

**Information and Application Packet for
MARI 3682.03: Tropical Marine Biology
April-May 2025**

Please read the information contained in the attached documents (as numbered below) and contact Nina Hamacher (email: NHamacher@dal.ca) if you have any questions.

- 1. What to expect from MARI 3682**
- 2. MARI 3682.03 Syllabus with draft schedule for 2025**
- 3. Fee statement for MARI 3682**
- 4. Traveler information for Belize** (including health information from the CDC website)
- 5. Pre-course check list** (what you need to do before the course starts)
- 6. Checklist of what to bring to Belize** (don't wait until the course starts to prepare)

To apply for this course, please 1) fill out the online SEASIDE application form and 2) send the two forms in this packet to Nina Hamacher, co-instructor of MARI 3682, or bring hard copies to the Biology Main Office, as soon as possible (space in the course is limited):

- 7. Acknowledgement of Risk Form**
- 8. Personal Information Form**
 - The information in this form is confidential. If you are not accepted, the form will be deleted. If you do take the course, the form will be deleted after we return from Belize.

What to expect from MARI 3682

MARI 3682: Tropical Marine Biology includes an approximately 10-day field trip to Belize. As with any field course, the opportunity to get out of the classroom and experience, first-hand, the ecosystems and sampling techniques that you're learning about is very exciting. However, there are always additional considerations when determining whether the opportunity is a good fit for you, and it is particularly important to be thorough in your deliberations when it is an international field course. To help with that, we aim here to provide as detailed a description of the course delivery environment and activities as possible. Please understand that one of the characteristics of any field course is that weather or other logistical challenges may affect initial plans. We will need to be flexible in response, such that some of the description below may have to change.

For students with documented accommodations, we are more than happy to work with you and your accessibility advisor to ensure that all aspects of the course are understood. There may be barriers not normally encountered in other courses, requiring different types of supports. To ensure everyone's safety, any student with known medical or health related concerns/needs that could be a factor while traveling must engage with an accessibility advisor (even if they currently do not have academic accommodations in place) in advance of the trip. In the context of this process, the advisor will determine what relevant information the course instructors would need to know to support the student on the trip. It will be important to start this process early to ensure that all necessary accommodations and supports can be designed and implemented before the course begins. **To this end, a deadline of March 27th, 2025 for having necessary accommodations identified will have to be observed.** Any accommodations requested after that date cannot be guaranteed. Not engaging with an accessibility advisor in advance could negatively affect the ability to implement accommodations and could impact a student's ability to go on the trip.

While in Halifax, there will be in-person course delivery with no recorded components. Lectures, discussions, and most labs will take place in LSC 4012. One lab will take place at the Dalplex pool. The class will meet, from 9:35-4:25 almost every day between April 27-May 5. As with most SEASIDE courses, students who do not prepare themselves for an intensive course schedule may find this overwhelming. Because we will be leaving for Belize immediately after this time, it is essential that everyone have all their travel documents and vaccinations taken care of before the course starts. It is also a good idea to have everything you plan to bring with you to Belize purchased/borrowed before the course begins.

Students are responsible for arriving at the Halifax airport at the designated time. Anyone who misses the flight to Belize will be personally and financially responsible for any alternate travel arrangements they can make. Alternate travel arrangements may not be possible and it may also not be possible to reimburse the auxiliary fees associated with the trip. Travel to and from Belize will be with Air Canada/United Airlines. It will involve overnight stays at airport hotels in Toronto in both directions. We will have stopovers in the USA in both directions. All travelers will require passports that are good for at least 6-months after our return date and international students will need to determine whether they require additional visas to enter Belize or transit through the USA. As with any air travel, patience and flexibility may be required.

We will be met at the airport by a guide and driver from Island Expeditions. All road travel will be during the day, in air-conditioned buses, with drivers, provided by Island Expeditions. We will travel to Dangriga, where we will be met by a large motorboat, provided by Island Expeditions. The trip to Billy Hawk Caye is approximately 45 minutes over relatively calm waters. Dehydration and excessive sun exposure are potential risks everywhere we will be in Belize and should be proactively avoided at all times.

Billy Hawk Caye is a small, remote caye within the Belize Barrier Reef. It is a beautiful location with warm and generous hosts, however, its remoteness and rustic nature may pose challenges for some people. Access to health services requires travel to the mainland, with potentially long waits associated with it. A

satellite phone will be brought and in an emergency, the Belizan Coast Guard would be called. The quality and accessibility of government (i.e. coast guard and medical) services in Belize are not comparable to Canada. Students with medical conditions should consult their health care practitioners and the student accessibility centre to ensure that appropriate supports/plans are in place.

