

BIOL 2060 Syllabus F2020

Faculty of Science Course Syllabus

Department of Biology

BIOL 2060 (online)

Introductory Ecology

Fall 2020

Lecturer: Rajesh Rajaselvam (he/him); Rajesh.Rajaselvam@dal.ca; Office Hrs: Fri 11:30-12:30/Thu by apt

Coordinator & Lab Instructor: Isabelle Aubé (she/her); Isabelle.Aube@dal.ca; Office Hrs: by apt

Lectures: Synchronous, online, and hosted through our class Brightspace page (see schedule for details)

Laboratories: Weekly online, combination of synchronous meetings with TAs & asynchronous lab work, hosted through our Brightspace page (see schedule for details)

Tutorials: None

Course Description

Ecology examines interactions of plants and animals, including humans, with each other and with their non-living world. Topics include population growth, competition, predation, food webs, metapopulation dynamics, biodiversity and ecosystem function. The course has a quantitative approach providing a foundation for further work in ecology, marine biology and environmental science.

Course Prerequisites

A grade of C+ or higher in BIOL 1011.03, BIOL 1021.03, BIOA 1003.03, ENVS 1000.06, BIOL 1030.03, or (SCIE 1505.18) AND A grade of D or higher in MATH/STAT 1060.03 or MATH/STAT 2080.03.

Course Exclusion

BIOA 3001.03

Course Materials

1. “Connect” access code (\$90.56) **must** be purchased through the Dal bookstore (<https://bookstore.dal.ca/>)
2. Molles MC, Laursen A. 2020. Ecology: concepts and applications. 5th Canadian Edition. Toronto: McGraw-Hill. 654p (included as an e-book through the “Connect” access code)
3. Course Brightspace page (<https://dal.brightspace.com/d2l/login>)
4. Lab manual (free, included in course Brightspace page)
5. Up to date versions of MS Excel and Teams (free download here: <https://libraries.dal.ca/help/software-downloads.html>)
6. R statistical software (free download here: <https://www.r-project.org/>)
7. Must have high-speed internet

Assumed Knowledge and Skills before taking BIOL 2060

Before starting the course, you should be able to:

- **Recall** 1) exponential and logistic models describe unlimited and resource-limited population growth; 2) evolutionary trade-off underlie differences in life history strategies; and 3) basic chemistry concepts (balancing equations, molecules)
- **Distinguish** among biological interactions (predation, competition, mutualism, symbiosis, parasitism)
- **Describe** human impacts on the nitrogen cycle
- **Interpret** 1) the results of a simple field or laboratory experiment and 2) simple graphs (e.g., histograms, x versus y plots) of ecological data
- **Know** how to calculate summary statistics (mean, sample size, variance, standard deviation)
- **Familiarity** with regression, t-tests and ANOVA

Note: If you are unsure about any of these, you should review them in your first-year biology, chemistry and statistics textbooks before the class begins.

Learning Objectives -- Expected Knowledge and Skills after taking BIOL 2060

Once you have completed the class you should be able to:

- **Describe** 1) major drivers of and differences among terrestrial, marine and freshwater biomes; 2) how abiotic factors influence the distribution and abundance of organisms; 3) the mechanisms that drive primary and secondary succession; and 4) the effects of disturbance on species diversity
- **Understand** the fundamentals of disease dynamics and transmission
- **Interpret** 1) the evolution of animal behaviour and life history in light of natural selection and inclusive fitness and 2) food-web diagrams in terms of indirect interactions including trophic cascades
- **Explain** 1) the concept of a fundamental and realized ecological niche; 2) top-down and bottom-up control of primary productivity and 3) the major gradients of species diversity in terrestrial and marine ecosystems.
- **Use** the BIDE (births, deaths, immigration, emigration), exponential and logistic population growth models to make predictions
- **Manipulate and interpret** results of the Lotka-Volterra competition and predator-prey models
- **Predict** the impacts of human activities (e.g. climate change, nutrient loading) using knowledge of the major biogeochemical cycles on the planet (e.g. water, carbon, nitrogen, phosphorus)
- **Design** a laboratory or field study using appropriate experimental design principles
- **Generate** appropriate tables and graphs to represent ecological data
- **Read** and interpret a scientific paper describing a straightforward experimental or observational study
- **Conduct** statistical analyses (regression, t-test, ANOVA) on ecological data
- **Communicate** research results in the style of a scientific paper and conference style poster

Course Assessment

To get a passing final grade in BIOL 2060 you **must get 50% or better** on your Final Lab Grade (20 out of 40 points) **and** your Midterm and Final Exam marks (30 out of 60 points). See Table 1 and schedule for more information.

