

University of Victoria
Department of Biology
BIOL 336 – Biology of Algae
Winter Session – Second Term 2019 (201901)
A01 – CRN 20352 – 1.5 units

Course Description:

We will examine aquatic and terrestrial algal diversity, with a special emphasis on marine algae. We will consider the ecology, physiology, cell biology, evolution, and technological applications of algae. Laboratories will include observations of microscopic and macroscopic algal specimens, a local field trip to the intertidal and data analysis, and an oral/poster presentation.

Course Instructor:

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

Lectures:

- Monday and Thursday - 11:30 p.m. – 12:50 p.m., Engineering/Computer Sciences building (ECS) 104.
- Lectures start on Monday January 7, and end on Thursday April 4.

Laboratories:

- Monday and Tuesday - 2:30 p.m. – 5:20 p.m., Petch building (PCH) 107.
- Lab sections are full so you can only attend the one section in which you are officially registered.
- Labs start on January 14 and end on March 26.
- Please bring a copy of the Laboratory Manual to every laboratory. The Laboratory Manual can be purchased from the UVic bookstore.
- Lab schedule can be found in this syllabus (page 6) and in the Laboratory Manual (page 4). The lab manual also has relevant information related to the lab component of the course.

Laboratory personnel:

Laboratory Coordinator: Dr. Emma Shelford; Email: ebrownle@uvic.ca
Laboratory Instructor: Katrina Nikolich; Email: katrinan@uvic.ca

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 at the following site:

<http://voyager.library.uvic.ca/vwebv/holdingsInfo?bibId=4326920>

Please note that, as a UVic student, you are permitted to view and download the PDF without cost, but due to copyrights you cannot share this PDF with anyone or post it in file sharing

websites. For anyone else (non-UVic), this e-book is available as a digital purchase (USD40) through the author's website (www.ljlmpress.com/algae.html).

Please also note the UVic Fair Dealing Statement: "This copy was made pursuant to the Fair Dealing Guidelines of the University, library database licenses, and other university licenses and policies. The copy may only be used for the purpose of research, private study, criticism, review, news reporting, education, satire or parody. If the copy is used for the purpose of review, criticism or news reporting, the source and the name of the author must be mentioned. The use of this copy for any other purpose may require the permission of the copyright owner."

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

Course Website:

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

Evaluation:

Lecture Component:

Midterm Exam (Thursday February 14)	20%
Final Exam (Date TBD)	38%

Laboratory Component:

Lab Exam (March 4-5)	17%
Individual In-class Assignments (Labs 1-6 @ 1.5% each)	9%
Field Trip & Data Analysis (Labs 7-8) and Written Report (due April 2)	10%
Poster/Oral Presentation (Lab 9)	6%

Final Course Mark: 100%

Exams and Grading Policy:

- **Students must achieve a passing grade (≥50%) in BOTH the lecture and the laboratory components to pass the course.**
- As indicated in the University Calendar, students who do not pass the laboratory component will not be permitted to write the Final course examination.
- You are required to write all exams. If you must miss the Midterm exam for a *valid well-documented reason* (illness, accident, family affliction or sporting commitments as a UVic athlete), you must notify Dr. Varela as soon as possible and provide suitable and *original* written documentation (from a medical doctor, counselor or UVic coach). If excused, your Final exam will be worth 58% of your final course mark. If you are not excused from the missed exam, you will receive a zero for the missed midterm.
- Exams cannot be written early under any circumstances. However, the Final exam can be deferred for a valid well-documented reason (see above). If you miss or expect to miss the Final exam for any of these reasons, please notify the course instructor as soon as possible. When you are able to do so, you must apply for academic concession using a *Request for Academic Concession* form that can be found in the Office of the Registrar's website.

- You are also required to attend the weekly laboratory sections, complete all laboratory assignments and write the lab exam. If you must miss a laboratory section, the field trip, the presentation and/or the lab exam for a valid well-documented reason you must notify Dr. Varela and Dr. Shelford as soon as possible and provide suitable and original written documentation (see above). If you are excused from the missed lab work, the course instructor will inform you as to how your final lab mark will be calculated; you will not incur any penalty.
- You must complete all portions of the course (including the lab exam, written report and presentation) to get credits for this course.
- You cannot miss more than 2 weekly laboratory sections, even for valid well-documented reasons, to get credits for this course.
- Travel plans are not a valid reason for missing laboratories, the presentation, 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 last day for Final exams this term is Saturday April 27. You are safe to make travel arrangements for *after* that date.
- 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.
- Students who require special arrangements for testing should obtain a referral from the Centre for Accessible Learning (CAL) office *at the beginning* of the term.
- All exams may be of mixed format (definitions, multiple choice, short answer, and longer multi-part or essay questions). All lecture course materials (*i.e.* 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 lab exam will also include visual identification of specimens and/or their parts that were studied during the weekly lab sections.