On Billy Hawk Caye, electricity is derived from generators and only available from ~6pm-5am. Laundry facilities are not available to us here, or at any other location during the trip. Refrigeration capacity is limited. There is limited/poor cell service, such that it may not be possible to communicate with family and friends from Billy Hawk. Student accommodations are shared. Some accommodation is available in a concrete dormitory, while others will be in canvas tents. Bathrooms are composting toilets, in a separate space from sleeping areas, and showers are reliant on rainwater. Meals will be buffet style in an open-air dining space. Students are responsible for taking turns washing dishes after meals. Fruits and vegetables are more difficult to get in coastal areas of Belize than in Canada and will be less abundant in our meals than some students will be accustomed to at home. Vegetarian, gluten-free, and vegan diets can generally be accommodated, but options will be limited.

Our time on Billy Hawk Caye will involve long, generally more than 8, hours of coursework per day. None of the course activities involve scuba diving and there won't be opportunities to dive while on the trip. On most days we will carry out field work from smaller motorboats (seating maximum 10 per boat) at locations within a 10-minute ride from the caye. The field work will involve 2-3 hours out on the boat and snorkeling each morning and again in the afternoon. We will return to Billy Hawk in-between for lunch. The Glover's Reef trip is an all-day trip, which will involve travel in the large motorboat and a packed lunch. The minimum guide to student ratio on the water will be 1:8. The water is generally warm and calm but the work of collecting data can be physically tiring. Students are able to wear life jackets or snorkel vests in the water if their swimming ability requires it. Students' physical fitness should be such that this level of activity can be maintained for five days straight. Wildlife in the water can pose risks. Each evening at Billy Hawk Caye will involve data entry, preparing gear for the next day, and whole class debriefs.

We will stay at the Tropical Education Centre (TEC), about half an hour from Belize City, our last night in Belize. Accommodations will be shared. Bathrooms are in a separate building than sleeping areas. Meals will be buffet style and provided in a communal dining hall. Vegetarian, gluten-free, and vegan diets can generally be accommodated, but options will be limited. When we are at the TEC, we will have a walking tour of the Belize Zoo. This will involve several hours walking around the facility in the heat/humidity.

Throughout the trip, there will be some opportunity for down time each day but very little opportunity for alone time. Belize is a more socially conservative country than Canada. All students will have accommodation arrangements that they are comfortable with, but male and female students will not be allowed to share accommodations. To be respectful of our hosts, everyone will be asked to refrain from profanity. We will be traveling in Belize at the end of the dry season/beginning of the rainy season. It will be very hot and humid, with some possibility of downpours. As with most tropical locations, insects, other wildlife, and some plants in Belize pose risks. Caution and good judgement will need to be exercised to ensure the safety of all participants.

Tropical Marine Biology Syllabus

Department of Biology

MARI 3682.03 Summer 2025

Dalhousie University acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. We are all Treaty people.

Dalhousie University also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.

Course Instructor(s)

Name	Email	Office Hours
Dr. Margi Cooper	mhcooper@dal.ca	LSC 4130; By appointment
Nina Hamacher M.Sc.	nhamacher@dal.ca	By appointment

Course Description

This course provides a practical introduction to tropical marine biology, including a multi-day field trip to tropical marine ecosystems (reef, mangrove, seagrass). Identification of species, ecological interactions and tropical marine conservation will be discussed. Evaluation includes, but is not limited to, lecture and field tests, presentations, field observations and reports.

Course Prerequisites

BIOL 2003 and BIOL 2060 or equivalent courses; or Instructor's permission. An introductory course in statistics and familiarity with spreadsheets (e.g. Excel) will be useful.

Course Structure

Course Delivery

This is an in-person, intensive course taking place between April 28-May 20, 2025. Students need to be available to meet Monday through Sunday from 9:35am-4:25pm while in Halifax. Lectures and labs will be held in LSC 4012. On the field trip, course activities will extend into the evening as well. This course aims to provide students with a foundation in tropical marine biology and first-hand experience with related ecosystems in Belize. Students will learn through lectures, labs, readings, discussions, field exercises and a research project.

The first nine days will be spent in Halifax, with lectures and assignments focused on coral reef, seagrass, and mangrove habitats, as well as ecological interactions among these habitats. Species identification, marine conservation issues, and habitat monitoring protocols will also be emphasized. Students will participate in group discussions, labs, and have a field trip to the pool to become familiar with sampling protocols underwater. There will be a lecture examination the last day in Halifax.

