

BIOLOGY 400 – History of Biology

Spring 2024

Department of Biology, University of Victoria

A. Basic Course Information

Course Description

The historical development of the major techniques and ideas of biology, including the significance of the important contributors to biology. The treatment will be part chronological, part topical.

Meetings

A01 (CRN 20398) – Tuesday, Wednesday and Friday, 12:30 – 1:20 PM, Bob Wright B150

Instructor

Dr. Greg Beaulieu

Office: 006 Petch

Email: gregoryb@uvic.ca. If you send an email, please put "Biology 400" in the message line.

Phone: 721-7140

Office hours: Wednesdays, 2:30 – 4:00 PM, or by appointment, or drop by

Prerequisite

Third year standing.

Readings

I will post pdfs of selected readings on the Brightspace site when they become relevant as we progress through the course. There is no text or course pack.

Course Website

Biology 400 has a Brightspace website. There you will find lecture notes, audio recordings of the lectures, notices, marks and links. You should look on the website before each class and bring the lecture notes posted there. The lecture note (in pdf form) that I post are skeletal notes only, and you should expand upon them during class with your own notes, questions, comments and clarifications.

Please be aware that the lecture notes are for personal use only and must not be published, distributed, sold or posted anywhere else.

Course Topics

- Introduction
- The roots of biology
- Biology in the ancient world
- The Islamic world and medieval Europe
- Hidden and mythical organisms
- The human body: the Scientific Revolution and after
- The early days of microscopy
- Biology and the emerging physical sciences: chemistry
- Describing and arranging organisms
- Biology and the emerging physical sciences: geology
- Evolution before Darwin
- Darwin
- Cells, the units of life
- Heredity
- Evolution and genetics come together
- The hereditary material
- TD Lysenko and Soviet biology

B. Evaluation

Components of your course grade

Packback participation	20% (See C below)
Midterm exam (Tuesday, February 27)	30%
Final Exam (April final exam period)	50%
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	100%

Writing the final exam is the essential component of the course. If you do not write the final exam, either at the regular time or deferred, you will receive a grade of N.

Midterm exam

Tuesday, February 27, in class, in person. Format: about 30 multiple choice questions, 45 minutes.

Final exam

The final exam will be written during the final exam period (Thursday, April 11 – Friday, April 26). The specific day and time will be arranged by the Registrar's office.

The final exam will be mixed format, with two parts.

Part 1 – There will be a noncumulative multiple choice section worth approximately half of the exam points; these questions will be concerned with material we have covered since the midterm.

Part 2 – The exam will also have an essay question that will require a written answer of 500 – 600 words or so; you will be asked to integrate various parts of the entire course in your answer to this question. This essay will be worth the other half of the final exam points.

Because the final exam period ends for all faculties on Friday, April 26, the university's last exam will be in the evening of that day. Your last exam might be on this date, or it might be sooner – you will know for sure only when the final exam schedule is drawn up and posted in February.

Travel plans are not a valid reason for missing a midterm or the final exam. Please do not make plans to leave Victoria in April without being sure that your final exams in all your courses will be over.

Exam Policy

No electronic devices will be permitted during the midterm or final exam.

If you must miss the midterm for a valid reason (illness, accident, personal or family affliction, participation in an important cultural, community or sporting event), your final mark will be calculated on the basis of the other components of the course, and you will not incur any penalty. If you expect to miss the midterm for any of the above reasons, please notify the instructor as soon as possible. You will not need supporting documentation if you miss the midterm for a medical reason, but you will need to show documentation for any other reason.

Deferred final exam

The final exam can be missed and deferred for the same reasons listed above for missing the midterm (illness, accident, personal or family affliction, participation in an important cultural, community or sporting event).