Table 1. BIOL 2060 course assessment.

Components	Weight (% of final grade)	Date
Exams (required, synchronous)	60	
Midterm Exam	15	Oct 14, 2020 (time TBD)
Final Exam	45	Scheduled by Registrar
Labs	40	
Pre-lab Quizzes	5	See schedule
Assignments (A2, A3, & A5, 4% each)	12	See schedule
Competition Experiment (A1C)	10	See schedule
Forest Ecology & Succession Poster (A4)	8	See schedule
Final Reflection Video (A6)	3	See schedule
Discussion Board participation	2	See Course Policies
Total	100	

Other course requirements

Course Orientation Quiz

Prior to the start of Lectures and Labs, students **must obtain 100%** (unlimited attempts) on this Quiz to view and unlock the rest of the Pre-lab Quizzes. Based on the contents of the Brightspace course's Orientation Unit.

Assignment Drafts

Although not worth any marks, you will be required to submit draft assignments throughout this course. The purpose of these is so you can receive valuable feedback on them to improve on your work before final submissions (which are worth marks). Failure to submit drafts on time will result in a **5% deduction** on your future assignments.

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

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

4 Syllabus

Note: If you require a specific final grade for a scholarship, honours degree, job, graduate or professional school or other purpose, you should ensure that you put in the work needed to earn that grade. We offer many opportunities in the lecture and lab to get feedback and help and showcase your understanding on exams and assignments; therefore, we do not offer extra assignments to “boost” your grade. Keep in mind that we already round final grades to the nearest whole number. In fairness to other students and in keeping with the university’s high academic standard, it is not our practice take in requests to bump up a grade at the end of the term. However, if you have any questions about your grade, marking or feedback, believe a mistake was made, or if you experience an extenuating circumstance, we encourage you to come and discuss this with us as the term is progressing.

Course Content: Lecture & Lab Schedule (all times in Atlantic Time)

Date & Lecture Topic (M/W/F; 1035-1125 am)			Lab Topic (click here for your synchronous lab times)	Due Dates
Sep 9-W	1	Introduction (<i>Molles and Cahill: Chapter 1</i>) <u>Individuals:</u>	Orientation week: optional synchronous online meeting on Wednesday Sept 9th at 6 pm : teaching team, lecture & lab virtual settings, code of conduct (netiquette), syllabus, exams & lab quizzes (complete orientation quiz), virtual lab experiments & assignments (complete exp. draft design), and other FAQs	
11-F	2	Evolution & Speciation (4)		
14-M	3	Behavioral Ecology (8)	Lab 1A: Competition Experiment: Design + Methods - synchronous meeting with TA during lab time to go over experiment.	Must have orientation quiz submitted by 11:59 pm the day before your meeting , followed by a group experimental design worksheet (draft) by the end of the lab day . (e.g. if your meeting is on Tuesday, quiz is due at 11:59 pm on Monday, group draft is due Tuesday at 11:59 pm)
16-W	4	Life History & Niche (9)		
18-F	5	Review/ Discussion I		
21-M	6	<u>Population Ecology:</u> Distribution & Abundance(10)	Lab 2: Nature of Data - asynchronous	Submit A1A (methods section) Pre-lab activity- quiz 1 Both due by 11:59 pm on Monday
23-W	7	Dynamics & Structure (11)		
25-F	8	Population Growth I (12)		
28-M	9	Population Growth II (12) <u>Interactions:</u>	Lab 3: Population Dynamics Synchronous meeting with TA during lab time to go over A1A feedback.	Submit A2 Pre-lab activity- quiz 2 Both due by 11:59 pm on Monday .
30-W	10	Competition I (13)		
Oct 2-F	11	Competition II (13)		
05-M	12	Predation & Herbivory I (14)	Synchronous meeting with TA during lab time to go over A2 feedback.	Submit complete A3 draft due by 11:59 pm on Monday A3 Final is due by 11:59 pm the day after your meeting (e.g. if your meeting is on Tue, A3 is due on Wed)
07-W	13	Predation & Herbivory II (14)		
09-F	14	Parasitism & Disease (15)		
12-M		No classes: Thanksgiving	Lab 1B: Competition Experiment: Draft Scientific Manuscript – asynchronous	Pre-lab activity- quiz 3 due by 11:59 pm on Monday
14-W		MIDTERM EXAM		
16-F	15	Life on Land I (2)		

