**UNIVERSITY**

**Ontario Universities Program in Field Biology**

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| **Course Title:** | Marine Biology and Oceanography |
| **Instructor(s):** | James Ballantyne |
| **Dates:** | 3 August – 17 August 2019 |
| **Location:** | St. Andrews New Brunswick |
| **Cost:** | ~$2000 |
| **Prerequisites**: |

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| University Ecology or Aquatic Course  |
| University Invertebrate Biology Course |
| University Statistics Course |

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| **Enrolment\*:** | 20 (5UOFBP) |
| **Course Description (brief):** | A two-week course held at the Huntsman Marine Science Centre, St. Andrews, New Brunswick. Aspects of the ecology, behaviour, physiology, biochemistry and genetics of marine organisms will be studied as well as basic oceanographic techniques. The course will include group exercises to study various intertidal and subtidal environments as well as boat cruises to collect plankton, benthic invertebrates, marine fish and to observe marine mammals. The course provides excellent opportunities for students to familiarize themselves with state-of-the-art techniques involved in various branches of marine biology and oceanography and conduct an individual research project. |
| **Evaluation:** | Group Project 40 % Individual Project 50 %  Participation 10 % |

\*For your enrolment numbers please show the total enrolment with your reserved seats in parentheses; e.g. 12(4) would indicate total enrolment is 12 with 4 seats reserved for the home university.

**An Average Day – What to Expect**

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| 1. Daily timeline
 |  An average work day in the first week (e.g., 7:00 AM breakfast, 8:00 AM field work rain or shine, 12:00 lunch, 1:00 continuing field work, 6:00 dinner, 7:00-10pm class lectures, lab work, individual projects. First week involves group projects that are scheduled according to the tides. Some early departures may occur. |
| 1. Work habitat & Physical exertion
 | The fieldwork habitat involves muddy, rocky, or slippery intertidal areas. Boat excursions may involve rough seas.  |
| 1. Common activities
 | * common activities (e.g., boat travel over open ocean, walking in slippery habitats)
* associated risks (e.g., sea sickness, sunburn, animal spines (non-poisonous).
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| 1. Weather, dehydration, & biting insects
 | * weather conditions likely to be encountered (strong sun, high UV, rain, strong wind).
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| 1. Toxic/poisonous, wildlife/ plants
 | Lyme disease ticks occur in area but no encounters yetFish and sea urchin spines – gloves worn |
| 1. Sleeping, washroom & laundry facilities
 | Dorm rooms are shared with one other student (same sex). Bedding is provided, but towels etc. are not. Floors are generally segregated by gender. Each floor has a shared bathroom / showers. * Coin operated washing/laundry facilities are available
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| 1. Meal plans & food allergies
 | Any food sensitivities / allergies should be communicated to course personnel as soon as possible. Vegetarian meals may be accommodated by the dining hall staff, though strict vegans are unlikely to be satisfied (in our opinion and experience). Other requests for dining accommodations will be addressed individually, but keep in mind this is a field station not a restaurant.  |
| 1. Non-academic responsibilities
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| 1. Degree of isolation
 | The town of Saint Andrews is a 15-20-minute walk from the station. It has grocery, pharmacy, post office, souvenirs, hardware, and restaurants. A small health centre is in town, the closest hospital is the Charlotte County Hospital in Saint Stephen NB. |
| 1. Alcohol & drugs
 | Alcohol is permitted in dorm rooms only  |
| 1. Vaccinations/ Insurances
 | No additional vaccinations needed  |
| 1. Social Situations
 | Shared dorm rooms. |
| 1. Final comments
 | This is a great course to learn techniques in marine biology and oceanography and develop interpersonal skills. |