Grading and Posting:

The following table shows the official grading system for the University of Victoria:

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

F: Unsatisfactory performance, wrote final exam and completed course requirements, no supplemental.

N: Did not write final exam or complete course requirements by the end of term, no supplemental.

Freedom of information legislation allows the instructors to post full student numbers and grades, with names stripped out. Students have the right to refuse grade posting but must inform the instructor in writing at the beginning of the course. Final grades will be made available no sooner than one week after the Final Exam.

Academic Regulations:

- It is your responsibility to understand the University's policy on academic integrity. Please check the University's Academic Integrity Policy:
<https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/academic-integrity.html>
<http://www.uvic.ca/learningandteaching/students/resources/expectations/index.php>
<http://library.uvic.ca/instruction/cite/plagiarism.html>

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 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 warning, a failing grade, a record on the student's transcript, or a suspension. Read pages 11 and 12 of the Lab Manual for additional information.

- Please read the appropriate section of the 2018-19 University Calendar (<https://web.uvic.ca/calendar2019-01/pdfs/undergraduate-201901.pdf>), particularly the Undergraduate and Faculty of Science sections, regarding your rights and obligations. **For important dates, please check** https://web.uvic.ca/calendar2019-01/pdfs/undergraduate-201901_Part2.pdf. It is the student's responsibility to attend to ADD/DROP dates published in the Calendar and posted on the Undergraduate Records website. 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 (<http://www.uvic.ca/registrar/>). In addition, students need to check the Calendar course descriptions for all currently registered courses and transfer credit 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.

Course Experience Survey (CES):

Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback regarding the course and the instructor's teaching, as well as to help the department improve the overall program for students in the future. Results are available to course instructors only after final grades have been submitted.

The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device. You will be reminded and provided with more detailed information nearer the time. Please consider this important activity.

UVic is committed to promoting, providing and protecting a supportive and safe learning and working environment for all its members.

LECTURE SCHEDULE

BIOL 336 - 201901

Lectures are held in ECS 104

Date Range	Lecture Topic	
Jan 7 – Feb 11	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	
	Feb 14 (Thursday)	LECTURE MIDTERM EXAM – 75 min
	<i>Feb 18 – 22</i>	<i>READING BREAK - No lectures or labs</i>
	Feb 25 – Apr 4	Photosynthetic Stramenopiles II: Chrysophyceans, Raphidophyceans and Xantophyceans
Photosynthetic Stramenopiles III: Phaeophyceans		
Red Algae		
Green Algae		
Phytoplankton Eco-Physiology		
Seaweed Eco-Physiology		
Harmful Algal Blooms		
Algae in Extreme Environments and in Biotic Associations		
Technological Applications of Algae		
TBD (between Apr 8 - 27)	LECTURE FINAL EXAM – 3 hours	

LABORATORY SCHEDULE

BIOL 336 - 201901

Labs are held in PCH 107

Lab #	Date (Week of)	Lab Topic
1	Jan 14	Introduction, Review and Classification
2	Jan 21	Cyanobacteria
3	Jan 28	Euglenoids, Haptophytes and Dinoflagellates
4	Feb 4	Photosynthetic Stramenopiles Part 1 (Diatoms, Chrysophytes, Xanthophytes)
5	Feb 11	Photosynthetic Stramenopiles Part 2 (Phaeophytes)
-	<i>Feb 18</i>	<i>READING BREAK - No labs or lectures</i>
6	Feb 25	Rhodophytes, Chlorophytes and Streptophytes
-	Mar 4	LAB EXAM
7	Mar 11	Seaweed Intertidal Field Trip – Data Collection
8	Mar 18	Field Trip Data Analysis and Preparation for Presentations
9	Mar 25	Oral/Poster Presentations
-	Apr 1	No formal labs - <i>Field Trip Written Report Due at 4 PM on Apr 2</i>