6 Syllabus

Date & Lecture Topic (cont.) (M/W/F; 1035-1125 am)			Lab Topic (click here for your synchronous lab times)	Due Dates
19-M	16	Life on Land II (2)	Work on A1B	Optional A2 resubmission due by 11:59 pm on Monday
21-W	17	Life in Water I (3)	Synchronous meeting with TA during lab time to go over A3 feedback.	
23-F	18	Life in Water II (3)		
26-M	19	<u>Limits to Biodiversity:</u> Succession I (18)	Lab 4: Forest Ecology: conference poster - provide data/analyses - asynchronous	Submit A1B
28-W	20	Succession II (18)		Pre-lab activity- quiz 4
30-F	21	Measuring Biodiversity (16, 18)		Both due by 11:59 pm on Monday .
Nov 2-M	22	Niche/Disturbance (16, 18)	Work on A4	Submit A4 draft by 11:59 pm on Monday
04-W	23	Food Webs I (17)	Synchronous meeting with TA during lab time to go over A1B feedback	Peer-feedback of A4 due by 11:59 pm on Friday
06-F	24	Food Webs II (17)		
09-M		No classes or labs: Fall Study Break		
11-W				
13-F				
16-M	25	<u>Species Interactions:</u> Keystone Species/ Media	Lab 5: Species-Area Relationships + Trophic Cascades - asynchronous	Submit A4
18-W	26	Ecosystem Engineers (17)		Pre-lab activity- quiz 5
20-F	27	Review/ Discussion II		Both due by 11:59 pm on Monday .
23-M	28	<u>Limits to Production:</u> Production & Energy I (19, 20)	Lab 1C: Competition Experiment: Final Scientific Manuscript Optional drop-in synchronous meeting with TA during lab time for A1C help	Submit A5 by 11:59 pm on Monday
25-W	29	Production & Energy II (19, 20)		
27-F	30	<u>Nutrient Cycling</u> Nitrogen, Phosphorus (19,20)		
30-M	31	Carbon (19,23)	Lab 6: Final Reflection - asynchronous	Submit A1C by 11:59 pm on Monday
		<u>Global Human Impacts:</u>		
Dec 2-W	32	Anthropocene I (19 - 23)		
04-F	33	Anthropocene II (19 - 23)		
07-M	34	<u>Large Scale Biodiversity:</u> Crisis & Conservation	No labs	Submit A6 by 11:59 pm on Monday
08-T	35	Final Revision/ Exam Info		

BIOL 2060 Course Policies

It is **your responsibility** to read the **BIOL 2060 Course Policies** and **University Policies and Statements** outlined in the following pages during the 1st week of class.

To ensure the fair and equal treatment of all students, these rules and policies will be followed by all members of the teaching team.

Note: Extenuating circumstances can arise and when they do you are encouraged to get in touch with Isabelle Aubé (isabelle.aube@dal.ca) as soon as possible in an attempt work out reasonable accommodation.

The **Brightspace** online platform (<https://dal.brightspace.com/d2l/login>) will be used to host course lectures, labs, and to post regular course updates and announcements. It is your responsibility to log in regularly (several times a week) to the course's Brightspace page for the most up-to-date information.

Lectures (60% of your final grade)

Lectures will be delivered **synchronously online according to the class schedule** with detailed Lecture slides uploaded before each Lecture. At the end of every 5 to 6 lectures, a quick revision will be done taking into consideration different time zones.

Online class participation is considered **essential**. Complete attendance of all Lectures is highly recommended since it will help to improve your grade significantly.

Refer to the **Missed Course Requirements** section of this syllabus for missed exams.

Labs (40% of your final grade)

Labs sessions are weekly, with much of the required work due **prior** to the lab week. Labs that are scheduled as **synchronous** are **mandatory**.

It is preferred that you attend the virtual lab room (link in your Brightspace page) for the lab section that you are registered. However, if you need to attend an alternate lab time (either short- or long-term), contact Isabelle.Aube@dal.ca and we will do our best to accommodate.

