

GEOG 5803 – Seminar in Geomatics
Course Outline
Winter 2016
Department of Geography and Environmental Studies

Instructor: Scott Mitchell, B359 Loeb Building
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Office Hours: Tuesdays 12:30-2:25, when my door is open, or by appointment

Course calendar: Seminars: Fridays 11:35-14:25 Loeb A220 (or A237 by arrangement)

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**

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 me beforehand to discuss this further.

Evaluation:

Student assessment will be split as follows:

- seminar participation (5%)
- project proposal (5%)
- seminar presentation(s) (one or two, depending on number of students) (35%)
- journal article review (15%)
- final project (40%).

Standing in a 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.

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 theme of spatial data analysis and remote sensing. The final projects are due April X.

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 2013-14 Graduate Calendar:

<http://calendar.carleton.ca/grad/gradregulations/administrationoftheregulations/#18>

Plagiarism (the submission of someone else's writing / ideas / work as your own) will not be tolerated. All ideas presented which are not your own must be properly referenced. All presentations and your final project must be prepared independently.

Practical work:

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 me 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 desired, any practical work for this course can be performed in the graduate computer laboratory (Loeb A237), where PCI, Arc/INFO, IDRISI, ArcView, Corel Draw, R, GRASS, QGIS, Mapserver and many other open source programs, are available.

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 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.

Academic Accommodation:

You may need special arrangements to meet your academic obligations during the term. 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 see the Student Guide.

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 see the Student Guide

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.

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 lead 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.

Week 1:

- orientation to the course
- discuss mutual expectations and interests
- use this discussion to refine this schedule

Week 2: Scott Mitchell's research program

Week 3: Doug King's research program

Week 4: Derek Mueller's research program

Week 5: Guest lecturer: Angela Lausch

Weeks 6-10 (excluding reading week): Student Seminars

The remaining weeks will feature some combination of guest speakers and presentations your project progress at the end of term.