

Preliminary **COURSE OUTLINE**
GEOG 499: SUBARCTIC FIELD STUDIES - SCHEFFERVILLE
Field Portion August 21-31, 2017

INSTRUCTOR:

Prof. Wayne Pollard (Rm 618)

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COURSE DESCRIPTION:

This course focuses on physical geography field methods and research design. The prerequisite for this course is a minimum of GEOG272: Earth's Changing Surface (or the equivalent) and ideally one or more 300 level courses in physical geography, environmental studies, biology or geology.

Field investigations are a primary source of data for research in Physical Geography and most Environmental Sciences. The quality or value of a scientist's research is often a reflection of his/her ability to observe and measure natural processes or phenomena in the field. Thus, exposure to field techniques and the systematic analysis of field problems are important components of a student's training.

This course provides an introduction to the subarctic physical environment with emphasis on the application of field methods in physical geography. The course consists of preliminary meeting in the Department prior to our departure (tentatively will be confirmed - 12:00 pm August 21 in Burnside 426), followed by 9 days field instruction and independent study at Schefferville, Québec and a series of meetings early in the fall where we discuss and present the findings of exercises and independent study projects. To avoid problems associated with heavy fall term work loads, you will be required to submit 2 (of 5) assignments while in Schefferville (I will make sure a

printer is available and 1-2 computers with MS Word) and the remaining 2 exercises in the first week of class. The independent research component involves a project that you develop (study aims and research design) with my help, undertake on your own and write up in a journal paper format. The journal format means you have a 15-20 page (double spaced) limit on text and is designed to force you to organize your information and write concisely.

Important dates (2017):

- March/April - Sign up for course
- August 21 - Initial meeting
- August 23 - flight to Schefferville
- August 23-31 - (9 working days) in Schefferville
- August 31 - Return to Montreal
- August 31 - 2 Assignments due
- Sept. 8 - Meeting 1 (will confirm)
- Sept. 15 - Remaining assignments due
- Sept. 8-30 - 2-3 Meetings tba
- Oct 6 - Research Papers due
- Conference Presentation

* please note minor changes in the itinerary may arise due to our complex travel arrangements.

PROGRAM IN SCHEFFERVILLE:

The first 5 days will be spent on a series of guided excursions, field demonstrations and 5 assigned exercises (not necessarily in this order):

Exercises - work done in groups

- Exercise 1: Micro-Meteorology
- Exercise 2: Mapping and Surveying
- Exercise 3: Geomorphology -Stream Gauging
- Exercise 4: Biogeography and soils
- Exercise 5: Glacial erosion and deposition

In addition to these exercises there will be various demonstrations of equipment, data loggers, etc. and you will also be expected (as a group) to maintain twice-a-day aviation weather observations.

Independent Study:

The last 3-4 days will be spent on a project of your own design which will be approved by the instructors in charge. This project should be simple enough that you can collect your field data in 3 days and not require overly sophisticated hardware or depend on the cooperation of the weather (it is usually cool, 0-15° C, windy and often rains for 2-4 days of the course). You do not have to have your project defined before arriving in Schefferville, although some thought and a few ideas before hand will help you enormously. Copies of some of previous independent study projects will be available.

COURSE EVALUATION:

Individual Project	50%
Proposal and Paper	40%
Presentation	10%
Note book +	
Landform - Survey Project	10%
Geomorphology Project	10%
Meteorology Project	10%
Biogeography Project	10%
Glacial	<u>10%</u>
	100%

INDIVIDUAL PROJECT:

The purpose of the individual project is to allow the student to gain experience in defining, designing, carrying out and completing a small field research project; there is limited time so the evaluation is structured accordingly. In the proposal I am looking for a number of elements that are necessary for a successful study. Note, often complex studies are unsuccessful because too many things can go wrong, conversely simple projects based on a single problem or hypothesis are extremely successful. Follow the motto of the famous geomorphologist - J. Ross Mackay "simple is best". A component of your grade will be assessed on the basis of field methods and your ability to complete the study. The final paper should be approximately 15-20 pages (3000-4000 wds) in length and include a statement of problem and the aim of the project, field and laboratory methodology, analysis of results and a comparison with other published findings. A brief review of the literature should also be incorporated. This makes up 50% of your final mark so allocate your energies accordingly. A copy of your research paper will be kept as part of a course collection.

A conference will be held at the end of September, at which time each student will present the results of their project (oral presentation - 10%). The paper for the individual project must be submitted by September 30. You will submit your field notebook (worth 5%) at the same time; your notebook should contain all your field observations and preliminary thoughts about your independent study and the other projects. Your notebook is a field diary, don't leave it until you return then borrow a colleague's notebook and copy, even if someone else is taking notes make sure each night you bring your notebook up- to-date.

COST

In addition to the tuition fees for this course an additional fee of *~\$1800 will be charged directly to your student fee account to cover the costs for travel, accommodation and food. (* based on 2015 costs).

CLOTHING:

Temperatures may range from 0 to + 20°C, but since we anticipate cool and often wet weather you are advised to bring warm clothing (sweaters, gloves, wind pants ...) rain suits and rubber boots. Hiking or work boots are good for days spent hiking the ridges. On warm days black flies can be a nuisance so bring your favorite insect repellent or a bug jacket.

RECOMMENDED CLOTHING AND MATERIALS LIST (will be updated)

- **rubber boots** & hiking boots
- running shoes
- laptop computer
- day pack
- **rain coat/suit**
- gloves
- sweater - down vest
- warm coat - anorak
- **bug jacket**
- pens, rulers, protractors
- Camera

***Please Note:** Policies governing academic issues which affect students can be found in the Handbook on Student Rights and Responsibilities, Charter of Students' Rights (see <http://www.mcgill.ca/files/secretariat/greenbookenglish.pdf>).*

***Academic Integrity:** "McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary*

Procedures (see www.mcgill.ca/integrity/ for more information)."

"In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded."

***Student Support:** If you have a disability, please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 398- 6009 (online at <http://www.mcgill.ca/osd>) before you do this.*

***Course Communication:** Communication to students will often be by email and through on myCourses. Students are encouraged to check myCourses regularly for course updates. While students can set-up forwarding of myCourses emails to personal accounts, they are strongly encouraged to forward this mail only to their official McGill email account (not hotmail or yahoo). The university and instructor cannot guarantee that course emails will be successfully forwarded to external email accounts.*

***Finally:** Please inform the instructor in writing before starting the course of any medical conditions, allergies or food preferences that could jeopardize your health or limit your ability to work in a field setting.*