

Course Title:	Ecological Monitoring in an Urban Ecosystem.								
Instructor(s):	Dr. Laura McKinnon (lmck@glendon.yorku.ca)								
Dates:	Monday May 4 to Friday May 15								
Location:	Don River Ravine system & surrounding natural areas at Glendon Campus, York University, 2275 Bayview Avenue, Toronto, ON, M4N 3M6								
Cost:	<p>\$350 deposit payable to home university plus tuition at home institution. While we prefer students to live on-campus at Glendon residence for the duration of the field course, we recognize that this may not be feasible for some students who may wish to live at home. However, some field course days will begin early in the morning (5am) and run late. The course includes the first weekend.</p> <p>The cost of campus accommodation is estimated at \$445 for the two-week period. Students should budget approximately \$30/day for food if using the campus food services. Please contact the Instructor at least 1 month before the start date to reserve accommodations.</p> <p>Students are responsible for their own transportation costs to and from Glendon Campus and surrounding field sites which will all be located within walking distance of local municipal transportation (TTC).</p>								
Prerequisites:	A university course in Introductory Biology and Ecology.								
Enrolment:	20 (14)								
Description:	<p>This field course is based in the secluded Don River setting of Glendon Campus, which is part of Toronto’s extensive ravine system. Local wildlife includes white-tailed deer and coyotes. The course combines short in-laboratory instructional sessions (< 2 hours) with daily field excursions to natural areas in the Greater Toronto Area, where students will master ecological sampling techniques.</p> <p>In-class instructional sessions permit students to establish a strong baseline of knowledge in ecological theory, sampling design, data collection and data analysis. The outdoor field component, which will be held mostly on campus and surrounding areas, will permit students to gain hands on experience in ecological field sampling. We will cover a diversity of field techniques such as; nest searching, bird banding, small mammal trapping, amphibian monitoring, botanical surveys, insect sampling, behavioural observations, and water and soil sampling. The students will then apply the techniques learned to a group research project to be completed within three weeks of the end of the course.</p>								
Evaluation:	<table border="0"> <tr> <td>Field exercises (Week 1)</td> <td>(20%)</td> </tr> <tr> <td>Group Research Proposal and Presentation (Week 2)</td> <td>(20%)</td> </tr> <tr> <td>Dataset, Analysis (Week 2)</td> <td>(20%)</td> </tr> <tr> <td>Final Research Paper (Due June 11)</td> <td>(40%)</td> </tr> </table>	Field exercises (Week 1)	(20%)	Group Research Proposal and Presentation (Week 2)	(20%)	Dataset, Analysis (Week 2)	(20%)	Final Research Paper (Due June 11)	(40%)
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An Average Day – What to Expect

(a) Daily timeline	<ul style="list-style-type: none"> Start times vary based on activities. The first week of the field course is the most intense as students are being training in a variety of field techniques that they will use for their research so a 10-hour day is not unusual. For example, on bird banding days students will be expected to be on site as early as 5am, and the day's activities may not end until 5pm. There will also be some evening surveys (frogs), which may run as late as 11pm. Students will not have time to take another summer course during this two-week period.
(b) Work habitat & Physical exertion	<ul style="list-style-type: none"> Students must be in good physical shape. Most activities will include long hikes (up 15km) in parks, wetlands and forested areas where access to facilities will be limited or non-existent. Students are expected to be able to carry all the gear amenities they will need for a full 10 -hour day outside (water, food, change of clothes) with sometimes limited access to facilities.
(c) Common activities	<ul style="list-style-type: none"> Prepare for long day hikes, long days collecting data outside in the sun or rain. Risks in the field include; fatigue, blisters from walking, heat exhaustion, sun burn, dehydration and bug bites.
(d) Weather, dehydration, & biting insects	<ul style="list-style-type: none"> May in Toronto is variable with temperatures ranging from 10 to 20 degrees. Prepare for cool days on the lakeshore (hat/warm jacket/gloves), rainy days (rain jacket) and hot sunny days in the park with little cover (sunhat/sunblock). Biting bugs are not too much of an issue.
(e) Toxic/poisonous, wildlife/ plants	<ul style="list-style-type: none"> The most common hazards are poison ivy, bee stings and tick bites. Most can be avoided by being aware of each of these risks, wearing long pants and proper shoes in the field and bringing an epipen if you are allergic to bee stings.
(f) Sleeping, washroom & laundry facilities	<ul style="list-style-type: none"> Co-ed dormitories with shared washrooms are available at Glendon Campus. Linens are provided. Coin mashing/laundry facilities are available on site.
(g) Meal plans & food allergies	<ul style="list-style-type: none"> Students are responsible for their own food. The cafeteria is open from 7am to 6pm daily.
(h) Non-academic responsibilities	<ul style="list-style-type: none"> None
(i) Degree of isolation	<ul style="list-style-type: none"> The field sites are located in urban areas, but amenities (water, food, washrooms) are not always in proximity.
(j) Alcohol & drugs	<ul style="list-style-type: none"> No alcohol or drugs permitted during class activities. Campus rules apply otherwise.
(k) Vaccinations/ Insurances	<ul style="list-style-type: none"> Students must provide evidence of up to date tetanus vaccinations.
(l) Social Situations	<ul style="list-style-type: none"> Students will work closely with each other in small groups.
(m) Final comments	<ul style="list-style-type: none"> Early morning starts, long days and blisters are a small price to pay for the amazing experiences this course has to offer!