

# **BIOLOGY 400 – History of Biology**

**Summer 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 31196) – Monday, Wednesday and Thursday, 10:30 AM – 12:20 PM, David Turpin A110.

We will be taking a 10 minute break in the middle of each class.

### **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, 12:30 – 2:00 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, notices, marks and links. You should look on the website before each class and bring the lecture notes posted there. The lecture notes (in pdf form) that I post are skeletal notes only, and you should expand upon them during class with your own elaborations, 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Please be aware that the lecture notes are for personal use only and must not be published, distributed, sold or posted anywhere else.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 (tentative)**

- 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 (Thursday, June 6, in class) | 30%               |
| Final Exam (Thursday, June 27, in class)  | 50%               |
|   | <hr/>             |
|   | 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**

Thursday, June 6, in class, in person. Format: about 30 multiple choice questions, 60 minutes.

#### **Final exam**

The final exam will be written in class, on the last day of class (Thursday, June 27). You will have the full period (110 minutes) to write it.

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 final 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.

### **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 June, 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 Deferral form:  
[https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/forms/uvic\\_undergraduate\\_request\\_for\\_deferral.pdf](https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/forms/uvic_undergraduate_request_for_deferral.pdf)
- The link below gives more general information about types of concessions and accommodations available to UVic students. It might come in handy in other courses you take:  
<https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>
- A writing of the deferred final exam will be offered to you on Thursday, July 4, 2024, 10:00 AM, in a room to be announced later.
- If you cannot make either the regular time or the deferred time, please get ahold of me and we will make other arrangements.

### **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.**

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 June 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+tax(CAN).

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

The idea behind the platform is that, every week, 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 week. You don't have to respond only to questions posted in the current one-week period; it's fine if you respond to earlier questions.

You should participate during every weekly 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 week is Saturday at 11:59 PM, PDT. The full list of deadlines:

Saturday, May 18, 11:59 PM (PDT) – 1 question, 3 responses

Saturday, May 25, 11:59 PM (PDT) – 1 question, 3 responses

Saturday, June 1, 11:59 PM (PDT) – 1 question, 3 responses

Saturday, June 8, 11:59 PM (PDT) – 1 question, 3 responses

Saturday, June 15, 11:59 PM (PDT) – 1 question, 3 responses

Saturday, June 22, 11:59 PM (PDT) – 1 question, 3 responses

### **A few more notes**

If you post your question early in the week, you have a greater chance that other students will respond to it. It’s always gratifying when another student is interested enough in your question to post a response.

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 (of course).
- 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.

I've included some information from the company on the last page of this course outline. It tells you how to register, and it directs you to a YouTube video you should watch.

## **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, May 13           | First day of classes for the Summer session, and first day of class for Biology 400 (10:30 AM, David Turpin A110) |
| <b>Saturday, May 18</b>  | <b>Packback assignment 1 (1 question, 3 responses), due 11:59 PM (PDT)</b>  |
| Sunday, May 19           | 100% fee reduction  |
| Monday, May 20           | University closed (Victoria Day); course add deadline   |
| <b>Saturday, May 25</b>  | <b>Packback assignment 2 (1 question, 3 responses), due 11:59 PM (PDT)</b>  |
| Thursday, May 30         | 50% fee reduction   |
| <b>Saturday, June 1</b>  | <b>Packback assignment 3 (1 question, 3 responses), due 11:59 PM (PDT)</b>  |
| <b>Thursday, June 6</b>  | <b>Midterm, in class, Biology 400 (30% of course grade)</b>   |
| <b>Saturday, June 8</b>  | <b>Packback assignment 4 (1 question, 3 responses), due 11:59 PM (PDT)</b>  |
| Wednesday, June 12       | Course drop deadline; no fee reduction  |
| <b>Saturday, June 15</b> | <b>Packback assignment 5 (1 question, 3 responses), due 11:59 PM (PDT)</b>  |
| <b>Saturday, June 22</b> | <b>Packback assignment 6 (1 question, 3 responses), due 11:59 PM (PDT)</b>  |
| <b>Thursday, June 27</b> | <b>Final exam, in class, Biology 400 (50% of course grade)</b>  |
| <b>Thursday, July 4</b>  | <b>Deferred final exam, Biology 400 (50% of course grade) 10:00 AM, room TBA.</b>                                 |

## **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](https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V)

### **UVic Territory Acknowledgment**

“We acknowledge and respect the lək̓ʷəŋən 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.”

## Packback Questions

Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback Questions is an online community where you can be fearlessly curious and ask open-ended questions to build on top of what we are covering in class and relate topics to real-world applications.

### Packback Requirements

Your participation on Packback will count toward 20% of your overall course grade. There will be a submission deadline every Saturday (11:59 PM), from May 18 to June 22. In order to receive full credit, you should submit the following each week:

- One question (3 points); three responses to other students' questions (3 points for each response); minimum curiosity score of 60 for each question and response.

### How to Register on Packback

An email invitation will be sent to you from [help@packback.co](mailto:help@packback.co) prompting you to finish registration. If you don't receive an email (be sure to check your spam), you may register by following the instructions below:

1. Create an account by navigating to <https://app.packback.ca> and clicking "Sign up for an Account"  
Note: If you already have an account on Packback you can log in with your credentials.
2. Then enter our class community's lookup key into the "Looking to join a community you don't see here?" section in Packback at the bottom of the homepage.  
Community Lookup Key: **a0f0dd56-653c-4738-a3ad-21c8c4a5442e**
3. Follow the instructions on your screen to finish your registration.

Packback may require a paid subscription. Refer to [www.packback.co/product/pricing](http://www.packback.co/product/pricing) for more information. **We will be using only Packback Questions in this course, not Packback Deep Dives.**

### How to Get Help from the Packback Team:

If you have any questions or concerns about Packback throughout the semester, please read their FAQ at [help.packback.co](http://help.packback.co). If you need more help, contact their customer support team directly at [help@packback.co](mailto:help@packback.co).

For a brief introduction to Packback Questions and why we are using it in class, watch this video: <https://www.youtube.com/watch?v=OV7QmigrD68>