- If you expect to miss the final exam in April, please notify me as soon as possible, either by phone, email or in person, and tell me the reason. You will not need a note if it is a medical issue, but you will need a note for any other reason.
- To make your deferred status official in the eyes of the university, you must fill out a Request for Academic Concession (RAC) form, available from Undergraduate Admissions and Records in the University Center or online. The link below gives information on types of concessions and accommodations available to UVic students. For a link to the RAC form, scroll down to where it says “Able to complete the coursework . . .” and click on “After the end of term”.
<https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>
- A writing of the deferred final exam will be offered to you on Friday, May 3, 2024, 10:00 AM – 1:00 PM, in Engineering and Computer Science 116.
- If you cannot make the above May writing, your deferred final exam will be written in the last three days of July, at a time determined by the Exams office. They will notify you of the details.

Grading Policy

At the University of Victoria, grades are submitted by instructors as percentages. These will be converted to letter grades by the Registrar, according to this grading scale:

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

The only circumstances under which I change a submitted course grade are as follows: a) if I have made a calculation error; b) if a student has deferred the final exam, received an N, and then written a deferred final.

Please do not ask me to raise your percent grade in order to qualify you for a higher letter grade. I turn down all such requests.

You will receive an F in the course if your aggregate grade is less than 50% (rounded to the nearest whole number). It is not necessary to pass the individual course components – the Packback component, the midterm, or the final exam – in order to pass the course.

You will receive an N in the course if you miss the final exam in April and do not write a deferred final exam.

No supplemental final exam (second-chance final exam) will be given in this course, although, as described above, you may defer the final exam for any of the reasons given.

C. Packback

What is it?

Packback is an online platform for discussion among students. You will be contacted by the company about signing up.

Since Biology 400 has only third-year standing as a prereq, there are students from many different academic backgrounds registered here. That has always been one of the strengths of the course and one of its pleasures to me. I hope that Packback will be able to bring together students with different knowledge, ideas, viewpoints and values.

Cost

The cost is \$39 (CAN).

How it works, what you will do, and how you will be assessed

The idea behind the platform is that, every two weeks, you will post:

- one discussion question related to the course material in some way
- three responses to questions posted by other students

Each question and response is worth 3 points, for a total of 12 points every two weeks. You don't have to respond only to questions posted in the current two-week period; it's fine if you respond to earlier questions.

You should participate during every two-week cycle. You can't let a cycle slide and then post 2 questions and 6 responses in the next cycle.

The questions and responses will be assessed for their quality by the platform's AI. Questions that pertain to specific, easily-lookuppable matters get a low score; more open-ended questions score higher. The score a post gets is called its "Curiosity Score". I have set the minimum curiosity score at 60, which will be fairly easy to achieve. After the AI tells you what it thinks of your question or response, you may edit and improve it. It is only your edited post that will count, or your original post if you choose not to edit.

If the AI thinks your final post deserves a score of 60 or more, you get 3 points in the course grade book for that post. If your post goes below this 60 minimum, you will get 1.5 points. If you do not post at all that cycle, you get 0 points.

Although I have to allot marks for your Packback participation, you should not obsess about marks the way you might before a test. The minimum curiosity score of 60 is quite modest. The important thing is to enjoy participating in the discussions.

Your participation in Packback will be worth 20% of your course grade.

When you log in to Packback, there will be a button to click ("Packback Tutorial") to get you started.

Packback Deadlines

The deadline for your one question and three responses every two weeks is Saturday at 11:59 PM, PST or PDT. (Reading break does not count as a week.) The full list of deadlines:

Saturday, January 20, 11:59 PM (PST) – 1 question, 3 responses
Saturday, February 3, 11:59 PM (PST) – 1 question, 3 responses
Saturday, February 17, 11:59 PM (PST) – 1 question, 3 responses
Saturday, March 9, 11:59 PM (PST) – 1 question, 3 responses
Saturday, March 23, 11:59 PM (PDT) – 1 question, 3 responses
Saturday, April 6, 11:59 PM (PDT) – 1 question, 3 responses

A few more notes

If you post your question early in a cycle, you have a greater chance that other students will respond to it. So try to post your question in the first 3-4 days of a cycle.