Labs have been designed for you to practice the skills you need in science and beyond:

- Critical thinking
- Initiative, self-motivation and self-assessment
- Planning, organizing and time management
- Data collection and analysis
- Data presentation, interpretation and synthesis
- Scientific research and writing
- Collaboration – working in groups
- Communication – through collaboration, writing and discussions

Pre-Lab Quizzes

You will have and **orientation quiz** for which you **must achieve 100%** to gain access to the other **5 pre-lab quizzes**, each worth **1%** (see schedule). Each quiz will give you feedback as you progress and unlimited attempts, so feel-free to take the quiz as many times as you like up to the deadline. Quizzes will be available for 1 week prior to the deadline and cannot be taken after the deadline has passed.

Latecomers must contact Isabelle.Aube@dal.ca to obtain special access to closed quizzes.

Lab Assignments and Other Submissions

There will be 2 types of assignments:

- 1) the semester-long plant competition experiment that has specific due dates for the different components
- 2) other self-contained weekly lab assignments

An electronic copy of each assignment **must** be submitted online in the associated Brightspace dropbox by the deadline. You will have access to unlimited submissions; however, the teaching team will only mark the latest completed submission. Late marks will apply if you need to resubmit a completed version after the due date.

Pro-tip: Well-before the deadline, submit the work that you have completed so far, followed by a final version closer to the deadline. That way you will not have to worry about computer failures or other complications preventing you from submitting an assignment on time.

Note: For your first assignment, as a working group you will need to complete and submit your **competition experiment worksheet (draft)** by **11:59 pm** the day before your first synchronous group meeting with your TA the week of **Sep 14-18** (see schedule).

You will be given **guidelines for the figures, tables and formatting that must be meticulously followed** because this is a requirement in science. You will not be given a “recipe” or rubric in advance to follow. It will often be left up to you to make judgments about what to include or how to approach a question, this is the critical thinking aspect of the assignments and providing a detailed rubric robs you of this practice.

You will be provided with the **rationales and examples** in the lab to help you understand the requirements and guide your thinking. You will also have **small and large group discussions** to gain a broader and deeper understanding of ideas and concepts. The instructor and TAs will never give you the answers to assignment questions but instead direct your thinking toward the answers you are looking for.

Late Assignments: All assignments will be considered late if submitted after the deadline. A **10% penalty per day** (30% for weekends) is levied on late assignments. Late assignments will **not** be accepted after graded papers have been handed back.

Assignment Back-ups: It is the student's responsibility to keep backup copies of all submitted class work. Computers meltdown often, back up your work in the cloud or email it to yourself.

Assignment Marking Framework

Not all assignments are graded but all need to be completed to get a full understanding of the concepts. Non-graded **assignments drafts** that are submitted late, incomplete or not at all will result in a **5% penalty** on the future graded assignments. Feedback on assignments drafts will be discussed in 1-on-1 or 1-on-group sessions with your TA. You will be asked a series of reflective questions about your work in the feedback sessions but also as part of some of the assignments themselves. Your reflections will not be marked but this is where we will provide more detailed feedback to help you hone your ability to assess and improve the quality of your work.

Evidence shows that when you assess the quality of your own work, you are developing the ability to critique how you did something and learn from your mistakes (Weimer 2014). This is a crucial step in your learning and will greatly help you to understand the material and improve your work. Critically assessing your work and improving it based on your assessment are essential skills in all professions. Mastering any skill takes practice, so continually using them is vital in developing your assessment skills and preparing you for the work force (Weimer 2014).

Therefore, the onus is on you to take the feedback you get and go back to the guidelines and assignment details to identify where you may have gone wrong, and come up with specific questions for clarification to bring to the TA or Isabelle Aubé (isabelle.aube@dal.ca) if needed.

For all assignments, you will be assessed on:

- your ability to follow guidelines where they are specified
- the quality of your work
- your understanding of the concepts
- your ability to convey that understanding

Note: Time and effort are not on the list because they cannot be objectively assessed, so please do not come and request a higher grade with these as a rationale. Carefully read all your feedback, look at the marking framework and come with specific questions. This will enhance your understanding and grow your ability to self-assess.

Your work will be assessed using the following framework. Indicated below is what inadequate (F) and excellent (A) represent in the context of this class and the rest is a sliding scale. The generality of the framework allows you to think critically about what is needed and gives you the flexibility to be creative while still being rigorous and building your scientific thinking and communication skills. This framework parallels the Dalhousie University Grade Scale and Expectations.

