

# LAKEHEAD UNIVERSITY

## Ontario Universities Program in Field Biology

<b>Course Title:</b>	<b>Aquatic Ecology and Experimental Limnology</b>
<b>Instructor(s):</b>	Dr. Michael D. Rennie, <a href="mailto:mdrennie@iisd-ela.org">mdrennie@iisd-ela.org</a>
<b>Dates:</b>	Sunday Aug. 23 to Friday Sept. 4, 2015
<b>Location:</b>	The Experimental Lakes Area, Northwestern Ontario. Phone number. Travel from either Winnipeg, Thunder Bay, Kenora or Menaki is included; students must arrange transport to one of these three locations and arrange for pick up with the course instructor.
<b>Cost:</b>	\$1200*** (\$350 deposit to home university, \$850 balance due Aug. 1, 2015). Cost includes transportation from one of the four locations listed above, accommodation, meals, use of boats, research facilities and supplies.
<b>Prerequisites:</b>	All registrants in the course must be able to swim and are physically fit for hiking and overnight camping. Students are not required to provide their own camping gear. Courses in ecology and statistical analysis will be an important asset. Students with a Pleasure Craft Operator's Card may be asked to operate boats with outboard motors.
<b>Enrollment:</b>	12 students (6 for Lakehead University)
<b>Description:</b>	<p>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.</p> <p>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.</p> <p>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.</p> <p>During the first day of the course, students will present a 20-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.</p> <p>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.</p>
<b>Evaluation:</b>	Presentation: 20% Field notebook: 20% Course/project participation: 20% Write up of field research project: 30% Quiz during field course: 10%

**\*\*\*Students who drop a field course should not expect a refund of any field course costs.  
 Students are encouraged to purchase cancellation insurance if airline tickets are required.**