



COURSE OUTLINE

NOST 215

NORTHERN FIELD STUDY METHODS

**45 HOURS
3 CREDITS**

PREPARED BY: _____ DATE: _____
Scott Gilbert, Instructor

APPROVED BY: _____ DATE: _____
Margaret Dumkee, Dean

APPROVED BY ACADEMIC COUNCIL: _____

RENEWED BY ACADEMIC COUNCIL: _____

YUKON COLLEGE
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Course Outline prepared by Scott Gilbert, July 2015.

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Division of Applied Science & Management
NOST 215
3 Credit Course
Summer 2015

NORTHERN STUDIES FIELD METHODS

INSTRUCTOR: Scott Gilbert, B.Sc., Ph. D.
Kathy Piwowar, BA
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Al von Finster, B.A.
Wildland Fire Management staff

OFFICE HOURS: TBA

OFFICE LOCATION: A2515

CLASSROOM: August 24 2015 ONLY: A2103
August 25 - Sept 4, 2015 - Field camp,

E-MAIL: sgilbert@yukoncollege.yk.ca
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TIME: Aug. 24, 2015 ONLY 9am - 4pm

TELEPHONE: (867) 668-8776

DATES: August 24 - Sept 4 , 2015

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, water sampling equipment; bottom, benthos and drift sampling equipment; 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.

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, wood, cleanup) are shared and planned around learning activities.

ATTENDANCE

Attendance at all class activities is mandatory. Students who miss more than 10% of class activities may be required to withdraw.

REQUIRED TEXTBOOKS AND MATERIALS

Plants of the Western Boreal Forest and Aspen Parkland. 1995. Derek Johnson, Linda Kershaw, Andy MacKinnon and Jim Pojar
Handbook of Safety. B.C. and Yukon Chamber of Mines. (Provided in class.)

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 - Ornithology* as an elective in second year should purchase the National Geographic Society 2011 *Field Guide to Birds of North America - 6th Ed.*

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the Academic Regulations:

http://www.yukoncollege.yk.ca//downloads/Yukon_College_Academic_Regulations_and_Procedures_-_August_2013_final_v1.pdf

PLAGIARISM

Plagiarism involves representing the words of someone else as your own, without citing the source from which the material is taken. If the words of others are directly quoted or paraphrased, they must be documented according to standard procedures (APA). The resubmission of a paper for which you have previously received credit is considered a form of plagiarism.

Plagiarism is academic dishonesty, a serious academic offence, and will result in you receiving a mark of zero (F) on the assignment or the course. In certain cases, it can also result in dismissal from the college. And do not underestimate the impact such a situation will have on your reputation.

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 a 10 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.

ORIENTATION MEETING

The field course begins at 9:00 AM on Monday August 24 and will include an orientation. Students are required to submit a signed waiver form and may choose to consult their family doctor beforehand for a medical examination.

EVALUATION

There will be assignments for students to work on most evenings as well as 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. Working in teams and contributions to the group is encouraged and will be recognized by awarding marks for participation. 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%

FOOD

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

EQUIPMENT AND SUPPLIES

Recommended personal equipment is listed below. Some items such as tents can be borrowed from the College. 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 easy walking 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 \$550 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 a waiver will need to be signed.

COLLEGE REGULATIONS

During the camp all college regulations apply. In particular:

ALCOHOL AND DRUGS: No alcohol 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 and it is essential you have clothing that will keep you warm and dry in any conditions. 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 (wooden matches in waterproof case, waterproof matches, lighter)
- headlamp (preferred or flashlight) - it gets dark by 10 PM

CAMPING GEAR

- tent (can be borrowed from 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 (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**
- shorts and /or bathing suit
- GPS
- compass - strongly recommend you buy your own Silva Ranger
- binoculars - highly recommended - buy or try and borrow a pair
- camera
- sunglasses and sun block
- relaxing reading, art supplies, personal music source