Inadequate:

- inappropriate presentation and analysis of the data
- followed few to none of the guidelines for the layout of figures, tables and their associated captions
- incorrect interpretation of the data and analyses
- demonstrated a limited understanding of the necessary background, context and underlying concepts
- included only the minimum level, unnecessary or excessive amount of detail in the explanation
- demonstrated a limited ability to draw scientific conclusions based on data, integrate results with scientific literature and discuss the importance of results to science and society
- information poorly conveyed (not succinct, illogical, unfocused, redundant or lacking clarity)

Excellent:

- best and complete way to present and analyze the data
- used a thoughtful design for the layout of figures and tables (e.g. concise tables, multi-panel figures, etc.) and their associated captions in addition to following all the guidelines
- correct and complete interpretation of the data and analysis
- demonstrated an exceptional understanding of the necessary background, context and underlying concepts
- included an appropriate amount of detail in the explanation
- drew insightful conclusions based on data, demonstrated an exceptional ability to integrate results with literature and displayed critical thought in discussing the importance of results to and their implications for science and society
- clearly and thoughtfully conveyed information with a logical structure clearly linking ideas

Missed Course Requirements

- Students are responsible for all material covered in the class. However, Dalhousie University recognizes that you may experience short-term (3 consecutive days or less) physical or mental health conditions, or other extenuating circumstances (such as caregiving duties; immediate family illness, injury or death; involvement in an accident; legal proceedings or being a victim of a crime, domestic or intimate partner violence) that may affect your ability to attend required classes, tests, exams or submit other coursework.
- Holiday travel and heavy course load are not exceptional circumstances and will not be accommodated.
- You will be allowed to use the **Student Declaration of Absence (SDA)** form **once** in BIOL 2060 and there are exceptions for when you can use them (see below). You must submit your fully completed form using the **dropbox** in Brightspace. To be eligible for any accommodation, **your SDA must:** be complete (no blanks or missing information), include the reason for your absence, and be submitted within 3 days of your absence. You must also notify Isabelle Aubé (Isabelle.Aube@dal.ca) that you submitted an SDA.
- ****New for the Fall/Winter 2020/21 terms**:** medical notes will not be required for any subsequent short- or long-term absences, including for the midterm and final exams. Instead, you **must notify Isabelle Aubé (Isabelle.Aube@dal.ca) about your absence from labs or exams as soon as possible (ideally prior)**, for any accommodation to be considered. See the University Policies and Statements section of this syllabus for more information.
- SDAs are not a free pass; they replace a sick note which means that **you are still responsible for completing missed course requirements**. If you knowingly provide false or fraudulent medical or other documentation (including the SDA form) for your absence, you will have committed an academic offense and are subject to University discipline (per Section 7 of Dalhousie's Code of Student Conduct).
- You cannot use the SDA for the following:
 - Forest Succession Poster (Assignment 8) and Competition Experiment Paper (Assignment 9): You have 2 weeks to complete your paper and poster and the poster has an online peer-evaluation component. Only long-term absences (see definition below) are acceptable grounds for an extension on these 2 assignments. In that case, **prior** arrangements must be made with appropriate written documentation.
 - Final Exam: Requests for alternate arrangements for missed University-scheduled **final** exams are handled under a separate University regulation: Requests for an Alternative Final Examination Time
- Exception: You do not need an SDA if you already have an accommodation plan in place that allows for coursework deferrals or deadline extensions. You do need to contact Isabelle Aubé (isabelle.aube@dal.ca) in advance (usually at the start of the course) to initiate your plan.

- “Long-term absence” refers to absences of more than three (3) consecutive days due to major or chronic physical or mental health conditions, or other extenuating circumstances such as caregiving duties; immediate family illness, injury or death; involvement in an accident; legal proceedings; being a victim of a crime, domestic or intimate partner violence. If this applies to you, get in touch with Isabelle Aubé (isabelle.aube@dal.ca) as soon as possible to help determine the best way to move forward.

Student Collaboration and Communication

Even though our labs are taught in an online environment, you will still be strongly encouraged to collaborate with your classmates on all assignments since this is how you will get different perspectives and insights. However, you must also be mindful that successful collaborations and group work are based on important criteria, as summarized by Clark and Mayer (2011) in Table 2 below. You are encouraged to **discuss these 3 success criteria at the start of all collaborative group projects** so that everyone’s expectations and goals are clear. You can apply this guideline in other courses too!

Table 2. Criteria for successful collaborations (Clark and Mayer, 2011).

Success Criteria	Description
Social Interdependence	The goal of each team member depends on the achievement of all other members.
Outcome Goals	The desired results of the collaboration, such as individual learning or quality of a team project.
Dialog Quality	Substantive contributions made by all parties with no one ignored.

