

University of Victoria
Department of Biology
BIOL 336 – Biology of Algae
Winter Session – Second Term 2023 (202301)
A01 - CRN 20413 – 1.5 units

Course Description:

This course will examine aquatic and terrestrial algal diversity, with a special emphasis on marine algae. By the end of the course, you will know about the ecology, physiology, cell biology, evolution and technological applications of algae. Through discussions in this course, you will be able to critically reflect on the current and future effects of climate change on algal eco-physiology and therefore, on biological systems. You will also observe and identify microscopic and macroscopic algal specimens in the laboratory, conduct a field trip to a coastal local environment (intertidal) and learn how to critically analyze and interpret data collection from the field.

We aim to delivery an enjoyable course experience and provide you with the opportunity to become knowledgeable about the diversity and importance of algae on Earth. We are committed to providing and protecting a supportive and respectful learning environment for all of you. We care about your learning and will provide you with the necessary tools to help you succeed in the course. At the same time, you need to understand the course expectations and requirements (see below).

Course Instructor:

Dr. Diana Varela
Office: Bob Wright Centre A333
Email: dvarela@uvic.ca
Office phone: 250-472-5425
Office hours: By appointment

Laboratory personnel:

Laboratory Coordinator and Teaching Assistant: Viktorie Kolatkova; vkolatkova@uvic.ca
Teaching Assistant: Brian Timmer; briantimmer@uvic.ca

Delivery mode:

Face-to-Face (lectures, laboratories and exams)

Lectures:

- Monday and Thursday, 11:30 AM – 12:50 PM, Cunningham Building, Room 146.
- Face-to-Face lectures start on Monday January 9, and end on Thursday April 6.
- Lecture schedule can be found in a separate document posted in Brightspace.

Laboratories:

- Monday, Tuesday and Wednesday, 2:30 PM – 5:20 PM, Petch Building, Room 107.
- Face-to-Face labs start on the week of January 16, and end on the week of March 27.
- You can only attend the lab section in which you are officially registered.

- There is no printed laboratory manual for purchase. Sections of the manual required for each lab will be posted in the course Brightspace site a week before the lab. Please download and read the documents/files before the start of each lab.
- Lab schedule can be found in a separate document posted in Brightspace and in the General Introduction of the lab manual.
- Relevant information related to the lab component of the course is provided in this syllabus, the lab manual and will be discussed during the first lecture and the first lab.

Textbook:

We will use *Algae*, by **Graham, Graham, Wilcox and Cook (3rd Ed)**, which is available digitally through the UVic library using your Netlink and password [here](#) (click on 'view full text').

Please note that, as a UVic student, you are permitted to view and download the PDF for the purpose of education and research without cost, but due to copyrights you cannot share this PDF with anyone or post it in file-sharing websites. An e-copy of this book is available through the [author's website](#) as a digital purchase. Note that a new edition (4th) of this e-book is available (USD40) at this site.

Hardcopies of the 1st and 2nd Ed. of this book are also available in the lab (to use during lab time).

Course Brightspace site:

The instructor will post lecture notes on the Brightspace site regularly. There will also be lab-related material, results from exams, general announcements and others. Students are responsible to check the site for postings and updates before coming to the lectures and labs.

Evaluation:

Lecture Component:

<i>Midterm Exam 1 (February 9th)</i>	15%
<i>Midterm Exam 2 (March 16th)</i>	15%
<i>Final Exam (during Final Exam Period, date TBD)</i>	30%

Laboratory Component:

<i>Lab Exam (March 6th)</i>	18%
<i>Individual Weekly Lab Assignments (Labs 1-9 @ 1.5% each)</i>	13.5%
<i>Individual Field Trip Written Report (due April 3rd)</i>	8.5%

Final Course Mark **100%**

Grading and Posting: Check [here](#) the official grading system for the University of Victoria.

Course Expectations and Requirements:

We hope that the following clarifies the course rules and how to succeed in the course:

- *As indicated in the UVic Undergraduate Calendar under [Evaluation of Student Achievement](#), students are required to achieve satisfactory standing in the lecture and laboratory component of the course, i.e. **a passing grade (≥50%) in BOTH the lecture and the laboratory components must be obtained to pass this course.** Furthermore, students who do not pass the laboratory component will not be permitted to write the Final course examination.*

