

**GEOGRAPHY 391**  
**Geographic Field Studies**  
**H (80 hours) Area III**  
**Fall 2014**  
**August 27 – September 05, 2014**

**INTRODUCTION & COURSE OUTLINE**

**Instructor of Record**

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**Course Instructors**

Dr. Joseph Arvai

Dr. Brent Else

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Dr. Yvonne Martin

Dr. Byron Miller

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**Course Assistants**

Dr. Victoria Campbell-Arvai (post-doctoral fellow)

Derek Wilson (technician)

**Course Description:**

An introduction to field research techniques and topics in physical and human geography. Lectures and projects will provide an introduction to a range of geographic disciplines. Field exercises will normally be conducted away from Calgary for about ten days before Fall Term.

NOTE: Enrolment in Geography 391 may be limited. Preference for registration is given to Majors in Geography, Earth Science, and Environmental Science until June 26. Applications from other students will be reviewed between June 26 and July 15. Registration closes on July 15. Registration information can be found on the Enrolment Services website <http://www.ucalgary.ca/registrar/>.

**Prerequisites:**

One of Geography 211, 251, 253, Geology 201, 209 **and** consent of the Department.

**Supplementary Fees:**

This course has supplementary fees that will be paid to the Group Study Programs (GSP) office. Registration with GSP is required in addition to normal course registration.

**Course Text/Readings:**

Required readings will be included in the lab manual given to students on the first day of class, and will be available for viewing (no need to print) on the course Desire2Learn site starting early to mid-August.

**Grade Weighting:**

Field exercises (9 at 9% each)	81%	Assignments will be completed in the evening after the field excursion and are usually due to the instructor by 22:00 OR at each instructor's discretion. Format will be different for each assignment and will be indicated by the instructor.
Final exam (take home)	14%	The exam will be posted on Desire2Learn by 06 Sept 2014 at 12:00 and is due 13 Sept 2014 before 23:50. All answers <b>must</b> be handed in through Desire2Learn. You <b>MAY NOT</b> consult with anyone regarding your answers. Please consult Plagiarism section below and in the calendar. It is unlikely that outside written sources will be necessary for your answers, but in the event any are used, they must be properly cited.
Field notebook	5%	Hand in to Geography main office (ES 356) between 08:30-12:00 or 13:00-16:30 on 15 Sept 2014.

**Note:** It is not necessary to pass each course component in order to pass the course.

The final examination will **not** be scheduled by the Registrar's Office.

**Grading System:**

A+ > 93	C+ 69 – 72.99
A 89 – 92.99	C 65 – 68.99
A- 85 – 88.99	C- 61 – 64.99
B+ 81 – 84.99	D+ 57 – 60.99
B 77 – 80.99	D 50 – 56.99
B- 73 – 76.99	F < 50

For additional detailed course information posted by the Instructors, see Desire2Learn at:

<http://d2l.ucalgary.ca/>. Students are automatically registered on the site.

**DESTINATION INFORMATION**

**\*Note:** The first day (Wed. Aug. 27) is Calgary based, with students responsible for their own meals and accommodation. The morning of Thurs. Aug. 28, we depart Calgary for the Blue Lake Centre, B.C. for the duration of the course, where food (starting Thursday evening) and accommodation are provided.

**Blue Lake Centre**

P.O. Box 759

Cranbrook, B.C. V1C 4J5

250-426-3676

Toll free: 1-888-328-9998

**Accommodations:**

Facilities include: a dining hall/common room, sleeping cabins, and centralized washroom facilities. All meals are included while at Blue Lake (\*exception: you must bring your own bag lunch on Thurs. Aug. 28). Sleeping accommodations are in dorm settings with bunk beds. **You will be required to provide your own sleeping bag, pillow, and towels.**

