

University of Northern British Columbia

FIELD APPLICATIONS IN RESOURCE MANAGEMENT (NREM 333) Summer 2009

Course Syllabus

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Course Location and Schedule

Location: Aleza Lake Research Forest, Quesnel River Research Station, John Prince Research Forest

Course Duration: August 24 – September 4

Course Description

This two-week field-based course is designed to provide students with exposure to the issues, science, and techniques relevant to natural resource management in forested systems. Given the wide range of resources and potentially competing values found across the province the practice and study of natural resources management is inherently interdisciplinary. Thus, the curriculum is much broader than just operational forestry, and we will draw on knowledge from both the social and natural sciences.

Students come to this course primarily with majors in Forest Ecology and Management, Wildlife and Fisheries, Outdoor Recreation and Conservation, and Biology. Respecting the broad range of interests and educational backgrounds, we will consider a full range of natural resources values and respective management processes. Field Camp challenges students to become integrators, working on problems and considering ideas that span their focal disciplines. In this context, students have an opportunity to gain practical experience applying creative and innovative skills and techniques for managing or conserving timber and non-timber resource values. Also, Field Camp provides students with a foundation for upper-level courses that require knowledge of multiple resource values and issues. Finally, through direct interactions with natural resource professionals students have an opportunity to investigate potential career choices and pursue future mentoring opportunities.

The course is taught in a modular format with the content being delivered by local experts working in the field of integrated resource management. Presentations and assignments are designed to encourage problem-based learning. Much of natural resource management is about working together productively to achieve shared objectives. This often will require an appreciation or respect for alternative world views and values, some of which you might not share. We will force you into group situations where productive and respectful working relationships with fellow students will be the key to success.

The learning objectives for the course are:

- understanding the real-world complexities of natural resource management;
- appreciation for a range of resource values from various cultural and socioeconomic perspectives;
- familiarity with techniques and approaches necessary for managing or conserving natural resources;
- exposure to a range of professions and research disciplines; and
- ability to work cooperatively with a group of natural resource “professionals” to prepare and defend a management plan.

Natural Resources Theme

The modules and other educational elements of field camp cover a wide range of topics and ideas in natural resources management; however, as the course progresses we force students to integrate values through the development and defence of a group-led planning project. This year, we will look at forest values in the context of bioenergy. Given the economic dynamics of the dimensional lumber market and ecological challenges of the mountain pine beetle outbreak, many in the forest industry are looking for alternative products and business opportunities. Bioenergy, as related to heat and electricity generated from harvest residue or long-term tenures, is now being proposed by the highest levels of government as a partial cure for the ailing BC forest industry. Unfortunately, there are still many more questions than answers (see http://www.unbc.ca/assets/nres/nres_op_04_helle_et_al_2009.pdf). You will be asked to explore the opportunities and implications of the John Prince Research Forest (<http://researchforest.unbc.ca/jprf/jprf.htm>) pursuing a bioenergy portfolio for their harvested wood or associated residue.

Evaluation

This course has no midterm or final exams. Your grade will be determined from individual and group assignments.

Assignment	Grade	Distribution
Quizzes and Assignments	40%	Individual
Field notebooks	20%	Individual
Participation/preparedness/attitude	15%	Individual
Case study	25%	Group

Expectations and Rules

For this class to succeed, we must all cooperate. Instructors will provide the structure, atmosphere, and learning material that will stimulate and challenge you to grow intellectually within the confines of the course objectives and hopefully beyond. However, learning and ultimately success will be impeded if you don't engage the speakers or fail to contribute and work fairly with other participants in this class. Peer review will serve as one component of your grade, so please participate and work hard to fulfill your commitments.

Three instructors will organise and lead the course. Participants must be willing to accept guidance from Chris Johnson (lead coordinator), Dexter Hodder (Research Manager, John Prince Research Forest), and Cheryl Johnston-Schuetz (Teaching Assistant/Graduate Student). Individual learning modules will be led by guest presenters. To ensure a safe and enjoyable learning atmosphere, students will also be expected to follow the guidance of these temporary instructors.

We will be living in close quarters for the next 2 weeks. To minimize interpersonal conflict we will expect all participants to use proper camp etiquette and conduct themselves in a safe manner at all times. We will randomly assign each student to a cabin (genders will not be mixed); shower and laundry times are according to cabin assignments. Participants are expected to be ready to go into the field at the designated time each day and to have their field gear (water, food, medication, raingear, cruise vest, etc.) collected and available upon departure.