In Belize, the class will be intense and meet all day (typically more than 8 hours per day). See the tentative schedule for details of each day's activities. Note that the schedule may need to be

modified due to weather and other unforeseen circumstances. We will explore coral, seagrass, and mangrove ecosystems. Fish species will be visually sampled over patch reef, seagrass, and mangrove habitats as part of a class project. An additional component of the class project will involve monitoring levels of predation at our sampling sites. A Reef Species ID quiz will take place prior to this project.

Course Materials

Required articles to read for discussion will be posted on the course website.

REQUIRED TEXT: Humann, P., and N. DeLoach. 1995. Snorkeling Guide to Marine Life: Florida Caribbean Bahamas. New World Publications.

This text can be found on Amazon and Indigo.

	Assessment	
	<u>Weight (% of total grade)</u>	<u>Date</u>
Tests		
Lecture Exam	35	May 6
Reef Species ID Quiz	10	May 8
Class Project		
Report	25	May 20
Other		
Lab Activities	10	Various
Discussions	10	Various
Field Participation	<u>10</u>	Belize Trip
	100	

Lecture Exam

The class will have a test on lecture material before leaving on the trip to Belize and it will cover all the material from lectures. The exam will include multiple choice, short answer, and essay style questions.

Reef Species ID Quiz

While in Belize, a reef species ID quiz will assess students' ability to identify important components of the reef community prior to beginning the class project.

Discussions

Students will read and discuss articles relating to tropical marine biology/ecology. This assignment includes submitting discussion questions on the articles, prior to group discussion. Each student will lead one or more of these discussion sessions for their group.

Lab work

There will be three labs: 1) reef fish identification; 2) benthic cover identification; 3) sampling techniques and size estimation.

Field participation:

Participation is encouraged and required for full marks and is based on performance in the following categories: Attitude, Safety, Competence, Preparedness, Independence, and Professionalism.

Field project

In Belize, students will conduct a survey of fish diversity and size in areas of patch reef, seagrass, and mangrove around the cay. They will also monitor levels of predation at the same sites. Students will individually submit a full report of the class findings on the final day of the course.

Conversion of numerical grades to final letter grades follows the Dalhousie Grade Scale

Grade	Mark	Definition	
A+ A A-	90-100 85-89 80-84	Excellent	Considerable evidence of original thinking; demonstrated outstanding capacity to analyze and synthesize; outstanding grasp of subject matter; evidence of extensive knowledge base.
B+ B B-	77-79 73-76 70-72	Good	Evidence of grasp of subject matter, some evidence of critical capacity and analytical ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.
C+ C C-	65-69 60-64 55-59	Satisfactory	Evidence of some understanding of the subject matter; ability to develop solutions to simple problems; benefitting from his/her university experience.
D	50-54	Marginal Pass	Evidence of minimally acceptable familiarity with subject matter, critical and analytical skills (except in programs where a minimum grade of 'C' is required).
F	0-49	Inadequate	Insufficient evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

Course Policies

- It is important to keep up with work. Late assignments will be deducted at a rate of 10% per day. Once assignments have been marked and feedback returned to the class, late submission will no longer be allowed.
- Attendance is mandatory. Students are expected to attend all lectures, discussions, laboratories, and field trips. Deductions will be made for unexcused absences (1% per day or 0.5% per half day). Excused absences include those for sickness or emergencies, but do NOT include those due to work or attending other classes. Please contact the instructor about any absences as soon as possible.
- Students who do not engage fully in the pre-departure academic and organizational requirements may not be allowed to engage in the international travel portion of the course.
- Students are expected to participate and to cooperate in all class activities and follow rules at the field station, field trip locations and those provided by the guides. Deductions may be made for students who do not follow the rules and therefore put themselves and others at risk.
- Students MUST adhere to all safety guidelines presented. Whenever out of sight of the instructors or the field stations, students must stay in groups of 2 or more--AND inform the instructors of where they are going and when they plan to return. Life jackets will be worn at all times when travelling in boats. **For everyone's safety, consumption of alcoholic beverages, cannabis products, or other drugs is NOT permitted on the field trip.**

Course Policies related to Academic Integrity

You are expected to abide by Dalhousie University's policies on academic integrity.

The use of generative AI or large language models (e.g. ChatGPT) in this class would undermine your development of thinking and writing skills, and therefore will not be considered appropriate. Plagiarism will be checked by the detection software Turnitin.

