

Division of Applied Science & Management

NOST 215

3 Credit Course

Summer 2019



COURSE OUTLINE

NOST 215

NORTHERN FIELD STUDY METHODS

45 HOURS

3 CREDITS

PREPARED BY: _____ DATE: _____
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APPROVED BY: _____ DATE: _____
Margaret Dumkee, Dean

APPROVED BY ACADEMIC COUNCIL: _____

RENEWED BY ACADEMIC COUNCIL: _____



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NORTHERN STUDIES FIELD METHODS

INSTRUCTOR: Scott Gilbert, B.Sc., Ph.D.
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Kathy Piwowar, BA

FALL OFFICE HOURS: (Gilbert):
Mon 9:30-10:30 Wed: 9:30-10:30
or by appointment.

OFFICE LOCATION: A2515

CLASSROOM: August 19 ONLY: A2103
August 20 - 30, 2019 - Field camp,

E-MAIL: sgilbert@yukoncollege.yk.ca

TIME: Aug. 19, 2019: 9am - 5:00pm

TELEPHONE: (867) 668-8776

DATES: August 19 - 30, 2019

COURSE DESCRIPTION

This course is designed as an introduction to northern scientific field techniques and concentrates on the practical skills needed to work in the field. The main focus is on methods of describing and collecting data in terrestrial and aquatic ecosystems. The course begins with an introduction to the equipment and skills that would be used by a scientific field party working in a remote setting. This includes logistics, planning, safety, communications, travel and navigation. Students will work with staff from Yukon Government's Wildland Fire Management to acquire some field experience and training with hand tools, pumps and hoses. Technical skills relevant to investigations in terrestrial and aquatic environments are taught and practised as follows:

- **Terrestrial:** From our base camp we will work on plant and animal identification, vegetation and habitat sampling, and an introduction to radio telemetry using hand-held antennas to track down radio collars.
- **Aquatic:** Working on a small lake and nearby streams we will cover safe use of boats and outboard motors, and techniques involving sampling and identification of common fish and invertebrates, and habitat descriptions.

The incorporation of traditional and local knowledge in scientific studies and ethical issues in respect to the land and local people will be discussed.

COURSE PREREQUISITES

Admission to the Renewable Resources Management Program or second year standing in Applied Science

COURSE TRANSFER

Not available.

LEARNING OUTCOMES

On successful completion of this course participants will:

- Have the skills and confidence to plan trips and to work and travel safely and efficiently in the northern wilderness;
- Be able to identify the basic components of terrestrial and aquatic ecosystems;
- Be able to use common scientific and technical equipment such as radios, GPS, topographical maps, compass, dichotomous keys, traps and nets, weigh scales, tapes and chains, clinometers, secchi disc, radio telemetry equipment;
- Be able to apply appropriate techniques to gather and record scientific data;
- Understand the role local and traditional knowledge plays in scientific studies;
- Understand the importance of ethical considerations for the land and local people.

DELIVERY METHODS/FORMAT

COURSE FORMAT

This is an intensive field course that takes place in a wilderness setting and begins with the planning and setting up of a tent camp. Students work in small groups with instructors developing safe and efficient travel and work habits, learning about northern ecosystems and practising skills and techniques to gather data.

Assignments reinforce instruction and encourage safe, thoughtful and planned approaches to working in the northern wilderness.

The daily chores of camp life (hauling water, fire wood, clean-up) are shared and planned around learning activities.

The field course begins at 9:00 AM on Monday August 19 with an orientation followed by a full day of activities in lectures and field work on campus. Students should bring a lunch as the cafeteria will not be open on the holiday. On the second day we will move to a field camp using College vehicles for transport and activities will be based there.

COURSE REQUIREMENTS

ASSESSMENTS

Attendance

Students are expected to attend all lectures and take part in the field activities. This course adopts an experiential approach to learning and absences or failing to take part in activities will lead to poor academic outcomes. Students are required to submit a signed waiver form and may choose to consult their family doctor beforehand for a medical examination.

ASSIGNMENTS & TESTS

There will be assignments for students to work on most evenings as well as the task of keeping a journal to record their field observations. Assignments may include the submission of reports on activities, logistical exercises, collections of specimens and the mastery of technical skills. We place great importance on the mastery of practical skills and the final exam, held in the field, will consist of short written questions and opportunities to demonstrate techniques.

Participation	25%
Assignments	35%
Journal	10%
Final exam	<u>30%</u>
Total	100%

REQUIRED TEXTBOOKS AND MATERIALS

Students are encouraged to acquire a field guide to birds either as a text (e.g. *Birds of North America* by C.S. Robbins, B. Bruun, H. S. Zim, J. Latimer and A. Singer. Revised edition. 2001) or a smartphone app (e.g. *iBird Pro North America*). Students planning to take *BIOL 225 - National Geographic Society. 2017. Field Guide to Birds of North America - 7th Edition. National Geographic Society, Washington, D.C. ISBN-13: 978-1426218354*

Students are encouraged to acquire a basic field guide to northern plants although both recommended texts are out of print and not available in the YC Bookstore. They are available on line as used texts:

Plants of Northern British Columbia – Revised and Expanded 1999. Andy MacKinnon, Jim Pojar & Ray Coupe. Originally retailed for about \$29.