However, for this course there is only 1 mandatory group submission. All other submissions are individual, or you have the choice to submit the competition experiment components as a group. This means you must ensure that even though you collaborate that your individual assignments are your own work. **Pro-tip:** To ensure maximum benefit with minimum chances of plagiarism, after you have discussed ideas with your classmates take some time to think independently before writing down your notes. We will be using **Urkund** in Brightspace to analyse assignment dropbox submissions for plagiarism. Your Urkund report will be available after we have graded your work. If you have any questions or concerns about this, please contact your TA or Isabelle Aubé (isabelle.aube@dal.ca).

Brightspace: Your Brightspace course page (<https://dal.brightspace.com/d2l/login>) is your main point of contact for all your course needs. It is important that you monitor and navigate to the Announcements, Calendar, Content, Discussion Boards, Assignments & Quizzes (plus feedback), and Gradebook regularly, and several times a week. When participating in online communications such as posting on the Discussion Board, it is important that you follow proper “**netiquette**” guidelines (see Brightspace Orientation Unit). **Pro-tip:** on the top right corner of your home Brightspace page, click on your name, and on “Notifications” to control how you receive these.

Email: Check your Dalhousie email daily! This is an additional route for communication between the teaching team and students on aspects not covered by the Brightspace course page.

Discussion Board Participation: Each student is required to post to the Discussion Board **at least twice** during the term: at least once before the Midterm Exam, and at least once before the Final Exam (but after the Midterm). Each post will be worth **up to 1% each (max 2% total)**. For full marks, each post must create or advance good quality discussions, can be a new post, an answer, or comment to a previous post, and must follow “**netiquette**” guidelines. For examples of good quality posts that would be worth full marks, see the Discussion Board Module in the Brightspace Course Orientation Unit.

University Policies and Statements

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

Missed or Late Academic Requirements due to Student Absence

As per Senate decision instructors may not require medical notes of students who must miss an academic requirement, **including the final exam**, for courses offered during fall or winter 2020-21 (until April 30, 2021).

Information on regular policy, including the use of the Student Declaration of Absence can be found here:

https://www.dal.ca/dept/university_secretariat/policies/academic/missed-or-late-academic-requirements-due-to-student-absence.html.

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

Tips to avoid plagiarism:

- **Never** lend your completed or partially completed report
- **Do not** borrow a classmate's report
- **Do not** use old reports from previous terms
- **Never** simply submit 2 identical copies of tables and graphs that you and a classmate have been collaborating on.
- You must **make the report your own, independent piece of work** in all respects; otherwise you will have "copied", thereby committing an academic offence.

Copyright Disclaimer

The course material on our Brightspace course page has been posted for your personal educational use only. Copying course material from this site for distribution (e.g. uploading material to a commercial third-party or public website, or otherwise sharing these materials with people who are not part of the class) outside of this site may be a violation of Copyright law. If you have questions regarding copyright, please contact the Copyright Office (copyright.office@dal.ca).

If you have questions regarding the use of materials from our Brightspace course page, or have any academic integrity concerns, please contact Isabelle.Aube@dal.ca, or your Teaching Assistant.

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

Multitasking: One of the biggest issues associated with BIOL 2060 is multitasking on your computer and phone in lecture or lab. Research by Fried (2008) and Sana et al. (2013) has shown that **students multitasking on their laptop in class did not understand the material as well** as those who did not multitask! Both studies also found that the performance of the **students sitting around the multitasker** was also negatively affected because the multitasking was distracting! So avoid looking at anything other than class material on your computer in lecture or lab so that you and your neighbours can focus on learning!

When you multitask you are in direct violation of section C.2. Disruption of the code of conduct.

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

Student Resources and Support

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 Students 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

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>

References

- Clark RC and Mayer RE. 2011. E-learning and the science of instruction: proven guidelines for consumers and designers of multimedia learning. 3rd Ed. San Francisco (CA): Pfeiffer. 527p.
- Fried CB. 2008. In-class laptop use and its effects on student learning. Comp. Edu. 50:906-914
- Sana F, Weston T, Cepeda NJ. 2013. Laptop multitasking hinders classroom learning for both users and nearby peers. Comp. Edu. 62:24-31
- Weimer M. 2014. Prompts to Help Students Reflect on How They Approach Learning: The Teaching Professor. Magna Publications; [accessed 2020 Aug 12]. <https://www.teachingprofessor.com/topics/for-those-who-teach/prompts-help-students-reflect-approach-learning/>