Learning Outcomes

After this course, students will be able to:

- Identify a variety of marine organisms
- Quantify marine habitats and relate them to wildlife species
- Apply problem solving and research skills
- Discuss marine conservation issues as they pertain to Belize

Course Content

Date	Day	Time	Activity
28-Apr	Mon	09:30-10:30	Introduction to the course (MC, NH)
		10:30-11:00	Lecture: Introduction to Mesoamerican Barrier Reef System (MC)
		11:00-12:00	Lecture: Coral reef habitat (MC)
		1:00-3:30	Lecture: Coral reef trophic linkages (MC)
29-Apr	Tues	9:30-10:30	Discussion of article 1
		10:30-12:00	Lecture: The Caribbean context (MC)
		1:00-2:00	Lecture: Ecosystem monitoring and population assessment (MC)
		2:00-4:00	Lab: Reef fish identification (4%) - DUE 10AM May 3rd
30-Apr	Wed	9:30-10:00	Discussion of article 2
		10:00-12:00	Lecture: Coral functional groups and benthic organisms (MC)
		1:00-2:30	Lecture: Structuring of the reef fish community (MC)
		2:30-4:00	Lab: Benthic cover analysis (4%) - DUE 10AM May 3rd
01-May	Thurs	9:30-10:00	Discussion of article 3
		10:00-12:00	Lecture: Data management and analysis (MC)
		1:00-3:00	Dalplex Pool: Sampling protocols and fish size estimation (2%)
		3:00-4:00	Work on Labs
02-May	Fri	9:30-10:00	Discussion of article 4
		10:00-11:00	Lecture: Seagrass habitat (MC)
		11:00-12:00	Lecture: Mangrove habitat (MC)
		PM	Work on Labs/Study for Exam
03-May	Sat	Off	Labs DUE 10 AM / Study for Exam
04-May	Sun	9:30-10:00	Discussion of article 5
		10:00-11:30	Lecture: Marine Protected Areas of Belize (NH)
		12:30-1:30	Lecture: Belize Fisheries: Lobster and Conch (NH)
		1:30-2:30	Lecture: Marine Mammals - Manatees and Bottlenosed Dolphins in Belize (MC)
05-May	Mon	9:30-10:00	Discussion of article 6
		10:00-11:00	Exam Review Q&A
		PM	Study for Exam
06-May	Tues	9:30-12:30 PM	Lecture Exam (35%) Final preparations and packing
07-May	Wed		Halifax to Overnight Destination
08-May	Thurs	AM	Overnight Destination to Billy Hawk
		PM	Snorkel orientation / Prepare Gear
		Evening	Reef Species ID Quiz (10%)

09-May	Fri	AM	Squidpop assay and transects - Seagrass
		PM	Squidpop assay and transects - Mangrove
		Evening	Data entry and gear prep; debrief
10-May	Sat	AM	Squidpop assay and transects - Patch Reef
		PM	Squidpop assay and transects - Seagrass
		Evening	Data entry and gear prep; field participation interviews
11-May	Sun	AM	Squidpop assay and transects - Mangrove
		PM	Squidpop assay and transects - Patch Reef
		Evening	Data entry; field participation interviews
12-May	Mon	AM & PM	Glover's Reef Atoll
		Evening	Drumming and goodbye dinner
13-May	Tues		Billy Hawk to Tropical Education Centre and tour the Belize Zoo
14-May	Wed		Belize City to Overnight Destination
15-May	Thurs		Overnight Destination to Halifax
16-May	Fri		Off
17-May	Sat	9:30-12:00	Tutorial - Data analysis
18-May	Sun		Independent Project work
19-May	Mon		Independent Project work
20-May	Tues	11:59PM	Report due (25%) - Submit via Brightspace

University Policies and Statements

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit or e-mail the Indigenous Student Centre at 1321 Edward St or elders@dal.ca. Additional information regarding the Indigenous Student Centre can be found at: https://www.dal.ca/campus_life/communities/indigenous.html

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at: <https://www.dal.ca/about-dal/internationalization.html>

Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. Additional academic integrity information can be found at: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (<https://www.dal.ca/about-dal/agricultural-campus/student-success-centre.html>)

Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: <http://www.dal.ca/cultureofrespect.html>

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner - perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution. The full Code of Student Conduct can be found at: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie. Additional information regarding the Fair Dealing Policy can be found at: https://www.dal.ca/dept/university_secretariat/policies/academic/fair-dealing-policy.html

Originality Checking Software

The course instructor may use Dalhousie's approved originality checking software and Google to check the originality of any work submitted for credit, in accordance with the Student Submission of Assignments and Use of Originality Checking Software Policy. Students are free, without penalty of grade, to choose an alternative method of attesting to the authenticity of their work and must inform the instructor no later than the last day to add/drop classes of their intent to choose an alternate method. Additional information regarding Originality Checking Software can be found at: <https://www.dal.ca/about/leadership-governance/academic-integrity/faculty-resources/ouriginal-plagiarism-detection.html>

Student Use of Course Materials

Course materials are designed for use as part of this course at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading to a commercial third-party website) may lead to a violation of Copyright law.