Students are responsible for informing themselves of the risks associated with field and laboratory studies. By participating in such studies they shall be deemed to have accepted personal responsibility for all such risks (including, without limitation, all risks identified by course instructors/supervisors and in literature that has been published by the University or that has otherwise been made available to students), to have agreed to abide by the safety rules and procedures established by their instructors/supervisors for such activities, and to have waived the liability of the University of Northern British Columbia and its instructors/supervisors in respect of such activities.

Purposeful dishonesty and plagiarism is a serious offence both in the class room and the work place. If you are unsure of what constitutes *Plagiarism* or *Cheating* please consult the calendar (2009-2010, P.62) or instructor for definitions, explanation, and potential consequences. Ignorance is not a valid excuse. Prohibited conduct also includes possessing or using intoxicating beverages in areas other than those given specific authorization by the University's Liquor Policy and possessing and/or selling illegal drugs or narcotics. Personal vehicles and pets are not allowed at camp.

If, because of a disability or other recognized learning impediment, you have a need for special academic accommodations, please come and discuss this with Chris Johnson, or contact Disability Services located in room 1048 of the Teaching and Learning Center.

Schedule of Activities and Modules

DATE/TIME	ACTIVITY/MODULE
Mon. 24th	Day 1: Welcome, Aleza Lake Research Forest – Stand Dynamics
0830	Welcome and short introduction to field camp
1030	Changing Forests: Understanding Forest Disturbances, Dynamics, and Silvicultural Systems: “Wetbelt” spruce-subalpine fir forests and moist rich ecosystems.: Mike Jull (<i>Manager of the Aleza Lake Research Forest</i>)
1230	Lunch Break
1800	Arrive back at UNBC – Head home/readings for next day’s modules
Tues. 25th	Day 2: Soils and Amphibians
0800	Leave UNBC for Aleza Lake Research Forest
0930	Considering Riparian and Moist Habitat Animals in Forest Management: Mark Thompson (<i>Molecular Genetics Support Specialist – UNBC</i>)
1230	Lunch Break
1330	Forest Operations and Soil Productivity: Paul Sanborn (<i>Associate Professor - UNBC</i>)
1630	Head back to UNBC
1730	Arrive back at UNBC
1930	Reading time for next day’s modules
Wed. 26th	Day 3: Aquatic Values and Guide/Outfitter Perspectives
0800	Leave UNBC for Aleza Lake Research Forest
0930	Aquatic Values, Assessment and Rehabilitation: Brian Aitken (<i>Environmental Manager – DWB Forestry Services</i>)
1230	<i>Brown bag lunch in the field</i>
1330	<i>Considerations for Guide/Outfitters Values in Forestry Operations: Scott Pichette</i> (<i>Guide/Outfitter- Bowron River Guiding</i>)
1700	Head to the Quesnel River Research Center
1700	QUIZ 1 – <i>from field notes and readings</i>
2000	Arrive at QRRC
2200	Recommended bed time
Thurs. 27th	Day 4: QRRC, Aquatic Values and Mining
0700	Breakfast/Pack Lunch
0800	The QRRC: A UNBC Research Facility: Bill Best (<i>Quesnel River Research Center</i>)
0900	To be scheduled
1200	Lunch
1300	Mining and the Environment: Ron Martel, Heather Frye & Terra Grady (<i>Environmental Department – Mount Polley Mines</i>)
1800	Supper at the QRRC
2100	Reading time for next day’s modules
2200	Recommended bed time

