

NRTH 5009
FIELD COURSE IN CANADA'S NORTH
SUMMER TERM 2019

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This course is compulsory for all students completing Northern Studies degree programs. It is graded with a letter grade, awarded for assignments submitted during the course. The course has been developed in collaboration with several agencies in Yukon and western Arctic Canada.

Calendar description: Field observation and methods in a selected region of northern Canada on a group basis. Two or three weeks in summer term. A supplementary fee will apply.

Prerequisites: NRTH 5000; NRTH 5001; NRTH 5905 or concurrent registration in NRTH 5905; Permission of the Northern Studies Supervisor.

Fee: There is no supplementary course fee for full-time students in a Northern Studies degree program. Students will be responsible for their breakfast while on the course, and for all meals after they leave Inuvik at the end of the course. Students must ensure the full fees due to Carleton University for the summer term by June 1st.

Activities: The course involves field activities, meetings, presentations, discussions, demonstrations, and surveys in southern, central and northern Yukon and the western Arctic. The program includes interaction with many agencies in the region.

Purpose: The purpose of the course is to articulate and examine in the field issues and topics that have been encountered during the coursework elements of the degree programs. Students' reflection on their field experience in light of the program's course work will be a key component of the assignments.

Themes: The primary themes of the course concern: the role of research in management and development in Canada's North; the development of self-government regimes in the North; the effects of climate change on northern life.

Requirements: You must bring a laptop computer and insect repellent. You will need field clothing, including rubber boots, and hiking footwear. You will need waterproof rain gear. The weather may be as warm as the Ontario summer, or as cold as the Ontario fall. It may rain hard, and it may be sunny all day. It may be muddy or dusty. It may be still, with many mosquitoes, or it may be windy. Most of your lunches and evening meals will be provided, and you will stay in

motel style accommodation. You will be issued small field books but bring your own pencils and pens. You should bring a camera. You will be able to do your laundry when we reach Inuvik.

Dates: Departure from Ottawa on July 4th; return to Ottawa on July 24th.

Flight arrangements: You must book your own air ticket to arrive in Whitehorse on Thursday, July 4th. Air North flies from Ottawa to Whitehorse that day. Your return may also be arranged on Air North, for Wednesday, July 24th. You may apply for a travel advance to cover the cost of the air ticket once you have purchased it. Heather Moulton will give full details and support your application for a travel advance. You will need to account for this advance when you return. You will not graduate if you do not clear the advance. **You will need to submit your boarding cards and ticket as part of this process.**

Accommodation: Nights of: July 4 – 6 Airport Chalet, Whitehorse; July 7 – 14 North Star Motel, Mayo; July 15 Triple J Hotel; Dawson; July 16 Eagle Plains Motel, Dempster Highway; July 17 – 20 Aurora Research Institute, Inuvik. July 21 Eagle Plains or Inuvik. July 22-23 Airport Chalet, Whitehorse. All nights are spent in motel style accommodation.

Travel: Travel will be in rented vehicles in Yukon and the western Arctic. These are large, but we shall have only two vehicles, so it will be important to carry only **one piece of luggage** and a day pack. It will be much easier if this is a bag, not a suitcase. Six students will drive back to Whitehorse from Inuvik on July 21-22nd.

Program:

July 4. Travel to Whitehorse by Air North from Ottawa.

July 5 Workshop at Yukon College: Introduction; Research in Yukon (Aynslie Ogden, YG); Yukon University (Lacia Kinneer); Infrastructure management (Brian Crist, YG); Northern Parks (Christopher Hunter). (Infrastructure management will be at TMB)

July 6 Permafrost hazards and threat to infrastructure. Kluane National Park. St Elias Mts: tectonic activity; drainage reversal, Slims River.

July 7 Travel to Mayo. Na Cho Nyak Dun Development Corporation.

July 8 Na Cho Nyak Dun: Partnership development.

July 9 Municipal affairs (Mayor Scott Bolton)

July 10 Municipal operations (Village of Mayo staff); Discontinuous permafrost (CB).

July 11 The permafrost environment (CB)

July 12 Regional biology (Mark O'Donoghue, YG); Community education.

July 13 Mining heritage at Keno Hill.

July 14 Rest day in Mayo.

July 15 Heritage preservation in Dawson; placer mining tour.

July 16 Dempster Highway (Sandra MacDougall, YG)

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July 18 The western Arctic (Pippa Seccombe-Hett, ARI; Amy Amos. GRRB; Peter Clarkson, GNWT; Continuous permafrost, CB; Doug Esagok, Inuvik HTC)

July 19 Mackenzie delta (Doug Esagok, Joel McAllister, CB)
July 20 Inuvik-Tuktoyaktuk Highway (Doug Esagok, CB)
July 21 Time-limited assignment; Vehicle departure for Eagle Plains
July 22 Travel to Whitehorse.
July 23 Southern Yukon – Carcross (DP).
July 24 Travel to Ottawa.

Meals: You are responsible breakfast each day and for the following lunches: July 6, 7, 8, 15, 16, 17, 19, 20, 21, 22, 23.

