COURSE OUTLINE
GEOG 495 LOCAL FIELD SCHOOL: MT ST. HILAIRE
May 19-June 5, 2019

INSTRUCTOR:
Prof. Christian von Sperber  chris.vonsperber@mcgill.ca

TEACHING ASSISTANT:
Janice Neumann  janice.neumann@mail.mcgill.ca

COURSE DESCRIPTION:
Field investigations remain an important source of data for research in Physical Geography and Environmental Science. The quality or value of a scientist's research often reflects their ability to observe and measure natural processes or phenomena in the field. Thus, exposure to field techniques and the systematic analysis of a field problem and data are important components of a student's training. This course provides an introduction to the physical environment with emphasis on the application of field and laboratory methods. The course consists of 10-11 days field instruction and an independent study at the Gault Nature Reserve. You will be required to submit 3 structured assignments while in the field (we will make sure 1-2 computers are available with word processing and statistical software). Wireless internet is available so you may wish to bring your own notebook computers for background investigation. The independent research project involves a research question that you develop independently with my help, undertake on your own or in a group of 2 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.

PROGRAM IN THE FIELD: May 18-28
We will have a brief meeting at McGill on Monday May 18 (time and location tba) and head to MSH on Tuesday May 19. The first 5 days will be spent on a series of structured exercises & field demonstrations:

Exercise Topics - work done in groups
Exercise 1: Micro-meteorology
Exercise 2: Soils
Exercise 3: Biogeography
Exercise 4: Mapping and Surveying
Exercise 5: Fluvial Geomorphology

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 meteorological observations.

Independent Study: The last part of the field program (~3-4 days) will be spent on a project of your own design (with the help of faculty) which will be approved by myself. 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. You do not have to have your project defined before the start of the course, although some thought and a few ideas before hand will help you enormously.

We will return to Montreal on May 28, you will have from May 28 to June 5 to complete unfinished assignments and write your research report for your independent project. The course will conclude with a professional style conference on June 5.

INDIVIDUAL RESEARCH PROJECT:
The purpose of the individual project is to give you experience in defining, designing, carrying out and writing up a small field research project (the evaluation scheme is structured accordingly). You will be required to write and present in a round table format a short proposal before starting your research project. In the proposal I am looking for a number of elements (see proposal form) that are necessary for a successful study. 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. So keep it simple! A component of your grade will be assessed on the basis of the problem statement (proposal), research design and field methods (and your ability to complete the study) data, data analysis, write up and presentation. Remember the final paper should be 15-20 pages in length and include the following: an abstract, an introduction, a statement of problem and the aim of the research, field and laboratory methodology, analysis of results and a comparison with other published findings. A brief review of key literature on your topic should also be incorporated. This makes up 50% of your final mark so allocate your energy accordingly.

The final paper will be submitted per email as word file for evaluation, diagrams must be neat and clearly presented. A conference will be held at the end of the course where each student will present the results of their project (oral presentation and notebook constitute 10%). You will submit your field notebook at the same time as your individual project, 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, don't borrow a colleagues notebook and copy, even if you are handling equipment while some one else is taking notes make sure each night you bring your notebook up-to-date.

ASSIGNMENTS / EXERCISES:
During the first five days you will undertake 5 assignments, even though the fieldwork associated with these assignments will be undertaken in groups you will write up your reports independently. Each assignment is worth 10% (totaling 50%).

COURSE EVALUATION:
Individual Project 50%
Proposal and Paper - (40%)
Presentation and notebook - (10%)
Exercises
Micro-meteorology Exercise 10%
Soils Exercise 10%
Biogeography Exercise 10%
Mapping - Survey Exercise 10%
Fluvial Exercise 10%
100%

CLOTHING:
Temperatures may range from ~5º C in the evenings to 20+ºC on warm sunny days. However, you will also need to plan for cool wet weather so bring rain suits, warm clothing and rubber boots. Hiking or work boots are good for hiking, work in gravel pits or in the woods and rubber boots are needed for work around swamps and rivers and rainy days. On warm days shorts and T-shirts may be an option. However mosquitoes and black flies can be a nuisance so bring your favorite insect repellent or a bug jacket.

RECOMMENDED CLOTHING LIST
- rubber boots
- work/hiking boots
- day pack
- running shoes
- rain coat/suit
- hat and gloves
- sweater
- anorak or wind breaker
- rain suit (water proof jacket at least)
- shorts, T shirts …
- Camera

Miscellaneous
- pencils, rulers, protractor, camera,
- notebook computer if you wish
- topo. maps will be available in the field
- we will also provide a field notebook
- any personal needs, medications,
sunscreen, sun glasses, if you wear glasses or contacts bring a spare.

IMPORTANT!!!!
Accommodation in the chalet consists of 4 bed rooms each with 4 bunk beds so space is shared– you will need to bring a sleeping bag or bed linens as well as a towel. Each Chalet has 2 toilets and 2 showers.

COST:
In addition to the tuition fees for this course an additional fee will be charged directly to your student fee account to cover the costs for travel, food and accommodation.

Please Note: Policies governing academic issues which affect students can be found in the Handbook on Student Rights and Responsibilities, Charter of Students’ Rights (online at 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)."

“\nIn accord with McGill University’s Charter of Students’ Rights, students in this course have the right to submit in