



COURSE OUTLINE

NORTHERN FIELD STUDY METHODS

45 HOURS

3 CREDITS

PREPARED BY: _____
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DATE: _____

APPROVED BY: _____
Shelagh Rowles, Dean

DATE: _____

YUKON COLLEGE

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Course Outline prepared by Scott Gilbert, August 2011.

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NORTHERN STUDIES FIELD METHODS

INSTRUCTORS: Scott Gilbert, Kathy Piwowar, Randall Tetlich, Susan Thompson, Katie Aitkin, David Blakeburn, YG Wildland Fire Staff: Scott Hamilton

OFFICE: A2515

PHONE: 668-8776

DATES: Aug. 22, 9:00 – 5:00 (Room A2402)

TIME: Aug. 23, – Sept. 2: all day (field camp)
Sept 6: 9:00 – 5:00 Room A2103

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 towards Government of Yukon certification as an Initial Attack Crew Member over several days, when staff from Wildland Fire Management delivers training. 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.
- **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 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.

COURSE PREREQUISITES

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

COURSE TRANSFER

Not available.

COURSE OBJECTIVES

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.

ATTENDANCE

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

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.

ORIENTATION MEETING

The field course begins at 9:00 AM on Monday August 22 and will include an orientation. Students are required to submit their signed waiver form and may choose to consult their family doctor beforehand for a medical examination.

REQUIRED TEXTS

Plants of Northern British Columbia. Edited by A. MacKinnon, J. Pojar and R. Coupe. Revised edition.

Birds of North America by C.S. Robbins, B. Bruun, H. S. Zim, J. Latimer and A. Singer. Revised edition. 2001. (or any similar recent field guide to birds)

Handbook of Safety. B.C. and Yukon Chamber of Mines. (Provided in class.)

Northern Waters: A Guide to Designing and Conducting Water Quality Monitoring in Northern Canada. 2005. EMAN-North (Repro text provided in class).

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!

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.

COLLEGE REGULATIONS

While at Summer 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 and eating areas (downwind!). Smokers are responsible for safe disposal of smoking materials – no littering.

FIREARMS: In Summer Camp there will be no need for students to use firearms and personal firearms will not be brought.

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, magnesium firestarter)
- headlamp 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

- pocket notebook and pencil (preferably waterproof)
- binder with loose-leaf paper or a hard backed exercise book which you can tear pages from field guides to birds and plants

OPTIONAL

- shorts and /or bathing suit
- GPS
- compass – strongly recommend you buy your own Silva Ranger
- binoculars - highly recommended – try and borrow a pair if you can
- camera
- sunglasses and sun block (depending on your susceptibility)
- relaxing reading, art supplies, personal music source

NOST 215 Schedule - 2011 - Draft version - August 19						
			Group A	Group B	Group C	
22-Aug	Mon	9:00 AM	<===== Orientation Room A2402=====>			
		9:30 AM	Intro stuff - Scott	Kathy - Intro to Compass	Randall - Wall tents	
		10:30 AM	Kathy - Intro to Compass	Randall - Wall tents	Intro stuff - Scott	
		11:30 AM	<Video: <i>Staying Safe in Bear Country</i> - Big screen in Student Lounge >			
		1:00 PM	<===== Introduction to Wildland Fire Training Rm A2402=====>			
		2:30 PM	<===== Introduction to Bird Identification - Katie Aitken Rm 2402 =====>			
		3:30 PM	Randall - Wall tents	Intro stuff - Scott	Kathy - Intro to Compass	
		4:30 PM	<===== Loading gear, canoes, etc =====>			
23-Aug	Tues	9:00 AM	Pack and leave College for camp. Visit Long Ago People's Place en route to camp			
24-Aug	Wed	9:00-11:30	Intro to Mapping - Kathy	Canoe & Plant Id - Scott	Intro to GPS - David	
		12:30-3:00	Intro to GPS - David	Intro to Mapping - Kathy	Canoe & Plant Id - Scott	
		3:00-5:30	Canoe & Plant Id - Scott	Intro to GPS - David	Intro to Mapping - Kathy	
25-Aug	Thurs		Fish Sampling- Susan T.	Veg & telemetry - Scott	Aq & Ter Insect ID - Kathy	
26-Aug	Fri		Aq & Ter Insect ID - Kathy	Fish Sampling- Susan T.	Veg & telemetry - Scott	
27-Aug	Sat		Veg & telemetry - Scott	Aq & Ter Insect ID - Kathy	Fish Sampling- Susan T.	
28-Aug	Sun		All day trip to Aishihik Village to meet with elder Rosalie Washington			
29-Aug	Mon	after supper	Day trip to subalpine area and vegetation sampling. Wildland Fire staff: Wildfire preparedness & survival			
30-Aug	Tues	AM	Wildland Fire Training	Intro to Intro to Power pumps, chainsaws and handtools		
		afternoon	"			
		after supper	"			
31-Aug	Wed	AM	Wildland Fire Training	Chainsaw use: felling, bucking, limbing and maintenance		
		afternoon	"			
		after supper	"			
1-Sep	Thurs	AM	Wildland Fire Training - Use of handtools			
		afternoon	"			
		after supper	Free time to review for final exam			
2-Sep	Fri	AM	<===== Exam =====>			
		PM	<===== Pack - return to White - unpack & clean gear =====>			
6-Sep	Tues	9:00 - 4:00	IACM quiz. Fire behaviour triangle - ROOM A2103 at Yukon College			
			Evening Activities:	Assignments:		
23-Aug	Tues		Finish camp set up			
24-Aug	Wed		Intro to knots	Critical data assignment due		
25-Aug	Thurs		Work on assignments			
26-Aug	Fri		Work on assignments			
27-Aug	Sat		Career goals/job skills	Trip planning assignment due		
28-Aug	Sun		Update your journals			
29-Aug	Mon		Fire fighting methods			
30-Aug	Tues		Fire fighting methods ? TBA			
31-Aug	Wed		Fire fighting methods > TBA	Veg methods assign due		
1-Sep	Thurs		Review for exam			
				Fish report due Sept 9 - drop at Scott's office		