# UNIVERSITY OF GUELPH

**Ontario Universities Program in Field Biology**

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| **Course Title:** | **Arctic Ecology** | |
| **Instructor(s):** | Dr. Sarah Adamowicz (sadamowi@uoguelph.ca) | |
| **Dates:** | July 20 – August 3, 2017 | |
| **Location:** | Churchill Northern Studies Centre (https://churchillscience.ca/), Churchill, Manitoba | |
| **Cost:** | $1500 ($350 deposit to home university, balance $1150);<br>**Includes:** meals and accommodation, transport around Churchill region, research materials;<br>**Excluded:** transportation to and from Churchill<br>**Balance:** due as indicated by the instructor | |
| **Prerequisites**: | University Ecology and Statistics courses<br>University Invertebrate Zoology Course (recommended)<br>University course in Plant Ecology or Plant Systematics (helpful but not required)<br>**NOTE: This course is intended for 3rd or 4th year students specializing in ecology, environmental studies, evolution, or aquatic biology.**<br>**NOTE: We will work in various field environments, including uneven and slippery rocky coastlines and soft and uneven bog and tundra. Weather permitting, we will be in the field for 7-8 hours/day with a lunch break. Most evenings will include presentations/discussions, lab work and data basing of field observations until 9 PM. Please indicate any illnesses, physical limitations, and/or disabilities that may affect your participation in such work, so that we can evaluate opportunities for accommodation.** | |
| **Enrolment:** | 20 students (15 reserved for Guelph) | |
| **Description:** | Churchill is a diverse region for ecological study, being located at the junction of the boreal, Arctic, and Hudson Bay biomes. The first week of the course includes exploration of terrestrial, freshwater, and near-shore marine Arctic environments, as well as an overview of both aquatic and terrestrial collecting methods used to survey invertebrate biodiversity in these environments. Two group projects are performed. Evening lectures and student-led presentations provide background on Arctic ecology and the use of genetic and statistical techniques for studying biodiversity and ecology. Weather permitting, excursions will include viewing estuary organisms including belugas. During the second week, students conduct independent research projects. Students have the opportunity to employ DNA barcoding in their research, depending upon the target taxon and project design. A major research paper is due in November. This course provides excellent opportunities to visit a spectacular sub-Arctic locality; to learn about Arctic ecology, Arctic biodiversity, and DNA barcoding methods; and to conduct an independent research project with faculty guidance. | |
| **Evaluation:** | Short presentations (2 at 5% each)<br>Two field quizzes [2 at 5% each (1 in a small group, 1 individual)]<br>Participation<br>Field notebook<br>Data organization<br>Individual research paper (due November, 2017) | 10%<br>10%<br>10%<br>10%<br>10%<br>50% |

***$350 Deposit is due at time of registration.
Tuition at your home institution is *in addition* to any field module costs.
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.
Students are responsible for all fees incurred by the home or host university due to any bounced cheque.