I will not be looking at all your posts, but I will be reading some of them. This is for my own interest. I won't get upset if I read something I disagree with, and I will not interfere with the system's grading.

When you post either a question or a reply, please try to bear in mind and practice the valuable academic habit of respectful, impersonal discourse.

- Don't use foul language.
- Don't insult any person or any group of people. It's alright to disagree with a person or a group of people; disagreement by itself is not insult and is not "verbal violence". But don't call people names.
- Don't attribute someone's statements or values to group membership or identity ("You're just saying that because you are an X.") This is bad for two reasons. One, it is disrespectful stereotyping and assumes the person to be no more than a mindless member of a group, rather than a thinking individual. And two, it commits a logical fallacy, the Genetic Fallacy (evaluating the truth value of a statement according to who says it, or their motive for saying it, instead of the evidence for or against it).
- Practice humility. You're not right about everything. Nobody is. Maybe the point at issue is one of the things you are wrong about.

Finally, don't be discouraged if some of your questions do not get any responses. I have seen excellent, thought-provoking questions that nobody responded to. Some questions attract more responses than others, but this does not necessarily reflect on the quality of the question.

D. Important Dates

On the UVic website you will find a fuller list of important dates, but the ones listed below are the ones that will matter to students in this course and to students wishing to add the course. Items in **bold** are worth points in the course.

Monday, January 8	First day of classes for the Winter session, second term
Tuesday, January 9	First day of class for Biology 400
Saturday, January 20	Packback assignment 1 (1 question, 3 responses), due 11:59 PM (PST)
Sunday, January 21	Last day for 100% reduction in fees for standard courses
Wednesday, January 24	Last day for adding courses that begin in the second term
Wednesday, January 31	Last day for paying second term fees without penalty
Saturday, February 3	Packback assignment 2 (1 question, 3 responses), due 11:59 PM (PST)
Sunday, February 11	Last day for 50% reduction in tuition fees for standard courses
Saturday, February 17	Packback assignment 3 (1 question, 3 responses), due 11:59 PM (PST)
Monday, February 19	Family Day; university closed
Monday, February 19 – Friday, February 23	Reading Break; no classes

Tuesday, February 27	Midterm, held during regular class time; all multiple choice; 45 minutes; 30% of course grade
Thursday, February 29	Last day for withdrawing from full year and second term courses without penalty of failure
Saturday, March 9	Packback assignment 4 (1 question, 3 responses), due 11:59 PM (PST)
Saturday, March 23	Packback assignment 5 (1 question, 3 responses), due 11:59 PM (PDT)
Friday, March 29	Good Friday; university closed
Monday, April 1	Easter Monday; university closed
Friday, April 5	Last day of class for Biology 400
Saturday, April 6	Packback assignment 6 (1 question, 3 responses), due 11:59 PM (PDT)
Monday, April 8	Last day of classes for the Winter session, second term
Thursday, April 11	First day of final examinations period
Friday, April 26	Last day of final examinations period

E. University Resources, Statements and Policies

Club life

UVic has an active student club scene. Check out your choices; you might want to get involved. The friendships you make in class or outside of class will enrich your university experience, and can last long after your UVic career is over.

Diversity

This course welcomes all students, regardless of income level, political and social views, religion, age, nationality, ethnicity, gender and sexual orientation.

Part of the value of a university education comes from interacting with students with different backgrounds, opinions and world views. Curiosity, civility, and respect are the important guiding principles of these interactions.

Special Resources

Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

Counselling Services - *Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students.* <https://www.uvic.ca/services/counselling/>

Health Services - *University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.* <http://www.uvic.ca/services/health/>

Centre for Accessible Learning - *The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.*

<https://www.uvic.ca/services/cal/>

Public Health Policies

All staff and students are expected to abide by the guidelines provided by the University of Victoria (<https://www.uvic.ca/covid19/>).

Academic Integrity

The University of Victoria and the Department of Biology take academic integrity (including plagiarism) as a serious matter. Please read this:

https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V

UVic Territory Acknowledgment

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