Fee statement for MARI 3682.03

Tuition

This course is worth **3 credit hours** of upper-level Marine Biology (equivalent to a full-semester course) and the tuition is calculated accordingly.

Auxiliary fees

The auxiliary fee for this course is tentatively **\$3650**, pending approval.

This auxiliary fee will cover airfare and trip cancellation insurance, travel expenses in Belize, including charter bus for land transport, charter boat for water transport, three meals a day, accommodations, supplies, and most field equipment. If we must stay in a hotel enroute between Halifax and Belize, this will also be covered.

Deposit

The deposit for this course is tentatively **\$1000**, pending approval, and is due **February 14, 2025**.

The deposit will allow us to purchase return air tickets from Halifax to Belize and with the ticket, trip cancellation insurance, which is required of all Dalhousie students who take a class out of the country. In most cases, this deposit is non-refundable. The deposit paid will be credited to the auxiliary fee for the course.

Items not covered by auxiliary fees

Transportation to and from Halifax airport is not covered. Baggage fees and any meals between Halifax and Belize are not covered.

You will need to pay for any snack food and souvenirs you wish to purchase in Belize.

Please note that snorkel equipment is not covered by the auxiliary fees and must be purchased (or borrowed) by students prior to the trip to the Dalhousie pool.

Students are expected to obtain (purchase or borrow) all the items they require for the trip. The "What to Bring to Belize" section highlights important items to consider bringing. Please ask Nina Hamacher if you have any questions.

Pre-course Check List for MARI 3682

1. Read all material provided in this information package and ask the instructors any questions you have.
2. **READ** and sign the SEASIDE Course “Student Commitment” form.
3. Fill out the Personal Information form and email it and your signed Student Commitment form, as well as **a copy of the photo page of your passport** to Nina Hamacher. Alternatively hard copies can be brought to the Biology Main Office, Attention: Margi Cooper.
4. Pay your \$1000 deposit for the course at Student Accounts when notified by Jen Frail-Gauthier that Students Accounts is ready to take your deposit. This will ensure your seat in the course. If you pay online, e-mail student.accounts@dal.ca that you have paid the deposit for MARI 3682; otherwise it will appear as a credit on your account.
5. Obtain a passport or check that your current passport is good for **6 months** or more beyond the return travel date (May 15th, 2025).
6. Obtain the international travel health insurance required by the Dalhousie International Centre.
7. If you are an international student, check if you need a visa to enter Belize or a transit visa for the USA (some will need an ESTA, even for transit: https://www.help.cbp.gov/s/article/Article-1441?language=en_US). There will be a stop in the USA to transfer planes.
8. Contact the International Centre as soon as possible to determine whether you are eligible for funding to help cover the costs of the trip. We strongly encourage you to take advantage of these potential opportunities as it can offset the costs considerably.
9. Attend a pre-departure orientation course with the International Center that we will organize for you.
10. See your doctor (or travel health clinic) for any vaccinations or medications you may need no later than March 1.
11. Pay the remainder of your auxiliary fee at Students Accounts when asked to do so.
12. Check that you have all the items on the “What to Bring to Belize” list that you require.

Traveler information for Belize

ENTRY INFORMATION

Government of Canada information: <http://travel.gc.ca/destinations/belize>

Canadians must present a passport to visit Belize, which must be valid for at least six months beyond the date of expected departure from Belize. Canadians do not need a tourist visa to visit Belize.

All visitors to Belize must possess a ticket for an onward or return journey.

Belize country information: <https://www.belize.com/belize-visa>

This website indicates which countries require more than a passport. For example, a Visitor Permit is required of nationals of China and India. You can check with the local Belizean Consulate, Belize Embassy, British Counsel, or contact the Department of Immigration and Nationality, Belmopan, Belize, Central America. *Telephone: (501-8-22611)*.

