

## **GEOG 5803 – Seminar in Geomatics**

### **Course Outline**

Winter 2021

Department of Geography and Environmental Studies

**Instructors:** Peter Pulsifer and Scott Mitchell

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Office Hours: Scott: Thursdays 10-11 Zoom meeting 886 9056 7802 or by request

Peter: By request

**Course calendar:** Seminars: Mondays and Wednesdays 16:35-17:55 by Zoom

Meeting ID 951 9850 5353 Passcode 251343

**Course description:** This class aims to provide a seminar venue in which students can explore contemporary issues and/or algorithms in Geomatics (broadly defined), ideally in order to help them develop their thesis proposal. In addition, presentations are given by departmental faculty with strong Geomatics interests, about their research programs. The course topics vary widely according to the student interests in any given year, but typically include at least these broad themes:

- **Issues around the use of and access to spatial data and algorithms,**
- **Advanced sensors and calibration or correction,**
- **Recent developments in spatial data analysis techniques, including spectral, spatial, temporal and/or uncertainty analysis, and**
- **Interfacing environmental models with spatial databases**
- **Spatial data management, interoperability and distributed computing**
- **Application of geomatics in the social sciences and humanities**
- **Indigenous mapping, geomatics and representations of space, place and geography**

The exact distribution of topics varies as a function of the guest speakers available, and the backgrounds and interests of the students that enrol. Potential participants are welcome to contact us beforehand to discuss this further.

### **Evaluation:**

Student assessment will be split as follows:

- seminar participation (10%)
- project proposal (5%)
- seminar presentation (35%)
- responses for guest speaker seminars **(5%)**
- final project presentation **(5%)** <sup>1</sup>
- final project (40%).

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<sup>1</sup> The two grades in bold have been inserted since the start of the course, with the approval of all participants – they replace 10% erroneously allocated in the original outline to a paper review exercise which was not assigned this year.

Standing in a course is determined by the course instructor and is 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.

## **Course Format and Overview**

The seminars will explore the major course themes through presentation of papers, possibly short practical exercises, and discussion (signup starts in the first class; separate handout to follow). We will take turns leading the discussions each week (schedule will be agreed upon over the first two weeks). The final project will ideally contribute towards your own thesis research. It can directly stem from the discussion topics in the seminar or we can agree on other topics within the themes of spatial data analysis and remote sensing. The final projects are due April 14.

As with most classes at Carleton this year, this will be a transition from how the course has been run in the past, and there will likely be challenges to work out through the term. At the same time, many people are dealing with new and elevated stresses in their personal lives while coping with ongoing pandemic and associated public health measures. We encourage everyone to employ a combination of patience and open communication so that we can all help each other out. Please do not hesitate to contact the instructors if anything is preventing you from participating properly in the course as designed. There are many things beyond our control, but reasonable modifications will be made wherever possible.

Please also recognize that the switch to online learning creates potential privacy problems that were not issues in the past. When we participate in synchronous video calls and we have cameras on, we are opening windows into our homes. Please respect that fact with all your fellow students and instructors. Do not record people without their permission, and do not distribute recordings that we make available to anyone outside of the course. Remember, it's not just the course materials anymore, now it is also recordings of what was said and seen and shown by all of your classmates. If you have any concerns about privacy, don't hesitate to bring them up.

### ***Readings:***

Readings / a reading list will be distributed for each topic. Students are encouraged to submit readings for consideration when they come across interesting candidates. Please consult with Peter or Scott for suggestions on topics you are interested in for further study, or that want to refresh yourself on to better participate in the seminars.

### ***Practical work:***

Students are generally expected to provide their own computer for the practical work in this class. It is assumed that all participants are already experienced with at least one spatial data analysis package. If you have not already completed a GIS or remote sensing course, please contact us before registering in this course.

Except for your project, if/when there are practical exercises in this course, they will be informal and based on the topics being considered in the seminar. There will not be any graded practical assignments except for the individual projects. If required, any practical work for this course that requires specialized software (e.g. ArcGIS, TerrSet, PCI etc.) can be performed using the CU Desktop virtual access system (<https://carleton.ca/cudesktop/>). For convenience, a virtual machine configured with popular open-source geospatial tools will also be made available. Use of this virtual machine requires VirtualBox virtualization software (<https://www.virtualbox.org/>)

## **Instructional & Conduct Offences:**

Instructional offences include, among other activities, cheating, contravening examination regulations, plagiarism, submitting similar work in 2 or more courses without prior permission, and disrupting classes. Conduct offences apply in areas of discrimination and sexual harassment. Further information about University regulations which define and regulate these offences is presented in the Undergraduate Calendar:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Plagiarism is a serious offence and will not be tolerated. Plagiarism is the submission of someone else's writing/ideas/work as your own. All ideas presented which are not your own must be properly referenced. All plagiarism offences result in mandatory reporting to the Dean's office. You will often be working collaboratively to prepare for an assignment and possibly to collect data, but unless you receive specific written instructions to do otherwise, ALWAYS write your assignments and tests individually. Never include others' writing or other materials into your work without proper attribution. Including your own work from previous assignments or other courses, without proper attribution, is also considered plagiarism.

## **Academic Accommodations:**

Carleton provides [academic accommodation to students](#) for reasons of disability, religious observance, pregnancy and/or parental leave, sexual violence, and student activities.

Providing accommodations simply means providing alternatives to students who cannot perform the essential requirements of their academic programs due to the reasons mentioned above. At no time does academic accommodation undermine or compromise the learning objectives that are established by the academic authorities of the university.

This page provides only a brief overview of the accommodations policy and process. Please contact [Equity and Inclusive Communities](#) for a full explanation.

## **Religious Observation**

A request should be made in the first two weeks of the academic term, or as soon as possible where the scheduling of an event or activity conflicting with a religious obligation does not appear in the course outline or calendar.

A list of multi-faith holy days is accessible through the [Equity Services website](#). Instructors can also contact Equity Services to confirm the eligibility of a religious event or practice.

### **Pregnancy and/or Parental Leave**

Requests for parental leave must be made in writing to the Registrar's Office, or in the case of graduate students, to the Office of the Dean of Graduate and Postdoctoral Affairs.

A student who is pregnant may request a temporary modification to her program (e.g., laboratory or field work). The student should meet with the instructor(s). The department chair/director and the faculty dean can assist in the discussion. An Equity Services advisor can also be consulted if a student has questions about pregnancy and/or parental leave.

### **Students with Disabilities**

Carleton is strongly committed to providing access and accommodation for all individuals with identified and duly assessed disabilities. The university has a [Senate-approved policy on academic accommodation](#) that forms part of its human rights policy. The policy promotes efforts to accommodate students with disabilities so that they will have the opportunity to meet learning outcomes and be fairly evaluated in their performance. In no case, however, does academic accommodation negotiate away, lower, or remove the academic standards and learning outcomes of any course or program, rule, regulation, or policy at the university.

Some students with disabilities may require special accommodations for tests and exams. In these cases, students must present you with a signed accommodation form from the Paul Menton Centre detailing their accommodation needs well in advance of the date of an exam. A copy of the [Paul Menton Centre accommodations policy can be found here](#).

### **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 [carleton.ca/sexual-violence-support](http://carleton.ca/sexual-violence-support).

### **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. Please contact your instructor 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, see [the policy](#).

**Course Scheduling:**

We normally start the course with some presentations by faculty (course instructor plus guests from the department / university), to give students some time to prepare their own contributions. Then we have a combination of research seminars led by students on topics of their own interest, and (eventually) presentations about their term projects. The distribution of these through the term depends on the numbers of people in the class, and will be negotiated in the first class.