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<td>Chapters 11, 12</td>
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<td>23-Mar</td>
<td>23-Mar</td>
<td>Critical cartography</td>
<td>Work on group project</td>
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<td>Crampton – Chapters 2, 4</td>
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<td>Lab 6</td>
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<td>30-Mar</td>
<td>30-Mar</td>
<td>Participatory mapping, Indigenous cartographies, language mapping, mapping texts</td>
<td>Work on group project</td>
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<td>Selected readings made available on CuLearn</td>
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<td>Lab 6 (if data platform option chosen)</td>
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<td>6-Apr</td>
<td>6-Apr</td>
<td>Final group project presentation</td>
<td>Final group project presentation</td>
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<td>Final group project submissions at end of lab</td>
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