Transit visas:

Most flights from Canada to Belize connect in the USA. Citizens of some countries outside of Canada and the USA may need transit visas for flights that connect in the USA. For more information, see: <https://ca.usembassy.gov/visas/> (See above about ESTA, some students will only need that)

TRAVEL HEALTH INFORMATION

Government of Canada:

Consult a health care provider or visit a travel health clinic preferably six weeks before you travel. See the following webpages for more information:

<http://travel.gc.ca/destinations/belize>

Centres for Disease Control (CDC): <http://wwwnc.cdc.gov/travel/destinations/traveler/none/belize>

Travelers should ensure that their routine immunizations are up to date. These include measles-mumps-rubella (MMR) vaccine, diphtheria-tetanus-pertussis vaccine, varicella (chickenpox) vaccine, polio vaccine, and your yearly flu shot. For a schedule of recommended routine immunizations see:

<http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-schedule-easy-read-bw.pdf>

Recommended travel vaccines for Belize specifically include:

- COVID-19
- Hepatitis A
- Hepatitis B
- Measles
- Rabies
- Typhoid
- Malaria (optional – see next page)

Malaria is a low risk in the parts of Belize we will visit. Malaria in Belize is almost exclusively the less severe *Plasmodium vivax* but chemoprophylaxis with chloroquine, mefloquine, atovaquone/ proguanil or doxycycline may be considered. The decision about whether to take anti-malarial medication should be made by consulting your physician.

Malaria, Dengue, Chikungunya, and Zika are mosquito-borne diseases present in some parts of Belize. Chagas disease and Leishmaniasis can also be transmitted by bug bites. To prevent insect bites, it is important to cover exposed skin by wearing long-sleeved shirts, long pants, and hats. At night, mosquito head nets and bed nets can help prevent insect bites.

Products with one of the following active ingredients can also help prevent mosquito bites. Higher percentages of active ingredient provide longer protection.

- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and Icaridin. Products containing picaridin include Cutter Advanced, Skin So Soft Bug Guard Plus, and Autan)
- Oil of lemon eucalyptus (OLE) or PMD (Products containing OLE include Repel and Off! Botanicals)
- IR3535 (Products containing IR3535 include Skin So Soft Bug Guard Plus Expedition and SkinSmart)

What to Bring to Belize

Pack light but bring everything you may need. Goods purchased in Belize may be much more expensive and of inferior quality to those you are accustomed to purchasing. Remember, you will be limited to one checked bag on most American airlines and two small carry-on bags. We recommend packing light clothes. We recommend gear and clothes that dry quickly, the coastal humidity causes things to go moldy rapidly. Long pants and long-sleeved shirts are great at keeping the biting flies and sunburns away.

There are some thefts in Belize; while most incidents are in Belize City and crime is not directly targeted at tourists, we recommend that you take the usual precautions. The first tip is to not look flashy. Don't flaunt nice watches, purses, etc. Always carry your money and passport on your person when travelling.

Make a photocopy of the photo page of your passport and keep this in a separate place from your actual passport. This can aid in getting a new passport should you lose yours. You should also leave a copy of your passport with someone back in Canada. Bring your driver's license but leave your school ID and unnecessary credit cards at home. If it is difficult to replace, if you don't need it, or if you can't afford to lose it, leave it at home.

- **Passport** (and a photocopy, as well as a picture of the relevant pages on your cell phone), **driver's license** or other ID, **bank card** or **credit card** (for emergencies or souvenirs), and some **cash** (US or Belize dollars to buy sodas, snacks, supplies, souvenirs)
- **Water resistant day pack** for field work (to carry water, hat, sunglasses, field gear, first aid kit, rain jacket etc.)
- **Headlamp** and spare **batteries** (for night walks, early mornings, toilet trips at night, etc.)
- **Insect repellent** (see Traveler Information for Belize)
- **First aid kit**, personal size, that you will always carry with you (will be provided to you before departure)
- **Safety whistle** (pea-less type, such as a FOX 40 Classic or Sharx will be provided to you before departure)
- **Drinking water containers** (e.g., 1-L bottle and/or a hydration system that fits in your backpack)
- **Sneakers** and appropriate **socks** (for when you need closed shoes)
- **Hiking sandals** (such as Keens or Tevas) that can be used in water
- **Rain jacket** (our trip coincides with late dry season/early rainy season; expect some downpours)
- **Warm top** (one sweatshirt or fleece for cool nights/mornings)
- **Long pants** (2-3 pairs; preferably light, quick-dry material with a tight-weave)
- **Long-sleeved shirts** (2-3; quick-dry, wicking; tight-weave shirts are best for avoiding mosquito bites)
- Other **summer clothes** (shorts and T-shirt, tank top) and **underwear** (there will be no opportunity to do laundry so plan accordingly)
- **Swimsuit(s)**, **beach towel**, and **long-sleeved sun guard top** (or t-shirts) and **long shorts** or **long sun guard pants** to prevent sunburn when swimming
- **Snorkel gear**: mask, fins, snorkel, vest
- **Hat with brim, sunglasses, sunscreen, and lip balm with sunscreen**
- **Prescription medicines and medical supplies (as they apply to you)**. Make sure you bring enough to last the entire trip as well as any potential travel delays.
 - **Your prescriptions**
 - **Antibiotics** - for possible infection (especially if you are prone to infections)
 - **Travelers' diarrhea** antibiotic (optional – see your doctor or travel health clinic)
 - **Suture/syringe kit** (for use by local health care provider; requires a letter from your doctor on letterhead stationery)