Fri. 28th	Day 5: Invasive Plants and Non-timber Forest Products
0700	Breakfast/Pack lunch
0830	Forestry, Free Range Cattle and Invasive Plants: Ken Day (<i>Manager – Alex Fraser Research Forest</i>) and Fred Tillotson (<i>Local Rancher</i>)
1200	Lunch
1330	Non-timber forest products: Ray Coupe (<i>Ecologist – Ministry of Forests and Range</i>)
1630	Travel to Prince George
1800	Arrive back at UNBC – Head Home/Readings for next day’s modules
Sat. 29th	Day 6: Forestry Legacies and Stand Dynamics
0730	Meet at UNBC - Travel to John Prince Research Forest
1000	Welcome to the JPRF: House keeping items: Cabin & shower assignments, bush safety talk, first aid & bear aware: Chris Johnson and Dexter Hodder (<i>Research Coordinator – John Prince Research Forest</i>)
1100	Welcome to The John Prince Research Forest: Overview of the mandate & introducing resources: Sue Grainger (<i>Manager of the John Prince Research Forest</i>), Dexter Hodder & Chris Johnson
1230	Brown bag lunch at the JPRF (bring lunch from home)
1330	Forestry Legacies: Sue Grainger
1730	Presenters/Faculty Supper Soiree and Bar-B-Que
Sun. 30th	Day 7: Forest Dynamics and Furbearers
0800	Breakfast/Pack lunch
0900	Changing Forests: Understanding Forest Disturbances, Dynamics, and Silvicultural Systems: “Dry-belt” Douglas-fir – Pine-Spruce Forest Ecosystems Mike Jull (<i>ALRF</i>)
1200	Lunch in field
1300	Furbearer Values, Science and Management : River Otters and Mink: Dexter Hodder , Chris Johnson , & Sebastian Anatole (<i>Tl’azt’en First Nation Elder</i>)
1600	Free Time
1800	Supper
2000	QUIZ 2 – from field notes and readings
2200	Recommended bed time
Mon. 31th	Day 8: Economic and Wildlife Values
0700	Breakfast/Pack lunch
0800	Planning for the Economic Values of Forestry: Phil Smith (<i>Forestry Supervisor – Conifex, Inc.</i>)
1100	Forest Management In Mule Deer Winter Range: Dexter Hodder
1300	Lunch in the field
1330	Considering Important Wildlife Habitat Features in Land Planning and Development (part 1): Bear Dens: Dexter Hodder
1730	Supper
1900	ASSIGNMENT 2
2100	Reading time for next day’s modules
2200	Recommended bed time
Tues. 1st	Day 9: Wildlife Trees, WTP’s , Forest Recreation

0700 Breakfast/Pack lunch
 0800 Who Likes Sick Trees? Recognizing and Maintaining Valuable Wildlife Trees: **Susan Stevenson** (*Silvifauna Research*)
 1030 Wildlife Tree Patch Planning & Considerations for Future Habitat: **David Stevenson** (*Ecology Consultant*) and **Bob Brade** (*Ministry of Environment*)
 1330 Lunch in field
 1400 Forest Recreation And Tourism: The Culture-Nature Resource: **Pam Wright** (*Associate Professor – UNBC*)
 1800 Supper
 1900 **QUIZ 3** - from field notes and readings
 2000 Reading time for next day's modules
 2200 Recommended bed time

Wed. 2nd **Day 10: Local Values, Traditional Ecological Knowledge and Archaeology**
 0700 Breakfast/Pack lunch
 0800 Fungi and Forestry: **Brian Pickles** (*Post-doctoral Fellow - UNBC*)
 1030 Archaeological Assessments in Land Planning: **Jamie Mooney** (*Senior Ecologist - Ecofor Consulting*)
 1300 Tea and Bannock and Lunch in the field
 1330 **ASSIGNMENT 3**
 1530 First Nation Values into Site Planning **Melanie Karjala** (*Aleza Lake Research Forest Research Coordinator/Planner*) and **Beverly John** (*Tl'azt'en Councilor*)
 1730 Supper
 2000 Reading time for next day's modules
 2200 Recommended bed time

Thurs. 3rd **Day 11: Birds, Mineral Licks and Case Study**
 0600 Breakfast/Pack Lunch
 0700 Techniques and Considerations for Avian Monitoring in Forest Management: **Ken Otter** (*Associate Professor – UNBC*)
1030 Considering Important Wildlife Habitat Features in Land Planning and Development (part 2): Mineral Licks: **Roy Rea** (*Senior Laboratory Instructor – UNBC*)
 1300 Lunch
 1330 Forest Management In Mule Deer Winter Range: **Dexter Hodder** and **Randy Sulyma** (*Wildlife Infometrics*)
 1600 Work on Presentations
 1830 Supper
 1900 Break into Groups/Prepare presentations

Fri. 4th **Day 12: Scenario Planning for Case Study and Building Consensus**
 0700 Breakfast/pack van and truck
 0830 Case study round table and consensus building
 1200 Lunch
 1230 Turn in field notebooks for marking/course evaluations/contest judging/head back to UNBC
 1300 Stop and watch kokanee spawn at Tsilcoh Creek & take group photo (optional)
 1600 Arrive UNBC – Farewell