

Course Title:	Temperate Field Biology
Instructor(s):	Prof. Art Weis, arthur.weis@utoronto.ca TBA
Dates:	22 May – 4 June 2020
Location:	Koffler Scientific Reserve at Joker's Hill, King City, ON (www.ksr.utoronto.ca)
Cost:	\$800 (\$350 deposit to home university; \$450 balance by April 15 to host university) includes 13 nights' dormitory accommodation, meals, and transportation to/from the St. George campus.
Prerequisites:	First year biology course; upper year lab course; introductory stats course.
Enrolment*:	16 (14)
Course Description (brief):	<p>Koffler Scientific Reserve at Joker's Hill is a University of Toronto research station atop The Oak Ridges Moraine, 50 km north of Toronto. Our objective in this course is to give you a broad overview of the natural history of south-central Ontario and to introduce you to some of the most commonly used methods in the study of field ecology and evolution. We will study many types of organisms (e.g., plants, insects, birds, mammals) in a wide array of environments. You will experience hands-on learning through informal natural history walks, and group projects. There will be also be instruction on study design and statistical analysis. The course experience culminates in an independent research project. These projects start with an interesting natural history observation the student makes on some particular species or system found at the reserve. Students formulate a hypothesis based on their observation, then design and conduct an experimental test. Results are presented in a symposium, held on the last full day of the course. A written report on the project will be due 6 weeks later. Further details on the course and specifics of what to bring will be sent upon enrolment.</p> <p><i>Physical Demands/Risks</i></p> <p>Most course activities are held out of doors. Students may encounter black flies, mosquitoes, bees and poison ivy. You must be prepared for contingencies such as extreme temperature (hot or cold) and rain, During the independent project, students will move independently through the property.</p>
Evaluation:	<p>Marks will be based on class performance/participation, performance on guided projects, and on the results of the original project. Each student will give an oral presentation to the class and hand in a written report, which is due at the end of the class. Students are expected to hand in their field notes and data. Grades will be available late August 2020.</p> <p>Oral presentation of a pre-assigned scientific paper: 10% Field notebook: 5% Class performance/participation: 20% Oral presentation on individual project: 30% Written report on individual project: 35%</p>

An Average Day – What to Expect

(a) Daily timeline	For the first week of the course is structured; days begin with breakfast at 7:30 a.m., and end with an after-dinner discussion that typically runs until 9:00 p.m.. Daytime hours will included guided walks and group field projects. The second half of the course is devoted to independent research projects. These tend to require ~10 hours per day in data collection and analysis.
(b) Work habitat & Physical exertion	The Koffler Scientific Reserve has diverse habitats. Expect to guided walks to consume up to 7 hours of the first few days. The terrain is rolling, but not steep. Group projects will entail data collection in an out of doors setting, rain or shine.
(c) Common activities	<p>Describe:</p> <ul style="list-style-type: none"> • common activities: Hiking, measuring and counting terrestrial plants, insect birds, etc. Sampling aquatic insects. • associated risks: There are the common risks of hiking, such as twisted ankles, fatigue, blisters from poor footwear, heat exhaustion, dehydration, and hypothermia.
(d) Weather, dehydration, & biting insects	<p>Describe:</p> <ul style="list-style-type: none"> • weather conditions in late May are general pleasant, but occasionally a late snow or early heat wave can occur. Students should bring adequate clothing, sunscreen and insect repellent. • Blackflies and mosquitoes can be expected. Deer ticks, vectors of Lyme’s disease, have been recorded from the reserve. Each residence is equipped with a tick-removal kit
(e) Toxic/poisonous, wildlife/ plants	Poison ivy is found in several areas at the reserve. Field projects will bring students into daily contact with bees and wasps.
(f) Sleeping, washroom & laundry facilities	<p>Describe:</p> <ul style="list-style-type: none"> • There are several residences on the reserve. Two to four student will share a bedroom/bathroom. • Shared bathrooms have full running water and showers. • Laundry facilities are available in the main residence
(g) Meal plans & food allergies	Meals are taken in the dining hall of the main residence. Vegetarian, vegan, kosher, and halal diets are readily accommodated.
(h) Non-academic responsibilities	Students will be assigned to kitchen clean-up duties for two days of the course. All students are responsible for the cleanliness of their bedrooms and bathrooms.
(i) Degree of isolation	<p>How isolated are you? How easy/difficult is it for students to:</p> <ul style="list-style-type: none"> • Most residences and the reserve laboratory have wireless service. • Cell phone coverage is strong at the residences and laboratory, but spotty across the natural areas. • There will be one or two ‘town runs’ to nearby Newmarket for purchase of personal supplies. • South Lake Hospital, Newmarket, is a 10 min. drive.
(j) Alcohol & drugs	Alcohol is permitted in the residence areas only, and only after 5:00 PM. Cannabis policies are yet to be formulated.
(k) Vaccinations/ Insurances	Standard vaccinations and health insurance are sufficient.
(l) Social Situations	The Koffler Scientific Reserve is a closed campus, meaning that you will encounter only your classmates and the resident research staff and students. Expect the types of social interaction found regularly on a university campus
(m) Final comments	In this course, you will begin the transition from being a science student to being a scientist.