- ***You are expected to be engaged in every component of this course: participate in lectures, write all exams and attend/complete lab work.***
- **To complete the course, you are required to complete the Academic Integrity Quiz** in Brightspace and submit the completion certificate to the Brightspace BIOL 336 site by January 31st.
- **To complete the lecture component (and get credits for the course), you are required to write the Lecture Final Exam** during the Final Exam Period. **Failure to complete the Final Exam will result in an incomplete grade (N).**
- If you must miss one or both of the Lecture Midterm Exams, you must notify Dr. Varela as soon as possible and provide a *valid reason* according to the Academic Concession rules (see below). If excused, the 15% of the missed Midterm will be re-distributed in the following manner: 5% to the other Midterm (which will be worth 20%) and 10% to the Final Exam (which will be worth 40%). If you are excused from missing both Midterm Exams, your Final Exam will be worth 60% of the total course grade. If you are not excused from the missed Midterms, you will receive a zero for the missed Exams.
- If you must miss or expect to miss the Final Exam *for a valid reason*, please notify Dr. Varela as soon as possible. When you are able to do so, you can request a [deferral](#) for the Final Exam (see below under Academic Concessions).
- **To complete the laboratory component (and get credits for the course), you are required to (a) attend and complete at least 7 out of the 9 face-to-face labs (i.e. you cannot miss more than 2 weekly lab sections and assignments, even for valid reasons), (b) write the lab exam and (c) submit the individual field trip report. Failure to complete one or more of these requirements (a, b or c) will result in an incomplete grade (N).**
- If you must miss a weekly lab (including the field trip), the lab exam or the deadline for submission of the field trip report, for a *valid reason*, you must notify Dr. Varela and the Laboratory Coordinator (Viktorie Kolatkova) as soon as possible
- If you are excused from the missed weekly lab (not more than 2), your final lab mark will be re-calculated; you will not incur any penalty. Missed weekly labs cannot be done earlier or later when the course is in session, and cannot be deferred after the course is finished.
- If you must miss the lab exam, you may request an [in-course concession](#). A *single date* for the deferred lab exam will be set (soon after March 6th and before the end of the course on April 6th) for all students who missed it for valid reasons. Due to conflicts with running weekly labs, the deferred lab exam may need to be scheduled outside regular class/lab hours. Students will only have one chance to defer a lab exam. The lab exam cannot be deferred after the end of the course on April 6th.
- If you must miss the deadline for the field trip report, you may request an [in-course concession](#) if you plan to finish it before final grade submission, or a [deferral](#) if you need to complete it after final grades are submitted.
- Exams (lecture midterms, lecture final and lab exams) cannot be written early under any circumstances.
- No supplemental exams or assignments will be offered in this course. In other words, you cannot rewrite any exams or provide extra assignments in order to improve your grade.
- Travel plans are not a valid reason for missing labs, exams or any assignment deadlines. The date for the BIOL 336 Final Exam will not be known until the final exam schedule is posted later in the term. The final exam period runs between April 11th and 26th in 2023. You are safe to make travel arrangements for *after* that period.

- *Please read carefully the Academic Concession Regulation and Guidelines (links below).*
- All exams may be of mixed format (definitions, multiple choice, short answer, and longer multi-part or essay questions). All lecture course materials (e.g. instructor commentaries, class discussions and figures, posted notes, and assigned readings from papers from the primary literature) are fair game for lecture exams. The textbook readings will help you to supplement the lecture material and provide you with additional insight and illustrations, and in-depth explanations. The Final Lecture Exam is cumulative. The Lab Exam will include visual identification of specimens and/or their parts that were studied during the weekly lab sections, and material included in the documents posted in Brightspace for each lab.
- Students who require special arrangements in this course should obtain a referral from the [Centre for Accessible Learning](#) (CAL), which must be sent to Dr. Varela *at the beginning* of the term (first 10 days).

Academic Policies and Regulations:

Undergraduate policies and academic regulations are described in the [UVic Undergraduate Calendar](#). Please read the appropriate parts of the 2022-23 University Calendar ([January edition](#)), regarding your rights and obligations. Specifically, read very carefully the Academic Concession Regulation/Guidelines, the Policy on Academic Integrity and Academic Important dates:

- [Academic Concessions Regulation](#) and [Academic Concession Guidelines](#)

The university recognizes its responsibility to offer academic concessions to students whose ability to complete course requirements is interrupted by: 1) unexpected and unavoidable circumstances or 2) conflicting responsibilities. Please refer to these Calendar sections when determining what is a 'valid reason' to request an Academic Concession and the process for requesting a concession. In the following [link](#) you will find a summary of the academic concession process and the required forms.

- [Policy on Academic Integrity](#)

It is your responsibility to understand the University's [policy on academic integrity](#).

