

Course Title:	Field Ecology												
Instructor(s):	Alex Smith, Department of Integrative Biology, University of Guelph. salex@uoguelph.ca												
Dates:	Sunday, August 02 nd – Saturday, August 15 th , 2020												
Location:	Wildlife Research Station (WRS) on Lake Sasajewun, Algonquin Provincial Park												
Cost:	\$1,500. Includes all meals. Does NOT include transportation to WRS \$350 non-refundable deposit due end of January 2020												
Prerequisites:	At least one undergraduate course in each of ecology and statistics												
Enrolment:	25 students (8 for OUPFB; 17 for University of Guelph)												
Description:	This is a 12-day field course held in Algonquin Park, Ontario, during August. Emphasis is on the design and implementation of ecological field experiments; students acquire knowledge of natural history of plants, invertebrates and vertebrates as a result. Students design and conduct a research project in small groups on invertebrate or plant ecology in terrestrial or aquatic habitats and write an independent formal scientific paper. In addition, the students will work in teams on a field exercise to develop familiarity with scientific methodology and will produce a field notebook highlighting their own natural history interests as well as accurately documenting their observations, data collection, and questions. A group field exercise will be completed after departure from WRS and based on DNA data collected during the course. An organizational meeting will be held in the winter semester prior to the field course, and there may also be some formal lectures.												
Evaluation:	<table> <tr> <td>Research Paper</td> <td>60%</td> </tr> <tr> <td>Group Field Exercise</td> <td>10%</td> </tr> <tr> <td>Proposal</td> <td>10%</td> </tr> <tr> <td>Field Notebook</td> <td>10%</td> </tr> <tr> <td>Self-Assessment</td> <td>2.5%</td> </tr> <tr> <td>Participation</td> <td>7.5%</td> </tr> </table>	Research Paper	60%	Group Field Exercise	10%	Proposal	10%	Field Notebook	10%	Self-Assessment	2.5%	Participation	7.5%
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An Average Day – What to Expect

(a) Daily timeline	Field work is intense and demands long days, both in the lab or field, but also sorting samples, and analyzing data, a typical field day is not 9 – 5 and students should be expecting to work very hard and, as a result, derive a great deal of satisfaction from their accomplishments at the end of two weeks. One should embark on a field course because they are passionate about being outdoors in all conditions, exploring nature, asking questions, and working hard. Some students perceive field course modules as opportunities for an easy grade, a credit-based vacation, this is not the case, the days are long and can be gruelling, but the sense of community and camaraderie that develops among the students is incredibly fun and rewarding. An average work day includes 7:00 breakfast (though cereal is available if an earlier start is necessary), 8:00 field work rain or shine, 12:00 lunch break, 1:00 continuing field work, 6:00 dinner, 7:00-10pm class lectures, field book updates, student presentations, field excursions).
(b) Work habitat & Physical exertion	Depending on the research projects, long back-country hikes, or canoeing (sometimes with portage) may be expected, 5-10km day hikes through varying elevations and through rocky/muddy/mosquitoey habitat are common. Students may find themselves immersed in bogs, ponds or lakes in hip-waders, climbing uneven terrain through mixed hardwood/conifer forest, long hours in open field/meadow habitats with only bushes as toilets or a long walk to an outhouse. Staying hydrated and resting when necessary will be key ingredients in maintaining stamina throughout the days. Being invested in hard work and data collection early will help to avoid the burnout that can occur if students do not balance their data collection and field work accordingly.
(c) Common activities	Hiking, canoeing, swimming are common activities.
(d) Weather, dehydration, & biting insects	Cold August nights and hot August days are common, as are days (weeks even) of rain. Students need to bring sun protection (sunscreen, wide-brimmed hats), a water bottle to carry water into the field, as well as rain gear (rain boots, rain pants, rain coats). A warm sleeping bag is necessary for cold nights. By mid August, the mosquitoes, blackflies and deer flies have started to wane, but are still prevalent and hungry. Depending on the season, they can be quite thick and wearing long sleeves, pants, and using repellent are excellent ways to ensure comfort.
(e) Toxic/poisonous, wildlife/ plants	Students must complete bear safety training as encounters with black-bears and other large wildlife (e.g. Moose) are possible around the field station and while in the field. Other natural hazards that are common are poison oak and poison ivy, wearing long pants and using common sense are the best defences. and use common sense to stay protected from biting insects and sun exposure.
(f) Sleeping, washroom & laundry facilities	<ul style="list-style-type: none"> • sleeping accommodations: shared cabins, not typically co-ed. Students need to bring bedding (warm sleeping bag, sheets, pillow). • washroom facilities: at the field station, there are flush toilets and hot showers, in the field, there are out-houses (sometimes) • washing/laundry facilities: washing machine available on a fee per use basis, clothes line for hanging to dry
(g) Meal plans & food allergies	Three meals are provided each day, if students have specific requirements (e.g. vegetarian) some can be met, others require students to supplement their own food.
(h) Non-academic responsibilities	Students are responsible for daily chores at the field station that include dishes, cleaning the common indoor areas, and tidying common outdoor areas, as well as pitching in on projects that may be ongoing while we are there.
(i) Degree of isolation	The WRS is a remote and very rustic field station that is equipped with electrical power but rudimentary (if any) cell/internet connections <ul style="list-style-type: none"> • Recharging electronic devices is possible, but outlets are limited and so patience is paramount • Cell reception around the station is improving, but still spotty, and data is typically very slow if it connects at all • Students can bring their own snacks, keeping them labelled and in a closed mouse-proof container
(j) Alcohol & drugs	Use of alcohol/drugs must follow the WRS policy, which is subject to change, but in the past, alcohol is permitted after working hours have wrapped up, and not during the day. Students must use substances responsibly, keeping their own safety and the safety of others as a priority. Intoxication will not be tolerated.
(k) Vaccinations/ Insurances	Up to date health insurance is required in case of accident or illness

(l) Social Situations	This course is two weeks of living in close proximity with a relatively small group of people. We share meal-times and spend a lot of time together as a group, but even more so in smaller project groups. It is important that people come with an open mind and are accepting of diverse personalities and perspectives, that people are friendly and supportive of each other. Students should be prepared to work in a small group of 4-5 people on a research project and be prepared to work hard to ensure that everyone is contributing fairly and collaboratively. Also, unless students drive their own vehicle (car-pooling is recommended as space for vehicles at the WRS is limited), getting to one of the small towns outside of Algonquin Park can be difficult (30 -45 min drive each way). Students must be prepared to be easy-going, friendly, and flexible with personal space expectations as quarters are tight for sleeping accommodations.
(m) Final comments	This is my absolute favourite course to teach, each group of students brings a vibrancy and enthusiasm for exploring nature and investigating scientific questions that invigorates my own curiosity and passion for field research. We will explore some absolutely stunning places in the boreal forest, and no doubt embark on some memorable adventures. Often people who participate in this course become long-lasting friends as it is a unique opportunity to connect with a diverse group of people from varying backgrounds but who all share similar passions. I look forward to meeting the 2020 cohort.