

Parasitology Syllabus

Department of Biology

BIOL3322 Fall 2024

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
Tatiana Rossolimo	trossoli@dal.ca	Tuesdays 8:30-10:30 pm, C238
James Kho	James.Kho@dal.ca	Tuesdays 10:30-11:30 am, TBD

Course Description

The course emphasizes the parasite-host relationships, evolution of the parasites and adaptations to the host, modifications of physiology, structure and life cycle for a parasitic existence. Since the most extensive research pertains to parasites of man, the emphasis is on human parasites.

Course Prerequisites

PREREQUISITES: A grade of C+ or higher in [BIOL 1010](#) (or [BIOL 1020.03](#) or [BIOA 1002.03](#)) and [BIOL 1011.03](#) (or [BIOL 1021.03](#) or [BIOA 1003.03](#)) or [SCIE 1505.18](#)

Student Resources

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Research Lab Safety https://www.dal.ca/content/dam/dalhousie/pdf/dept/safety/lab_policy_manual_2007.pdf

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Course Structure

Course Delivery

This class will be offered in a hybrid style, lectures will be in-person and online, and labs will be held in person. Please refer to Brightspace announcement page for any updates regarding delivery and any other changes.

Lectures

First lecture will be **in-person** and held during the listed time on the timetable: **Tuesday September 3rd, 2024 at 5:35 PM in LSC238**. All other will be in-person and asynchronous and uploaded weekly. We encourage everyone to try and attend this live session so you get to ask questions about the class should you have any. If you are unable to attend, do not worry as it will be recorded and posted on Brightspace. Make sure you listen to that recording before asking any questions about the class.

Laboratories

Labs on Tuesday @ 11:35 – 14:25; @14:35 – 17:25; on Thursday @ 11:35 – 14:25; 14:35- 17:25 in LSC-BIOL&EARTH B5012

Course Materials

Recommended textbook (not mandatory):

G.D.Schmidt &L.S.Roberts. Foundations of parasitology. Any edition, McGraw-Hill Higher Education

Website: www.tatiana.rossolimo.com

Assessment

Assignments

Lab notebook (15%), mini lab report on DNA/PCR on ticks (15%), a 7-10 minutes presentation on species or taxonomic group of parasites (10%), and attendance for labs (5%).

Mini lab report due week of November 19th (post reading week, Nov 19th and 21st).

Presentations will be done during the lab time starting on October 8th (Tues) or October 10th (Thurs) until October 22th (Tues) or October 24th (Thurs). Duration of presentation is 7-10 minutes.

Lab notebook due before the lab exam on November 26th, 2024.

Tests/quizzes

2 Midterms (15% each, 30% total) and final exam (25%) cover subjects from lectures, labs, and reading.

Midterm: October 1st and November 5th

Final exam

The final exam is a comprehensive exam including all taxa from the beginning of the course. The exam and midterm include a wide variety of questions and problems, some based on taxonomy of the organisms, many based on their anatomy, some based on their functional biology, natural history, life cycles and host-parasite relationship, some based on medical significance of parasites and drugs used to cure diseases caused by parasites.

Date of the final exam will be November 26th, 2024 in person (subject to change).

Other course requirements

Attendance for labs (5%).

Conversion of numerical grades to final letter grades follows the

[Dalhousie Grade Scale](#)

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (0-49)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies on Missed or Late Academic Requirements

For missed or late academics requirements during the term (assignments, tests, etc.), **policy has not changed**. We ask students complete the Student Declaration of Absence **PRIOR** to the due date or test date. Students who are ill for an extended period and thus miss multiple requirements should directly contact the professor and they will work alongside student affairs to arrange for appropriate solution.

Please see below specific requirements for each of the graded items in this class:

- **Final exam** – **Must inform James and Tatiana at least a week before the exam or have valid reasoning if notified later.** Make up final exam will be an oral exam scheduled and administered by Tatiana directly.
- **Midterm** – Makeup midterm format and timing at instructor/professor's discretion. Make-up will be a different exam with different questions.
- **Lab notebook** – Deduction of 10% of total grade per day for late submission. Grade of 0 upon five days past due date.
- **Presentation** – Deduction of 10% of total grade per day for late submission. Grade of 0 upon five days past due date.
- **Lab quizzes** – Deduction of 10% of total grade per day for late completion. Grade of 0 upon seven days past due date.

Course Policies related to Academic Integrity

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of 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.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.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.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

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

Statement: <http://www.dal.ca/cultureofrespect.html>

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 (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Learning Objectives

Knowledge of parasite's taxonomy, anatomy, physiology, life cycles.
Knowledge of symptoms, ways of transmission and treatment of vector-borne and parasitic diseases.
Knowledge of basic immune system and how parasites impact human immunology.
Skills to recognize parasites
Knowledge of preserving and working with parasites in a lab setting.

Course Content

Important dates for lab (by week):

Sept 3rd – Lab 1 Introduction to the class held synchronous

Sept 10th and 12th – Lab 1 Introduction to Parasitology and Protozoans (Euglenozoa)

Sept 17th and 19th – Lab 2 Protozoans (Flagellates and Ciliates)

Sept 24th and 26th – Lab 3 Tick DNA extraction + PCR

Midterm 1 materials up to here!

Oct 1st – First Midterm (Lecture materials)

Midterm 2 materials from here!

Oct 1st and 3rd – Lab 4 Protozoans (Amoebozoa and Apicomplexa) – Gel electrophoresis

Oct 8th and 10th – Lab 5 Platyhelminthes – Trematoda – Presentation period

Oct 8th – Quiz 1 review/online meeting session via Zoom (link on Brightspace)

Oct 15th and 17th – Lab 6 Platyhelminthes – Cestoidea – Presentation period

Oct 22nd and 24th – Lab 7 Nematoda – Presentation period

Oct 29th and 31st – Lab 8 Acanthocephala, Nematomorpha, Annelida, and Arthropoda part1

Midterm 2 materials up to here!

Nov 5th – Second Midterm (Non-cumulative lecture materials)

Nov 5th and 7th – Lab 9 Arthropoda part 2

Nov 12th and 14th – FALL READING WEEK ☺

Nov 21st – Quiz 2 review/online meeting session via Zoom (link on Brightspace)

– Lab exam review (online via Zoom, link on Brightspace)

Nov 19th and 21st – Lab exam review (online) and free lab session – **Lab report due**

Nov 26th – Final Exam and Lab notebook due

University Policies and Statements

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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>

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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

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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.