- **Where and what is the Blue Lake Centre?** The Blue Lake Centre is a camp and education centre located about 30 km west of Canal Flats, B.C. on forestry roads. You can find it on Google Earth or a topographical map at latitude 50° 10' 20.90" N, longitude 116° 01' 25.83" W. The Blue Lake Centre's website is <http://www.bluelakecentre.com>. their phone number (Cranbrook office) is 250-426-3676; the Centre itself is linked by satellite phone for emergency use only. You will not be able to make cell phone or land line calls from the Centre. The camp is a long way out in the woods and we do not plan trips to town other than for working modules. You will be able to stop at stores on the way in and occasionally during a module (e.g. Radium, Invermere, and Cranbrook).
- **What are accommodations like?** The Centre has several cabins for sleeping quarters, housing approximately 6-10 people each, and a large common building for meals and working. Cabins have bunk beds with a mattress. You need to bring a pillow and sleeping bag/bed linens. There are separate toilet and shower facilities (with hot water and electricity), so a flashlight and/or headlamp for night use is required. The cabins do not have electricity – make sure anything you bring is battery operated (e.g. alarm clock!). There are wood stoves in each cabin (which are otherwise unheated), and wood is provided. We have the entire complex, so we won't be disturbing anyone but ourselves as long as we stay in the main area. The camp manager lives on site but at some distance. No canoe races after dark – for safety, plus sound on the lake does carry! We need to clean the washrooms and cabins; Blue Lake provides cleaning supplies. There are no laundry facilities; washing is by hand.
- **What about food? You will need to pack your own lunch for Thursday, August 28.** From then on, all food is included, including lunch on the last day coming home. Blue Lake has professional cooks to prepare food. Build-it-yourself lunch components are put out every morning. Leftovers are available at any time in the main building's walk-in fridge. You may keep any food or beverages you bring in the fridge as well. Please don't use any breakable containers outside the main building. Clean-up will be by rotation among groups. Bringing food into your sleeping cabins is strongly discouraged, as the camp has pack rats that are likely to show up for the smallest crumb. We recommend any snacks, etc. that you want to keep by you be kept in an airtight, sturdy sealable container.

- **What about computers, etc.?** The main working building has electricity generated by the centre's own hydroelectric facility. You may bring and work on laptops – we will have a computer or two set up, with a backup power supply to even out the sometimes “dirty” current. The satellite-based internet connectivity is very low-bandwidth, very limited, and therefore unavailable for work or checking email. If you bring your laptop, download any information you may want before coming. The University laptops/computers will have ArcGIS, Adobe Illustrator, Photoshop, and Microsoft Office (including Word, PowerPoint, and Excel). We will also have a printer and data projector. You will be able to recharge various electronics in the main building. As stated above, there is no cellular service.
- **What's the daily routine like?** Breakfast is 07:00-08:00. You need to be ready for lecture or leaving for the field at 08:00. Bagged lunches are prepared after breakfast and then eaten in the field. Supper is 17:30-18:30 at the Centre. Your day's assignment will be finished and submitted before bed.

### **WHAT TO BRING:**

We will have a separate baggage van, so keep anything you need during the trip to and from Blue Lake (i.e. for Module 2 on Thurs. Aug. 28) in a separate day pack in the passenger van. Our space is **very tight**, so please pack as efficiently as possible and decide to leave the awkward or large items behind.

### **Required field equipment and essential to bring into the field each day:**

- watch
- day pack
- sturdy shoes/hiking boots (open toed shoes are forbidden during field activities)
- warm clothing in layers – avoid cotton
- rain jacket and pants (we work in the field rain, snow, or shine)
- **field notebook** - The following notebook is *strongly recommended* (available at University of Calgary Bookstore, Stationary Section #59): **Rite-in-the-Rain All-Weather Geological Field Notebook No. 540F** – 4.75in.x7.5in., yellow hardcover, sewn/bound pages (not coil), 68 double sided pages, ~\$20, Barcode: 3228154021. If you cannot obtain this exact notebook, please ensure yours is comparable (e.g. Can. Measure Field Book 7010.360) with a sturdy cover, secured pages (sewn/bound pages strongly preferred over coil), suitable for use in all weather conditions, and enough pages for 9 days/modules of observations and data.
- sun/rain hat, sun glasses, sunscreen
- toque and gloves
- water bottle, at least 1L, unbreakable
- small first aid kit (see details below)
- I.D. of some sort (student ID, driver's license), Alberta Health Care card
- pens, pencils, coloured pencils, eraser, sharpener or penknife, ruler
- textbook, course lab manual, loose-leaf paper and/or blank writing paper
- any essential medications
- cash for emergency purposes and/or small personal purchases
- bear spray (will be provided)
- Brunton compass & handheld GPS unit (will be provided)