Plants of the Western Boreal Forest and Aspen Parkland. 1995. Derek Johnson, Linda Kershaw, Andy MacKinnon and Jim Pojar Originally retailed for about \$29.

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when students present the words of someone else as their own. Plagiarism can be the deliberate use of a whole piece of another person's writing, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material. Whenever the words, research or ideas of others are directly quoted or paraphrased, they must be documented according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Resubmitting a paper which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the College.

STUDENTS WITH DISABILITIES OR CHRONIC CONDITIONS

This course involves experiential learning and students should be capable of hiking 5 km on rough trails carrying their personal daypack, using chest waders to work in waterways collecting samples, using a compass and binoculars to carry out bird transects and helping with camp chores such as hauling firewood and water during an 11-day wilderness camping trip.

Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student's responsibility to seek these accommodations. If a student has a disability or chronic condition and may need accommodation to fully participate in this class, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukoncollege.yk.ca/yfnccr.

FOOD

Food will be supplied and prepared by a cook in camp. If any students have serious dietary restrictions they should contact the program co-ordinator *well in advance of the camp start date*.

EQUIPMENT AND SUPPLIES

Recommended personal equipment is listed below. Some items such as tents can be borrowed from the College with advanced notice. Please keep personal gear to a reasonable quantity but don't forget any essentials! Make sure you have rain gear and rubber boots! Your tent site will be located within a short distance of the vehicle so duffle bags or back packs will work equally well.

ACTIVITY FEE

In addition to the course fee an activity fee of \$500 will be levied to help to defray the cost of food and rental vehicles. This activity fee will be paid at registration.

TRAVEL

Transportation to and from camp locations will be provided by the college. Private vehicles will not be permitted except under special circumstances and an additional waiver will be needed.

COLLEGE REGULATIONS

During the camp all college regulations apply. In particular:

ALCOHOL AND DRUGS: No alcohol, marijuana or non-prescription drugs will be permitted.

SMOKING: College regulations restrict smoking. Smoking will be restricted to non-instructional situations and away from food preparation, eating areas and the campfire. Smokers are responsible for safe disposal of smoking materials - no littering.

FIREARMS: There will be no need for students to use firearms and personal firearms will not be brought.

PETS: Dogs are not permitted in College vehicles unless they are service dogs so students will need to find boarding arrangements for their pets and cannot bring them to camp.

EQUIPMENT AND SUPPLIES

CLOTHING AND PERSONAL GEAR

Anything can happen with weather in late August (e.g. snow and hard frosts at night) and it is essential you have clothing that will keep you warm and dry in any condition. Clothing in layers is more adaptable than heavy outer garments and it is advisable to have some clothes which provide insulation when wet; such as polypropylene, fleece or wool.

Minimum requirements are:

- 2 prs. sturdy pants
- 2 sturdy shirts
- 3 prs. wool socks and 3 lighter pairs
- pile or fleece jacket, or a thick wool sweater
- windproof jacket or shell
- hat or toque
- work gloves
- Underwear and sleepwear. Jogging pants and sweat shirts are good for sleeping in, for wear around camp and can be used for layering if the weather turns cold.
- chest waders, if possible, the best quality you can afford (or borrow)
- hiking boots, rubber boots (a must!!) and running shoes
- rain gear: good quality with pants and a hood - absolute requirement!!
- personal toiletry kit, towel
- personal whistle and first aid kit for minor cuts and blisters, insect repellent
- water bottle, 1 litre
- emergency firestarter (waterproof matches, lighter)
- headlamp and spare batteries (preferred or flashlight) - it gets dark by 10 PM

CAMPING GEAR

- tent (can be borrowed from the college with advanced notice)
- sleeping bag (a liner is recommended)
- sleeping pad (ensolite or Thermarest type)
- backpack for day hikes
- plastic bags for storage, keeping stuff dry
- mug, bowl and/or plate, knife, fork spoon (don't forget!!!)

REFERENCE AND STUDY MATERIAL

- hard backed notebook suitable for use as a journal - you *must* have a proper book to keep journal notes that you will hand in. Note that the journal assignment cannot be submitted on loose leaf paper!)
- pocket notebook and pencils (preferably waterproof)
- binder with loose-leaf paper or a hard backed exercise book

OPTIONAL

- bear spray - recommended
- portable power bank to recharge your phone
- GPS will be helpful
- compass - strongly recommend you buy your own Silva Ranger
- binoculars - strongly recommended - buy or try and borrow a pair
- camera
- sunglasses and sun block
- relaxing reading, art supplies, personal music source