Other helpful resources that can help you to ensure that academic integrity is maintained are found in the [UVic Library's plagiarism guide](#) and the [UVic Learning and Teaching Support and Innovation site](#). The instructors of this course reserve the right to use plagiarism detection software or other platforms to assess the integrity of student's work. Please note that all lecture notes, course materials, and exams are the intellectual property of the instructor/university, and are made available to registered students in this course for instructional purposes only. Distributing lecture notes or exams without the instructor's permission through note-sharing sites or other means may violate the Policy on Academic Integrity.

Academic integrity is intellectual honesty and responsibility for academic work that you submit individually or as group work. It involves commitment to the values of honesty, trust, and responsibility. It is expected that students will respect these ethical values in all activities related to learning, teaching, research, and service. Therefore, plagiarism and other acts against academic integrity are serious academic offences.

The responsibility of the institution

Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.

The responsibility of the student

Plagiarism and cheating sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor. Depending on the severity of the case, penalties include a failing grade for the work or for the course, a record on the student's transcript, or a suspension.

Academic important dates:

Check [here](#). It is the student's responsibility to attend to Add/Drop dates published in the Calendar. Students must not assume they will be dropped automatically from any course they do not attend. It is also the students' responsibility to check their records and registration status. In addition, students need to check the Calendar course descriptions for all currently registered courses and transfer credits to check for duplicate or mutually exclusive (DUP or M/X) courses that would result in denial of course credit and/or influence eligibility for student loans.

Other helpful UVic links:

- [UVic Learn Anywhere](#)

- [Sexualized Violence Prevention and Response](#)

- [Student Affairs:](#)
 - [Academic Advising Centre for the Faculties of Humanities, Science and Social Sciences](#)

 - [Student Wellness Centre:](#)
If you need to book an appointment to meet with a counsellor, nurse, physician or spiritual care provider, call 250-721-8563, or book in-person at the [Student Wellness Centre](#) (HWB).

 - [Office of Student Life](#)

 - [International Centre for Students](#)

We acknowledge and respect the ləkʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

LECTURE SCHEDULE

BIOL 336 - 202301

Face-to-Face lectures are held in the **Cunningham Building, Room 146**

LECTURE TOPICS (January 9 to April 6):

- Introduction to Algae and Algal Diversity
- Origins of Photosynthetic Organisms
- Algae and Nutrient Cycles
- Prokaryotic Algae: Cyanobacteria
- Evolution of Eukaryotic Algae
- Euglenoids
- Cryptomonads
- Haptophytes
- Dinoflagellates
- Photosynthetic Stramenopiles I: Diatoms
- Photosynthetic Stramenopiles II: Chrysophyceans, Raphidophyceans and Xantophyceans
- Photosynthetic Stramenopiles III: Phaeophyceans
- Red Algae
- Green Algae
- Phytoplankton Eco-Physiology
- Seaweed Eco-Physiology
- Harmful Algal Blooms
- Technological Applications of Algae
- Algae in Extreme Environments and in Biotic Associations
- Current Topics in Climate Change

LECTURE EXAMS and READING BREAK:

February 9	LECTURE MIDTERM EXAM 1
Week of February 20	<i>READING BREAK – No lectures or labs</i>
March 16	LECTURE MIDTERM EXAM 2
Date TBD (Final Exam period, between April 11 - 26)	LECTURE FINAL EXAM

LABORATORY SCHEDULE

BIOL 336 - 202301

Face-to-Face labs and Lab Exam are held in the **Petch Building, Room 107**
(except when specified*)

Lab #	Date (Week of)	Lab Topic
1	Jan 16	Introduction, Review and Classification
2	Jan 23	Cyanobacteria
3	Jan 30	Euglenoids, Haptophytes and Dinoflagellates
4	Feb 6	Photosynthetic Stramenopiles Part 1 (Diatoms, Chrysophytes, Xanthophytes)
5	Feb 13	Photosynthetic Stramenopiles Part 2 (Phaeophytes) and Kelp Biomechanics
-	<i>Feb 20</i>	<i>READING BREAK - No labs or lectures</i>
6	Feb 27	Rhodophytes, Chlorophytes and Streptophytes
-	Mar 6	LAB EXAM
7*	Mar 13	Seaweed Intertidal Field Trip – Data Collection*
8	Mar 20	Field Trip Data Analysis
9	Mar 27	Phytoplankton Eco-Physiology
-	Apr 3	No formal labs - <i>Field Trip Written REPORT Due 11:59 PM (i.e. before midnight)</i>

*Lab #7 will not be held in the Petch 107 room, but will take place in a local intertidal area (details will be provided later in the term).