

BIOLOGY 351 – THE BIOLOGY BEHIND THE NEWS

Spring 2023

Department of Biology, University of Victoria

A. Basic Course Information

Course Description

An examination of the biological science that bears on current environmental, social, ethical and political issues. Emphasis on how an understanding of the science might inform decision-making by individuals and groups.

Meetings

A01 – Tuesday, Wednesday and Friday, 3:30 – 4:20 PM, Human and Social Development A240.

Instructor

Dr. Greg Beaulieu

Email: gregoryb@uvic.ca. If you send an email, please put "Biology 351" in the message line.

Phone: 721-7140

Office hours: Thursdays, 1:00 – 2:00

Prerequisite

Third year standing.

Readings

- Required book

Science Fictions, by Stuart Ritchie. Paperback edition on sale in the UVic bookstore.

This is not a textbook, it is an analysis of some of the problems that have plagued science in recent years, including some of the science that percolates into the public sphere.

- Biology text

If possible, it also would be useful if you had a biology textbook close at hand, so you can read about some of the biology I will mention. If you already have a biology textbook from a previous course, you can use that. If you don't have a text, I have several in my office I am not using. You are welcome to borrow one for the term. Alternatively, you could buy one at Subtext or online. The edition does not have to be recent.

Brightspace Website

Biology 351 has a Brightspace site, on which you will find notices, marks, lecture notes and other things. You should bring the relevant lecture notes to each class; I will let you know.

Course Topics (aspirational)

Introduction

Seeing reason

Molecules

The chemistry of life, here and elsewhere

Biofuels

DNA markers and DNA fingerprinting

CRISPR

The Human Organism

Physiology of long-duration space flight

The immune system in fact and in fiction

Concussion and sports

Environment

Biological consequences of climate change

B. Evaluation

Components of your course grade

Packback participation	25% (See C below)
Midterm exam (Friday, March 3)	30%
Final Exam (April final exam period)	45%
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	100%

Writing the final exam and passing Packback participation are both essential components of the course. If you do not do both, you will receive a grade of N.

Midterm exam

Friday, March 3, in class, in person. Format: mixed multiple choice and written.

Final exam

The final exam will be written during the final exam period (Tuesday, April 11 – Wednesday, April 26). The specific day and time will be arranged by the Registrar's office. Format: mixed multiple choice and written.

Because the final exam period ends for all faculties on Wednesday, 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 the final exam. You can safely make travel plans for Thursday, April 27 or later, but don't make any plans to travel before this date until after the schedule has been posted and you know when you will be finished all your exams.

Exam Policy

No electronic devices will be permitted during the midterms 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.

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 the course coordinator (gregoryb@uvic.ca) as soon as possible, either by phone, email or in person.
- 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 5, 2023, 10:00 AM – 1:00 PM, in a room to be announced later. If you cannot make this date and time, 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 is if I have made a calculation error, or 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 midterm exam 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; or if you do not pass on Packback participation (50% or better).

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 probably have been contacted already by the company about signing up.

Since Biology 351 has only third-year standing as a prereq, there are students from many different academic backgrounds registered here. I hope that Packback will be able to bring together in courteous, respectful discussion students with different knowledge, ideas, viewpoints and values.

Cost

The cost is \$29 (CAN); it is less if you have used the platform in previous courses at UVic.

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

The idea behind the platform is that you will post one discussion question per week, related to the course material in some way, and respond to two questions from other students per week. Each question and response is worth 3 points, or 9 points per week total. You don't have to respond only to questions posted that week; it's fine if you respond to earlier questions. Your response will be time-stamped, and will count toward the current week's participation mark.

You should try to participate every week. You can't let the first week slide and then post 2 questions and 4 responses in the next week.

The questions will be assessed for their quality by the platform's AI. Questions that pertain to specific, easily-lookupable matters get low marks; 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. 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 the post. If your post goes below this 60 minimum, you will get 1.5 points. If you do not post at all that week, you get 0 points.

Although I have to allot marks for your Packback participation, you should not worry about marks the way you might worry before a test. The important thing is to enjoy participating in the discussions.

Your participation in Packback will be worth 25% of your course grade. The platform determines your grade, not me. Therefore I will not mark you up or down depending on what I read. In the calculation of your final Packback score, your lowest week will be tossed. Your score will therefore come from your best 9 weeks.

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 two responses each week is Saturday at 11:59 PM, PST or PDT. There will be no deadline the first Saturday of the term (January 14), nor the Saturday of Reading Break (February 25). The full list of deadlines:

Saturday, January 21, 11:59 PM (PST)
Saturday, January 28, 11:59 PM (PST)
Saturday, February 4, 11:59 PM (PST)
Saturday, February 11, 11:59 PM (PST)
Saturday, February 18, 11:59 PM (PST)
Saturday, March 4, 11:59 PM (PST)
Saturday, March 11, 11:59 PM (PST)
Saturday, March 18, 11:59 PM (PST)
Saturday, March 25, 11:59 PM (PST)
Saturday, April 1, 11:59 PM (PST)

Coupla more notes

I will not be looking at all your posts and replies, but I will be reading some of the posts every week. This is for my own interest. 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 is not insult. But don’t call people names.
- You’re not right about everything. Nobody is. Maybe the point at issue is one of the things you are wrong about.
- Don’t attribute someone’s statements or values to group membership (“You’re just saying that because you are an X.”) This is bad for two reasons. One, it is 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).

D. University Statements and Policies

Cheating and Plagiarism

The University and the Biology Department deal with cheating and plagiarism as a serious matter, since ignoring it could be interpreted as endorsing dishonest practice in one's later professional career. To claim ignorance of the University's policy on academic integrity is, therefore, not excused. Please read the policy carefully to avoid unpleasant misunderstandings. The policy can be found on the online UVic calendar:
<https://web.uvic.ca/calendar2022-01/undergrad/info/regulations/academic-integrity.html>

The University of Victoria Department of Biology reserves the right to use plagiarism detection software or other platforms to assess the integrity of student work.

UVic official territory acknowledgement

“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.”

E. Important Dates

On the UVic website you will find a fuller list of important dates, but the dates listed below are the ones that will matter to students in Biology 400 and to students wishing to add the course this term. Course-specific dates are bolded.

Monday, January 9	First day of classes
Sunday, January 22	Last day for 100% reduction of tuition fees for standard courses.
Saturday, January 21	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Wednesday, January 25	Last day for adding courses
Saturday, January 28	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Saturday, February 4	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Saturday, February 11	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Sunday, February 12	Last day for 50% reduction in tuition fees for standard courses. 100% of tuition fees will be assessed for courses dropped after this date.
Saturday, February 18	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Monday, February 20 – Friday, February 24	Reading break; no classes
Tuesday, February 28	Last day for withdrawing from courses without penalty of failure
Friday, March 3	Midterm exam, in class
Saturday, March 4	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Saturday, March 11	Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Saturday, March 18	Packback posts due (1 question, 2 responses) 11:59 PM (PST)

Saturday, March 25
Saturday, April 1

Packback posts due (1 question, 2 responses) 11:59 PM (PST)
Packback posts due (1 question, 2 responses) 11:59 PM (PST)

Thursday, April 6
Tuesday, April 11 –

Last day of classes

Wednesday, April 26

Final exam period