BIOLOGY 400 – History of Biology

Online Edition, Spring 2021

Department of Biology, University of Victoria

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.

Instructor
Dr. Greg Beaulieu.
Email: gregoryb@uvic.ca. If you send an email, please put "Biology 400" in the message line. I will also have Zoom office hours, and I will be available for Zoom appointments outside my office hours.

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.

Evaluation and Grading Policy

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Midterm 1</td>
<td>25%</td>
</tr>
<tr>
<td>Online Midterm 2</td>
<td>25% (not cumulative)</td>
</tr>
<tr>
<td>Online Final Exam</td>
<td>50% (cumulative)</td>
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The midterms and the final exam will be accessible though the Quiz tool on Brightspace. You can find Quizzes under the Course Tools tab.

All three exams will be open to you from 8:30 AM to 8:30 PM on the exam days; within this time window you will have 2 hours on your personal clock to complete the exam. The exams will be open book. **However, you may not consult any other person, either in the course or not, about the exam while you are writing it.**

The two midterm exams will be all multiple choice.

The final exam will be mixed format. There will be a noncumulative multiple choice section worth half of the exam points; these questions will be concerned with material we have covered since the second midterm. 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.
The final exam is an essential component of the course; if you do not write the final exam, you will receive a grade of N.

You will receive a grade of F if you do not achieve an aggregate score of 50% or better on the three exams.
You do not need to pass every exam to pass the course.
You do not need to pass the final exam to pass the course, but you do need to write it; otherwise your course grade will be N.

If you cannot write one of the midterms or the final exam due to illness or crisis, please get in touch with me as soon as possible at gregoryb@uvic.ca. I can arrange either a deferred writing or a redistribution of your marks.

Structure and scheduling of the course
The university has timetabled this course for Tuesday, Wednesday and Friday, 12:30 – 1:20 PM. However, I will not be delivering the lectures synchronously, and I will not be using these times for lectures. I will be using the Tuesday time slot for an introductory Zoom session on Tuesday, January 12, and the subsequent Tuesday slots will be Zoom office hours.

The course will have these five elements:

1. Asynchronous Lectures – The lectures will be delivered in the form of narrated PowerPoint presentations that I will post on the course Brightspace site. You will be able to watch them according to your own schedule. You will not need PowerPoint on your computer to view these. I will convert the PowerPoints to mp4 files that you can watch just by clicking on the title of the lecture.

The plan is to post a new lecture every officially-scheduled lecture day: Tuesday, Wednesday and Friday of each week, beginning on Wednesday, January 13. The lecture videos will be approximately 30-50 minutes in length.

2. Lecture notes – I will post skeletal lecture notes in pdf form that will supplement the lecture videos. These lecture notes will have space for you to elaborate and jot down questions.

3. Readings – I will post pdfs of the readings as they become relevant to the course material.

4. Online office hours – These will take the form of Zoom sessions every Tuesday, from 12:30 – 1:20, beginning on Tuesday, January 19.

If you cannot make the Zoom session on a given week, you can email me directly with your questions or schedule a personal Zoom appointment. My email is gregoryb@uvic.ca. This would be appropriate if you have something pressing or something personal or confidential to discuss.

5. Online Exams – see the information about the online exams, above, in page 1.
Outline by Week

January 11 – 15

Tuesday
Live Zoom introduction to the course, 12:30 – 1:20 PM

Wednesday
Lecture 1 – Introduction

Friday
Lecture 2 – Roots of Biology

January 18 – 22

Tuesday
Lecture 3 – Ancient World 1
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 4 – Ancient World 2

Friday
Lecture 5 – Ancient World 3

January 25 – 29

Tuesday
Lecture 6 – Ancient World 4
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 7 – Ancient World 5

Friday
Lecture 8 – Islamic World and Medieval Science 1

Reading: “Genius and Gibberish”
February 1 – 5

Tuesday
Lecture 9 – Islamic World and Medieval Science 2
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 10 – Hidden and Mythical Organisms 1

Friday
Lecture 11 – Hidden and Mythical Organisms 2

February 8 – 12

Tuesday
Lecture 12 – The Human Body 1
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 13 – The Human Body 2

Friday
MIDTERM 1 – online; open 8:30 AM – 8:30 PM; 2 hours on your personal clock

February 15 – 19

Reading Break

February 22 – 26

Tuesday
Lecture 14 – The Human Body 3
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 15 – Microscopy

Friday
Lecture 16 – Chemistry 1
March 1 – 5

Tuesday
Lecture 17 – Chemistry 2
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 18 – Describing and Arranging Organisms 1

Friday
Lecture 19 – Describing and Arranging Organisms 2
Reading: “Living and Fossil Elephants”

March 8 – 12

Tuesday
Lecture 20 – Geology 1
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 21 – Geology 2

Friday
MIDTERM 2 – online; open 8:30 AM – 8:30 PM; 2 hours on your personal clock

March 15 – 19

Tuesday
Lecture 22 – Evolution before Darwin 1
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 23 – Evolution before Darwin 2

Friday
Lecture 24 – Darwin 1
Reading: “The Professor and the Naturalist”
Course Outline

March 22 – 26

Tuesday
Lecture 25 – Darwin 2
Live Zoom office hour, 12:30 – 1:20 PM

Reading: “Galapagos Archipelago”
Reading: “Kropotkin Was No Crackpot”

Wednesday
Lecture 26 - Cells

Friday
Lecture 27 – Heredity 1

March 29 – April 2

Tuesday
Lecture 28 – Heredity 2
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 29 – Evolution and Genetics Come Together 1

Reading: “One-Way Ticket”

Friday
Good Friday

April 5 – 9

Tuesday
Lecture 30 – Evolution and Genetics Come Together 2
Live Zoom office hour, 12:30 – 1:20 PM

Wednesday
Lecture 31 – The Hereditary Material 1

Friday
Lecture 32 – The Hereditary Material 2

Reading: “Chapter 23 from The Double Helix”
April 12 (Monday)

End of term

April 15 – 27

Exam period; includes both Sundays

Biology 400 Final Exam
Multiple Choice part – not cumulative
Essay part - cumulative