Lakehead University
Ontario Universities Program in Field Biology

Course Title:	**Aquatic Ecology and Experimental Limnology**
Instructor(s):	Dr. Michael Rennie, mrennie@lakeheadu.ca Kristi Valley, kedysiev@lakeheadu.ca
Dates:	Sunday August 16th to Friday Aug 28th, 2026
Location:	The IISD-Experimental Lakes Area, Northwestern Ontario (1-807-226-5162). Students are responsible for arranging travel to and from ELA. IISD-ELA shuttle may be available from either Winnipeg or carpooling from Thunder Bay, please contact the course instructor for details.
Cost:	$2100 ($350 deposit to home university, $1750 balance due 1 August 2026 to Lakehead University). Cost includes accommodation, meals, use of boats, research facilities and supplies. No refunds on course fees if dropped after August 1, 2026. Cancellation insurance for flight-based travel is recommended. (see note above about transportation)
Prerequisites:	All registrants in the course should be able to swim and be physically fit for hiking. Previous courses in ecology and statistical analysis will be an asset. Students with a valid Pleasure Craft Operator's Card may be asked to operate boats with outboard motors.
Enrolment*:	12 (2)
Course Description (brief):	This two-week field course provides a general background in limnology and aquatic ecology, and emphasizes the application of experimental ecology in helping address environmental issues related to water and aquatic resource management. Students will be introduced to common limnological sampling techniques, including sampling for basic parameters including temperature and oxygen; methods for collecting water at discrete depths for chemical analysis; collection and preservation methods for phytoplankton, zooplankton, invertebrates and fishes; organism identification, and capture- mark-recapture methods for estimating fish abundance. Students will be exposed first-hand to experimental methods in ecology, including whole- lake experiments and the opportunity to work with data from past experiments as part of their independent research projects. During the first day of the course, students will present a 12 to 15-minute seminar and provide a brief written summary on a pre-assigned topic in applied aquatic ecology, and propose an experimental approach that could effectively addresses the topic. Students will be assigned to research teams to conduct field experiments or comparative studies to address significant ecological questions. Each student must submit a scientific manuscript based on the data collected by the research team, one month after the course is completed.
Evaluation:	Presentation at beginning of course: 15% Field notebook: 15% Course/project participation: 15% Final presentation: 15% Write up of field research project: 30% Animal Care approval and certification: 5% Quiz during field course: 5%

An Average Day – What to Expect

(a) Daily timeline	Breakfast, 7-7:45 am; field work or class work, 8-noon; lunch, noon-12:45; field or class work, 1-5:30; Dinner, 5:30-6:15; Evening classes, 7-10 pm. Field work is conducted rain or shine. Typically, Saturday evening is a 'free night' socializing at a campfire. First week is intensive with group-based data collection, analysis and lectures; second week is less structured but focused on individual student projects.
(b) Work habitat & Physical exertion	Field work will typically consist of 2 to 15 minute hikes on trails between portages in 1 to 3 open boats with outboard motors to access lakes. Students may be required to help pack in field gear in back packs or totes. Typical field excursions last 2-3 hours, returning before meal times; field lunches will be packed and prepared for longer excursions if required. Environments accessed by students as part of individual research projects will vary based on topics chosen. Long days due to evening classes or individual based research should be expected.
(c) Common activities	Common activities are boat travel over lakes in open boats, hiking through potentially wet/muddy forest on well travelled trails, long days sitting in the open rain or cold or heat as the case may be. Associated risks include capsizes, twisted ankles, fatigue. These risks are mitigated through training for students and vessel operation by experienced operators, careful and aware walking in new environments, regular consumption of water and wearing of weather-appropriate clothing.
(d) Weather, dehydration, & biting insects	For the time of year, temperatures range between 10 to 30 degrees; rain may be encountered. Insects are typically lower in density at this time of year but may include mosquitoes (evening typically), and horseflies/stable flies in the day.
(e) Toxic/poisonous, wildlife/ plants	Lyme disease is known in the area, but ticks are very uncommon at this time of year. Mitigation is through daily tick checks and tucking pants into socks. Blastomycosis is also known in the area. Mitigation is through avoiding exposure to soil with a weakened immune system. Bears are sighted uncommonly. Mitigation is through travelling loudly and avoiding bears with cubs.
(f) Sleeping, washroom & laundry facilities	Sleeping is a dorm-style room or large geodesic dome shared with 1 or more additional students in gender-specific arrangements. Buildings are heated but not air conditioned; domes are not heated and can get chilly at night. Domes do not have internet connectivity, which is available through most of the rest of camp. Linens and pillows are provided but a sleeping bag is strongly recommended for cool evenings. Washroom facilities are modern (flush toilets) and located throughout camp, which may be augmented with outhouses. Showers are private with hot and cold running water, and laundry facilities are available on site.
(g) Meal plans & food allergies	Students should inform the coordinator of allergies and accommodations (e.g., gluten free, vegetarian, etc) prior to arrival. Meals are prepared by staff on-site.
(h) Non-academic responsibilities	Accommodations are cleaned weekly by residents and students are expected to assist with these duties. Hungry hall (kitchen) is cleaned Sunday evening and students are expected to assist.
(i) Degree of isolation	Power is available at camp. Internet is over wifi (StarLink). Cell service is available at the top of 'the ridge' or with cell over internet service with your cellphone provider. Meals are provided but snacks are not- if you are snacky, bring your own but keep your room free of crumbs and refuse. A stocked first aid room is on site with AED, epipen and all necessary requirements for immediate treatment; closest emergency rooms are in Dryden or Kenora (1 hour 30 mins away drive).
(j) Alcohol & drugs	Alcohol consumption is permitted as per the IISD-ELA alcohol regulations. These regulations will be made available to students prior to arrival.
(k) Vaccinations/ Insurances	Vaccination against potential hazards/exposures is recommended (e.g. tetanus, coronavirus). Insurance is through home institution, though travel insurance in case of flight cancellation etc. is recommended.
(l) Social Situations	The IISD-ELA fosters a highly collaborative working environment; people work together and play together. This is also the home to many students who will at this stage have been at the station all summer and whom you may be sharing accommodations with- please respect their space and understand they are sharing it with you. Students will likely work together on data collection and field work but are expected to write research reports independently. Swimming at the beach on Lake 240 is something you will likely find time for should the weather permit.
(m) Final comments	Despite long days and potential for inclement weather, this is a fun course! You will build good friendships and have opportunities to work at a world-renowned research station with exciting ongoing whole-lake experiments, and rub shoulders with world-class researchers over meals and in classes; one of them might just turn out to be your graduate supervisor or next employer!