- **Glasses and/or Contact lenses** - Consider packing spares in case yours are damaged
- **Diabetes testing supplies**
- **Insulin**
- **Inhalers**
- **Epinephrine auto-injectors (EpiPens)**
- **Medical alert bracelet or necklace**
- **Over-the-counter medicines and supplies to prevent illness or reduce discomfort**
 - **Antacid**
 - **Diarrhea medicine** (e.g., loperamide [Imodium] or bismuth subsalicylate [Pepto-Bismol])
 - **Oral rehydration salts** - these can be purchased at a pharmacy (e.g., gastrolyte)
 - **Antihistamine**
 - **Motion sickness medicine**
 - **Cough drops**
 - **Cough suppression/expectorant**
 - **Decongestant**
 - **Medicine for pain and fever** (e.g., acetaminophen, aspirin, or ibuprofen)
 - **Mild laxative**
 - **Saline nose spray**
 - **Bed net** - For protection against insect bites while sleeping
 - **Bug head net or bug jacket** – to keep away biting insects
 - **Earplugs**
- **First-aid kit**
 - **1% hydrocortisone cream**
 - **Antifungal ointments**
 - **Antibacterial ointments**
 - **Antiseptic wound cleanser**
 - **Aloe gel** - For sunburns
 - **Insect bite treatment - Anti-itch gel or cream**
 - **Bandages - Multiple sizes, gauze, and adhesive tape**
 - **Moleskin or molefoam** - for blisters
 - **Elastic/compression bandage wrap** - for sprains and strains
 - **Disposable gloves**
 - **Digital thermometer**
 - **Scissors and safety pins**
 - **Cotton swabs (Q-Tips)**
 - **Tweezers**
 - **Eye drops**
- **Documents**
 - **Health insurance documents** - Health insurance card (your regular plan and supplemental travel health insurance plan) and copies of claim forms
 - **Copies of all prescriptions** - Make sure prescriptions include generic names. Bring prescriptions for medicines, eyeglasses/contacts, and other medical supplies.
 - **Contact card** - Carry a contact card containing the street addresses, phone numbers, and e-mail

addresses of the following:

- Family member or close contact at home
- Health care provider(s) at home
- Lodging at your destination
- Hospitals or clinics (including emergency services) in your destination
- Embassy or consulate in the destination country or countries

- **Toiletries and related items**

- Towel, soap, shampoo/conditioner, toothbrush, toothpaste, hairbrush/comb, hair ties, head band; bandana; hand sanitizer; bags to organize your stuff (e.g., ziplock bags, grocery bags)

- **Optional items**

- Underwater camera; phone; headphones; power cords for your electronics; a good book to read, for those off times; any foods you can't live without (but remember there may be restrictions on what you can bring into the country)

Additional notes: Our drinking water will be filtered for purification, so you do not need to bring purification pills or equipment. Water is limited on Billy Hawk Caye. Please plan to limit your shower frequency and duration. There are no convenience stores near any place we will stay, so don't expect to be able to get to one with any regularity.

SEASIDE Course



Student Commitment

COURSE CODE: MARI 3682

Course Name: Tropical Marine Biology

I, the undersigned acknowledge the following:

