

	<b>School of Science</b>
	<b>NOST 215</b>
	<b>Northern Field Studies</b>
	<b>Term: Summer 2023</b>
	<b>Number of Credits: 3</b>
<b>Course Outline</b>	

**INSTRUCTOR:** Scott Gilbert, B.Sc., Ph.D., Margaret (Trix) Tanner, B.Sc., M.Sc.

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**TIME/DATES:** In Class Orientation: Monday August 21, 9:00 AM, Room A2103

Field activities: Whitehorse & local area - Aug 21-23, 9:00 – 5:00

Field trip: Kluane Lake - August 24 (leaving at 9:00 AM – Sept 1 returning at 5 PM)

**COURSE DESCRIPTION** This course is designed as an introduction to northern science field techniques and concentrates on the practical skills needed to work in the field. The 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. Technical skills relevant to investigations in terrestrial and aquatic environments will be taught. Students 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. There will be a field date devoted to the safe use of boats 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 REQUIREMENTS**

Prerequisite(s): Admission to the Renewable Resources Management Program or second year standing in Applied Science

### **EQUIVALENCY OR TRANSFERABILITY**

Receiving institutions determine course transferability. Find further information at:

<https://www.yukonu.ca/admissions/transfer-credit>

### **LEARNING OUTCOMES**

Upon successful completion of the course, students will be able to:

- Have the skills and confidence to plan trips and work and travel safely and efficiently in the northern wilderness;

- Be able to identify the basics 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.

## COURSE FORMAT

**Delivery format** This is an intensive field course that takes place in a wilderness setting. 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. Students will be expected to spend some time each evening completing field reports from the day's work, their field journal entries and preparing for the next day's activities. The course will be flexible to accommodate weather and the schedules of local resource people we will be meeting.

The field course begins at 9:00 AM on Monday August 21 (Room A2103) with an orientation followed by three full day of activities in lectures and field work carried out on campus with a day trip to Fox Lake. Students should bring a lunch and dress for the weather each day. On Thursday, August 24, we will depart for Kluane in a University bus (no private vehicles are required). We will be staying at a research base with shared accommodation in cabins (need to bring your sleeping bag) and meals will be provided.

## EVALUATION

Attendance and participation is mandatory given the experiential focus of the course.

Assignments	40%
Field journal	10%
Participation	20%
Final exam	30%
<b>Total</b>	<b>100%</b>

## COURSE WITHDRAWAL INFORMATION

Refer to the YukonU website for important dates.

## TEXTBOOKS & LEARNING MATERIALS

Students are required to obtain a plant field guide such as Plants of the Western Forest: Alaska to Minnesota. 2020 by Derek Johnson, Linda Kershaw and Andy MacKinnon. A good alternative field guide (out of print but may be available second-hand), is Plants of Northern British Columbia — Revised and Expanded 1999. Andy MacKinnon, Jim Pojar & Ray Coupe.

Students are encouraged to acquire a field guide to birds either as a text or a smartphone app (e.g. Sibley V2 - <https://www.sibleyguides.com/product/sibley-birds-v2-app/> ~\$28. Students planning to take BIOL

225 may wish to acquire a text copy of the Field Guide to Birds of North America – 7th Edition. National Geographic Society, Washington, D.C. 2017. ISBN-13: 978-1426218354

## **ACADEMIC INTEGRITY**

Students are expected to contribute toward a positive and supportive environment and are required to conduct themselves in a responsible manner. Academic misconduct includes all forms of academic dishonesty such as cheating, plagiarism, fabrication, fraud, deceit, using the work of others without their permission, aiding other students in committing academic offences, misrepresenting academic assignments prepared by others as one's own, or any other forms of academic dishonesty including falsification of any information on any Yukon University document.

Please refer to Academic Regulations & Procedures for further details about academic standing and student rights and responsibilities.

## **ACCESSIBILITY AND ACADEMIC ACCOMMODATION**

Yukon University is committed to providing a positive, supportive, and barrier-free academic environment for all its students. Students experiencing barriers to full participation due to a visible or hidden disability (including hearing, vision, mobility, learning disability, mental health, chronic or temporary medical condition), should contact [Accessibility Services](#) for resources or to arrange academic accommodations: [access@yukonu.ca](mailto:access@yukonu.ca).

## **UNIVERSITY REGULATIONS**

**Alcohol And Drugs:** Recreational use of alcohol, cannabis or non-prescription drugs is not permitted.

**Smoking:** Smoking will be restricted to non-instructional situations. Smokers are responsible for safe disposal of smoking materials – no littering.

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

## **TOPIC OUTLINE**

A detailed schedule with list of daily activities will be provided during the orientation session on the first day of course.

### **Clothing and Equipment List**

August weather is variable so ensure you have clothing that will keep you warm and dry in any condition. Dressing in layers and choosing fabrics that provide insulation when wet is a good strategy. Please consider the following suggestions:

- 2 prs. sturdy pants & shirts
- 3 prs. wool socks and 3 lighter pairs

- fleece jacket and / or down sweater
- windproof jacket or shell
- warm hat or toque
- sleeping bag – you will be staying in an unheated cabin that has a mattress
- underwear and sleepwear.
- hiking boots AND rubber boots (a must!!)
- rain gear: good quality with pants and a hood – absolute requirement!!
- personal toiletry kit, towel
- daypack with trip essentials such as water bottle, personal first aid kit for minor cuts and blisters, insect repellent, fire starter, whistle, pocket knife
- work gloves
- headlamp and spare batteries (preferred or flashlight) – it gets dark by 10 PM

### **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. Your journal cannot be submitted on loose leaf paper!
- a waterproof notebook (e.g. Rite in the Rain) to carry in the field; pen & pencils
- binder with loose-leaf paper or a hard backed exercise book

### **Optional Gear**

- bear spray – recommended (can be borrowed from the University)
- GPS & compass (e.g. Silva Ranger) (both can be borrowed from the University)
- binoculars - highly recommended – buy or try and borrow a pair
- chest wader - required for our day trip to Fox Lake on Aug. 22 and 23, obtain the best quality you can afford (or borrow)
- sunglasses and sun screen