Reading: You should examine the following for the course:

- Bleiler, L., Burn, C., O'Donoghue, M. 2006. *Heart of the Yukon: a natural and cultural history of the Mayo area*. Village of Mayo. (will be available in Mayo)
- Burn, C.R. 1994. Permafrost, tectonics, and past and future regional climate change, Yukon and adjacent Northwest Territories. *Canadian Journal of Earth Sciences*, **31**(1): 182-191.
- Burn, C.R. (ed.) 2012. Conservation and governance. In *Herschel Island – Qikiqtaryuk: a natural and cultural history of Yukon's Arctic island*. pp. 200-221. Wildlife Management Advisory Council (North Slope), Whitehorse.
- Burn, C.R., and Kokelj, S.V. 2009. The environment and permafrost of the Mackenzie Delta area. *Permafrost and Periglacial Processes*, **20**(2): 83-105. doi: 10.1002/ppp.655
- Burn, C.R., Moore, J.L., O'Neill, H.B., Hayley, D.W., Trimble, J.R., Calmels, F., Orban, S.N., Idrees, M. 2015. Permafrost characterization of the Dempster Highway, Yukon and Northwest Territories. Paper 705. *Proceedings, 68th Canadian Geotechnical Conference and 7th Canadian Permafrost Conference*, 21-23 September 2015, Quebec City, QC, Canadian Geotechnical Society, Richmond, BC. 8 p.

Other material will be provided as the course progresses.

Instructor's role: The instructor and staff are responsible for all logistical arrangements, and for coordinating activities. The instructors will lead directly some of the elements of the course.

Assignments: All students will compile a daily academic journal during the field excursion (July 5 – 21 inclusive). Daily entries of about 500 words should be written each evening and submitted to the instructors approximately every other day as a cumulative journal (pdf). The writing style must avoid colloquialisms and slang. The text should be single spaced and in 12 pt Times New Roman font. Each day's journal entry should be on a separate page; a word count must be printed at the bottom of the page. The date for the day must be included at the top of the page. The cumulative compilation must be emailed to Christopher.burn@carleton.ca before 11:59 pm on July 6, 8, 10, 12, 15, 18, 21. The entries should comprise a short summary of the day's activities (100 words) and personal reflections on what has taken place and been said (350 - 400 words). The reflections should demonstrate that you have integrated the academic materials you have encountered in the program into your thinking and into the approach you adopt to analysis of issues.

There will be a 3-hour assignment on the morning of July 21st. This will be completed under examination conditions at the Aurora Research Institute in Inuvik.

A short report on field activities will be required during the time in Mayo.

Evaluation: Evaluation will be based on three components: (1) Short daily journal reflections (50%); (2) a time-limited assignment on the last day of the course (July 22nd) (40%); (3) An individual assignment to be conducted in pairs (10%). A late assignment (journal) will incur a penalty of 2% in the course mark. A second late assignment (journal entries) will lead to reduction of one grade point in the overall grade; a third late assignment (journal entries) will lead to loss of a further grade point in the overall grade. If the journal is not completed before June 22nd, the journal will be mark out of a reduced total, proportional to the number of days completed.

Waiver: All participants are required to fill out and sign a waiver and emergency contact form before July 4th. The form will be emailed to you by the Program Administrator. You will grant Carleton staff and other students the right to take photographs of you that may be published for the professional purposes of the program.

Academic Accommodation: You may need special arrangements to participate in this field course because of disability, pregnancy or religious obligations. Please review this course outline promptly and forward any requests for academic accommodation to the Instructors. Due to the nature of the course, the terrain to be encountered, and the logistical arrangements for bush travel, we are unable to provide accommodation for certain physical disabilities in NRTH 5009. This is for safety reasons. Students will be walking over rough terrain and using boats for some portions of the course.

Cell phones and social media: There is cell phone service in Yukon and the western Arctic communities. Cell phone coverage does not extend to many parts of the highway network, especially along the Dempster Highway. Students must recognize that cell phones may disrupt workshops, and therefore these devices must be turned off before workshop sessions. Consultation of social media, checking email, and dealing with personal issues during workshops is similarly inappropriate. Such interference will prevent full participation in field course activities. A grade point will be deducted from the course grade each time a cell phone interrupts a student's participation in course activities. This includes interruptions during workshops and at other times when instructional activities are occurring.

Internet: There is wifi internet at most of the places where we shall be staying. You will be responsible for any supplementary fees required to access the wifi service.

Uploading of course materials: Classroom teaching and learning activities, including lectures, discussions, presentations, etc., by both instructors and students, are copy protected and remain the intellectual property of their respective author(s). All course materials are also protected by copyright and remain the intellectual property of their respective author(s). Students registered in

the course may take notes and make copies of course materials for their own educational use only.

Visitor presentations: The course includes presentations and other activities guided by guests to the course. These visitors include, but may not be limited to: Aynslie Ogden (Executive Council Office, YG); Lacia Kinnear, Bronwyn Benkert, and Clint Sawicki (Yukon College); Paul Murchison, Brian Crist, and Sandra Macdougall (Highways and Public Works, YG); Christopher Hunter (Parks Canada); Adrienne Hill (Na Cho Nyak Dun); Mark O'Donoghue (Environment, YG); Scott Bolton (Mayor, Village of Mayo); Pippa Seccombe-Hett and Joel McAllister (Aurora Research Institute), Amy Amos (Gwich'in Renewable Resource Board), Peter Clarkson (Executive Council Office, GNWT), Douglas Esagok (Inuvik Hunters and Trappers Committee).