- calculator

**Optional (but recommended) field equipment:**

- digital camera (one per group will be useful for some modules)
- paper tissues
- insect repellent
- plastic bags (zip lock) for your notebook and maps in case of rain
- extra socks
- umbrella
- Tupperware sandwich containers (for bagged lunches)

**Clothing and personal items:**

Be prepared to work in any conditions. There is no laundry facility – bring enough or wash by hand! Some suggestions for clothing and personal items are:

- **sleeping bag and pillow**
- sweater(s), long-sleeved shirts, t-shirts
- long pants, shorts
- hiking boots; trekking or good walking or running shoes
- rubber boots, shoes for use around water
- walking socks (e.g. Smart Wool), polypropylene socks
- underwear
- bathing suit
- hat with a brim
- warm jacket
- rain jacket, rain pants
- light wool gloves
- toque
- towel, face cloth
- required toiletries, soap, shampoo
- sewing repair kit
- ear plugs
- flashlight/headlamp and batteries (or dynamo LED flashlight)
- hand-washing laundry soap (biodegradable)
- battery operated alarm clock
- laptop + charger (optional)

**Suggested first-aid kit** (all vans will have a first aid kit):

- Tylenol
- Gravol
- Band-Aids
- Polysporin
- second-skin or moleskin, foam padding
- tensor bandage
- latex gloves
- alcohol swabs

- safety pins
- absorbent cotton, gauze
- medical tape
- triangular bandage
- small scissors

**DO NOT BRING any of the following:**

- picnic cooler
- mountain bike
- pets
- firearms, flares, or fireworks (any size)
- alcoholic beverages
- illegal drugs

**SAFETY POLICY**

All students will be provided with safety guidelines, other policy, and an injury waiver form before starting the course. It is important that you read and understand the following section before attempting any field exercise. Keeping a safe working environment for all participants is paramount and will supersede all academic considerations.

While we make every effort to provide a safe working environment in a field setting, the issues raised below cannot cover every conceivable circumstance. You, as a participant, have a responsibility to conform to government regulations, University policies, and common sense. If you have any questions, concerns, or are confused about how to proceed at any time, ASK YOUR INSTRUCTOR. If your instructor tells you to stop an activity, you must stop at once and ask questions later. Your instructor will advise you of any anticipated risks.

***Safety in and around the vehicle***

1. Students are required by law to use their seatbelts when the vehicle is in motion. The driver cannot and will not proceed unless everyone is buckled in.
2. Students are not allowed to drive University vehicles (rental or otherwise) without a Driver's Authorization form.
3. Often the van will stop at a site and be parked on the side of the road. You must exercise caution when exiting the van onto the roadway. It is a legal requirement that you wear a reflective vest (will be provided) if the group stands on the road or road allowance. The van is provided with safety cones or reflectors which will be put out to warn other drivers that there are people on the road. Do not exit the vehicle until told to do so by an instructor.
4. Each van is provided with a first aid kit.