1. Dalhousie University (“**Dalhousie**”) is offering [Tropical Marine Biology] in [Halifax and Belize] from [April 27-May 20, 2025] (the “**Program**”). I have reviewed and understand the Program description and have sought clarification on course requirements as necessary. I wish to participate in the Program.
2. I understand that my participation in the Program involves risks not found in study on Dalhousie’s campus. These include, but are not limited to, risks inherent in traveling to, and returning from the course location(s) and more limited access to health services. I recognize that there is an element of risk of injury in any activity associated with the outdoors. Injuries may result from, without limitation, traffic or boating accidents, weather conditions, rough terrain, water-related accidents, the consumption of food or beverage, bodily contact with other persons, equipment malfunction, physical contact with insects and/or wildlife (including scorpions, tarantulas, and snakes), sunburns, slipping, tripping or falling, falling objects such as rocks, trees and branches, and/or other hazards inherent to the environment of the Program; I have made my own investigation. I am willing to accept these risks.
3. I am responsible for being on time to travel to and from Belize and for all travel within Belize and I acknowledge that my group may leave without me if I am not on time.
4. I understand the course delivery environment and the program activities as they have been described in the Program Description. It is my responsibility to ensure that I am physically, emotionally and mentally able to safely participate in the Program given the course delivery environment and program activities. I am also aware of the Student Accommodation Policy. [https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/university_secretariat/policy-repository/StudentAccomPolicy_Nov252014-V3\(2017Sept\).pdf](https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/university_secretariat/policy-repository/StudentAccomPolicy_Nov252014-V3(2017Sept).pdf).

I understand that it is my responsibility to request an accommodation under that Policy if I believe there is a barrier to my participation in the Program because of a characteristic protected by human rights law (ex: disability, religion, race, etc). I further understand that the assessment of accommodation requests in relation to SEASIDE courses can be more complex and therefore that I should make any necessary accommodation requests as early as possible.

5. The academic aspects of the Program are such that my participation for the entire duration of the Program is necessary to achieve the objectives of the Program. I agree to attend all elements, including all orientations, meetings, classes, excursions, and exams on Dalhousie’s campus and in the field. I agree to complete all requirements/assignments associated with the Program.
6. I have reviewed and agree to be bound by Dalhousie’s Code of Student Conduct. I will, at all times, act responsibly and comply with the policies, rules, standards, and instructions for student conduct, including Dalhousie’s Code of Student Conduct. A copy is available online at: https://www.dal.ca/content/dam/dalhousie/pdf/dept/university_secretariat/policy-repository/CodeofStudentConduct.pdf.
7. I will not consume alcohol or illegal substances at any time while in Belize or travelling to and from Belize.

8. I understand that all applicable rules for participation must be followed. My course instructor is not a professional leader, guide, or licensed first aid attendant. At all times during the trip, the sole responsibility for my personal safety rests with me.

9. Dalhousie will enforce appropriate standards of conduct and may terminate my participation in the Program for failure to maintain these standards or for any actions or conduct which Dalhousie considers incompatible with the interest, harmony, comfort, or welfare of other Program participants or Dalhousie employees. Unacceptable conduct includes, but is not limited to, unauthorized absence from the Program, harassment, assault, vandalism, public disturbance, and any illegal activity.

10. If my participation in the Program is terminated or if I withdraw from the Program, Dalhousie shall have the right to require me to leave the Program and the living accommodations provided to participants of the Program without refunding my tuition or fees and without academic credit. If Dalhousie directs me to leave, I agree to cooperate and abide by such direction and cover all associated costs. Dalhousie is not responsible for any loss or additional expense which I incur as a result of any cancellation of the Program, my withdrawal from the Program at any time, or the termination of my participation in the Program by Dalhousie.

11. Dalhousie assumes no liability for any loss, damage, injury or additional expenses which I incur and suffer as a result of my participation in the Program, except to the extent that such loss, damage, injury or additional expense is the result of Dalhousie's negligence. I agree to indemnify and save harmless Dalhousie from any loss, damage, injury or other expenses caused by me to any third party.

Student's Name _____ **B00** _____

Student's Signature _____

For Dalhousie's internal purposes only -	Date received by Department: _____
--	------------------------------------

PERSONAL INFORMATION FORM – Dalhousie University - MARI 3682.03

Full name of traveler (exactly as listed on passport): _____

Nationality & passport Number: _____

Passport expiration date: _____

Home address (as appears on Passport): _____

Local address: _____

Phone: _____ Email: _____

Tell us a bit about yourself: Your strengths, experience with groups, and reasons for applying to this course.

What are your expectations and hopes for this experience? What skills might you be able to offer to the group?

Tell us about your past travel experiences, either alone, with family, or with groups. Please indicate location, duration, year of travel, and who you traveled with.

Do you have first aid training? If so, what level? _____

Do you have any swimming certification? If so, to what level? If not, please describe your ability/comfort in the water.

Please provide the name and contact information of two referees who can be contacted to submit a reference on your behalf. Referees must not be related to the applicant, and one referee must be an academic reference. Applicants must make sure that their referees are aware they may be contacted.

Academic Referee:

Second Referee:

I certify that the above information is correct and complete to the best of my knowledge.

SIGNATURE _____ DATE _____