

Course Title:	Marine Biology and Oceanography							
Instructor(s):	James Ballantyne							
Dates:	1 August – 15 August 2020							
Location:	St. Andrews New Brunswick							
Cost:	~\$2000							
Prerequisites:	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>University Ecology or Aquatic Course</td> </tr> <tr> <td>University Invertebrate Biology Course</td> </tr> <tr> <td>University Statistics Course</td> </tr> </table>		University Ecology or Aquatic Course	University Invertebrate Biology Course	University Statistics Course			
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University Statistics Course								
Enrolment*:	20 (5UOFBP)							
Course Description (brief):	<p>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.</p>							
Evaluation:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">Group Project</td> <td style="text-align: right;">40 %</td> </tr> <tr> <td style="padding-right: 20px;">Individual Project</td> <td style="text-align: right;">50 %</td> </tr> <tr> <td style="padding-right: 20px;">Participation</td> <td style="text-align: right;">10 %</td> </tr> </table>		Group Project	40 %	Individual Project	50 %	Participation	10 %
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*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

(a) 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.
(b) Work habitat & Physical exertion	The fieldwork habitat involves muddy, rocky, or slippery intertidal areas. Boat excursions may involve rough seas.
(c) Common activities	<ul style="list-style-type: none"> • common activities (e.g., boat travel over open ocean, walking in slippery habitats) • associated risks (e.g., sea sickness, sunburn, animal spines (non-poisonous)).
(d) Weather, dehydration, & biting insects	<ul style="list-style-type: none"> • weather conditions likely to be encountered (strong sun, high UV, rain, strong wind).
(e) Toxic/poisonous, wildlife/ plants	Lyme disease ticks occur in area but no encounters yet Fish and sea urchin spines – gloves worn
(f) 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. <ul style="list-style-type: none"> • Coin operated washing/laundry facilities are available
(g) 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.
(h) Non-academic responsibilities	
(i) 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.
(j) Alcohol & drugs	Alcohol is permitted in dorm rooms only
(k) Vaccinations/ Insurances	No additional vaccinations needed
(l) Social Situations	Shared dorm rooms.
(m) Final comments	This is a great course to learn techniques in marine biology and oceanography and develop interpersonal skills.