***General safety in the field***

1. You must use a “buddy” system while in the field. You and your buddy must never lose sight of each other and in times of increased danger (such as wading in a stream) take special precautions.
2. At no time will you or your buddy wander away from the group without first advising an instructor.
3. Use caution when walking along stream beds as the banks may be slippery or unstable.
4. Use caution when walking below an embankment and watch for falling debris or rocks if other students are walking above you.
5. Use caution while walking on slopes. You may injure yourself or others on loose or slippery rocks.
6. Keep sight of your group when in dense brush. Radios, compasses, and/or GPS units will be provided for those who are required to work away from the group. Appropriate instructions on GPS/compass use will be provided.
7. You must come prepared to be outdoors in all sorts of weather. Dressing in layers is advisable, as is having an extra set of clothing in case you get wet.
8. In cold or wet weather, monitor your buddy for signs of hypothermia (shivering, numbness and lack of coordination, confused or unusual behaviour).
9. In hot weather, monitor your buddy for signs of heat exhaustion (cool, moist, pale or red skin, headache, nausea, dizziness and weakness, exhaustion, normal or lightly elevated body temperature). The best defense against heat emergencies is to drink plenty of fluids, avoiding caffeine.
10. Open toed shoes are not to be worn in the field. You must wear runners or hiking boots.
11. Alert your instructor and your buddy if you have a medical condition that could require immediate assistance (diabetic, asthmatic, bee sting allergy, etc.).
12. Be sure that you know which instructors are trained in first aid and where they will be at all times.
13. Do not approach wildlife. Caution is advised when working in bear country. Bear spray and instructions will be provided if conditions warrant.
14. Wear a hat and use sunscreen/sunblock to protect against the sun’s rays. Wearing sunglasses will protect your eyes and reduce glare.
15. Use insect repellent during spring, summer, or fall field seasons. In tick infested areas, protect yourself by wearing long-sleeved shirts and pants. Check yourself for ticks after walking in tick infested areas.
16. Drink plenty of water while in the field. Bring a water bottle with at least 1L of water.
17. Horseplay in the field will not be tolerated.

**Always carry a complete  
change of dry clothing.....it  
may save your life!**

### ***Safety while wading***

1. If you are unfamiliar with the stream to be sampled or the stream bed is subject to change, then explore the stream bed and watch for obstacles or holes. Wade carefully into the stream bed with the aid of a wading stick.
2. Hip or chest waders should be worn as a protection against rocks and cold.
3. You **MUST** wear a life vest when entering the water. The waders should be worn over top of the life vest (if you fall in the water and need to get out of the waders quickly, you must have easy access to the release clasps).
4. Even if you have waders on, you should never wade deeper than you knees in swiftly moving water.

### ***Team work***

Field school participants will never be asked to work alone. Keep your partner in sight, and don't get separated. Most areas are very open, and you won't have any problems. If you get separated, retrace your steps, back to the start point if necessary, until you find your partner. You should never be alone in the field.

### ***Fires, smoking***

Unless required for emergency warmth, no fires. Smoking in the field, due to the fire hazard, is strongly discouraged. If you must, sit down, don't wander about with a lighted cigarette, ensure cigarette is fully extinguished when you are finished, and do not litter.

### ***Miscellany***

Other things/activities are forbidden during field activities, including:

- alcoholic beverages, non-medicinal drugs
- firearms
- boulder rolling
- rough-housing/horsing around
- antagonizing wildlife
- swimming alone; swimming after dark
- rock climbing
- littering

### ***Sexual harassment***

The University of Calgary has a clearly stated policy on sexual harassment. Because the field camp is a University of Calgary activity, serious penalties can follow from misbehaviour. Any incidents of harassment should be reported to a faculty member immediately.



***Student misconduct***

The nature of this field school requires that, for the safety of others, student misconduct be dealt with immediately. If a student threatens the safety or security of anyone, or commits any academic or non-academic offense as defined in the University Calendar, they will be expelled from the course immediately and be required to make their own travel arrangements back to Calgary at their own expense.

**COURSE READINGS**

You will be given a lab manual on the first day of class. During the field school you will be required to do further reading in order to complete your assignments and the final exam. The lab manual will be available for viewing (no need to print) on the course Desire2Learn site starting early to mid-August.