BIOLOGY 150A – MODERN BIOLOGY

Fall 2017
Department of Biology, University of Victoria

Course Description
An introduction to biological science, discussing the diversity of organisms and the evolutionary and ecological principles underlying this diversity. Topics include the history of life, genetics, mechanisms of evolution, biological diversity, and the ecology of communities and ecosystems.

Meetings
Section A01: TWF 9:30 – 10:20 AM, Engineering and Computer Science 123
Section A02: TWF 1:30 – 2:20 PM, Harry Hickman 105

Instructors
- Dr. Greg Beaulieu (September; history of life, genetics, evolution); 
  office: 006 Petch 
  phone: 250-721-7140 
  email: gregoryb@uvic.ca. If you send an email, put "Biology 150A" in the message line. 
  Office hours: Tuesday, 10:30 AM – 12:00 noon, or by appointment, or drop by.

  Dr. Beaulieu will also be serving as course coordinator, so if you have any course business or other issues, he is the person to see.

- Dr. Rossi Marx (October and November; biological diversity, ecology) 
  office: 105 Petch 
  phone 250-721-7089. 
  email: zoology@uvic.ca. If you send an email, put "Biology 150A" in the message line. 
  Office hours: TBA

Both of us love biology, have had a lifelong involvement with it, and hope to transmit to you the endless fascination and excitement of the scientific study of life.

Required Text
We do not recommend any other edition of this text or any other text. This is the same text that was used in Biology 150A/B last year, so used copies should be available.

You will not need digital access to the publisher’s website.

Course Website
Biology 150A has a CourseSpaces website. You may find there lecture notes and notices, marks and links.

Please be aware that the lecture notes we post are for personal use only and must not be published, distributed, sold or posted on any other website.
Class Conduct
We ask you to be mindful of where you are, and to treat the people around you with respect and courtesy. Talking in class, texting and surfing are all irksome to students sitting nearby and to the instructor.

Please turn your cell phones and all social media sites OFF during class time.

Evaluation
Midterm 1  (Friday, October 6)  25% (Dr. Beaulieu’s material only)
Midterm 2  (Friday, November 3)  25% (Dr. Marx’s material only)
Final Exam  (December final exam period)  50% (cumulative, with emphasis on material covered since Midterm 2)

The two midterms will be written during the regular class periods. All exams will be multiple choice format.

Midterms, Final Exam and Grading Policy
No electronic devices will be permitted during the midterms and final exam.

During the midterms and the final exam, invigilators cannot answer any clarification questions about the exam. However, if you believe a question is bad (no correct answer, more than one equally correct answer), please bring your concerns to the attention of an invigilator as soon as possible after the exam.

If you must miss a midterm for a valid reason (illness, accident, family affliction, or competition as a UVic athlete), you must notify the course coordinator (Dr. Beaulieu, gregoryb@uvic.ca) as soon as possible and provide suitable documentation for your absence. Your course grade will be computed from the other components of the course, and you will not be penalized.

The final exam can be deferred in cases of illness, accident, family affliction, or commitments as a UVic athlete. If you expect to miss the final exam for any of these reasons, please notify the course coordinator (Dr. Beaulieu, 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 also fill out a Request for Academic Concession (RAC) form, available from Undergraduate Admissions and Records in the University Center or online (http://www.uvic.ca/registrar/assets/docs/record-forms/rac.pdf).

In order to pass this course, you must write the final exam and at least one of the midterms, and your course grade must be 50% or better. If you miss both midterms, or if you miss the final exam in December without a valid excuse, you will receive a grade of N (a failing grade which indicates that an essential course requirement was not completed).

Travel plans are not a valid reason for missing a midterm or the final exam, even Christmas travel plans, and even if a plane ticket has been purchased for you by someone else without your knowledge. Please do not make plans to leave Victoria in December without being sure that your final exams in all your courses will be over.
This term, the final exam period ends for all faculties on Monday, December 18; the last exam will be in the evening of that day. Your last exam might be on this date, or it might be sooner – you won’t know until the final exam schedule is posted in October.

Deferred final exam
For those students who need to defer the final exam for any of the reasons listed above, the deferred final will be written on Saturday, January 6, 2018, 10:00 AM – 1:00 PM, in Bob Wright B150. This constitutes your official notice of the time and place.

Grading Policy
In determining your final grade for the course, our spreadsheet will round your course score to the nearest whole percent. That is the official course grade that will be submitted for you.

We cannot change your grade for any reason, except if we have made an error calculating it. There is no extra work that you can do to raise your grade.

Important dates
On the UVic website you will find a fuller list of important dates, but the ones we have listed below are the ones that will matter to students in Biology 150A and to students wishing to add the course this term.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Wednesday, September 6</td>
<td>First day of classes</td>
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<tr>
<td>Tuesday, September 19</td>
<td>Last day for 100% reduction of tuition fees for standard first-term and full-year courses</td>
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<tr>
<td>Friday, September 22</td>
<td>Last day for adding classes</td>
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<td>Friday, October 6</td>
<td><strong>Biology 150A Midterm Exam 1; Dr. Beaulieu’s material only</strong></td>
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<td>Monday, October 9</td>
<td>Thanksgiving holiday</td>
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<tr>
<td>Tuesday, October 10</td>
<td>Last day for 50% reduction in tuition fees for standard courses; 100% of tuition fees will be assessed for courses dropped after this date.</td>
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<td>Tuesday, October 31</td>
<td>Last day for withdrawing from courses without penalty of failure</td>
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<td>Friday, November 3</td>
<td><strong>Biology 150A Midterm Exam 2; Dr. Marx’s material only</strong></td>
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<td>Mon-Wed, November 13-15</td>
<td>Reading break, no classes or labs</td>
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<td>Friday, December 1</td>
<td>Last day of classes</td>
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<td>Monday, December 4</td>
<td>First day of final exam period</td>
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<td>Monday, December 18</td>
<td>Last day of final exam period</td>
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<tr>
<td>Saturday, January 6, 2018</td>
<td>Deferred final exam, 10:00 AM – 1:00 PM, Bob Wright B150</td>
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Instructors, Lecture Topics and Readings

These topics and readings are tentative, and might be modified when the topic is reached in the course. Each lecture instructor will confirm them or change them in class and on the CourseSpaces website before each topic comes up.

Part A – Dr. Greg Beaulieu

Evolution and the history of life
History of life Chapter 13, pp. 276-277, 283-286
Cell Cycle Chapter 8, pp. 138-147, 151-159
Genetics Chapter 9, pp. 168-176, 182-185, 188-192
Introduction to Evolution Chapter 13, pp. 270-275, 278-280
Evolution of Populations Chapter 14, pp. 289-300
Speciation and Systematics Chapter 14, pp. 304-308; Chapter 15, pp. 311-329

Part B – Dr. Rossi Marx

Diversity of life
Prokaryotes Chapter 16, pp.338-344; Chapter 17, pp. 359-366, 369-374
Protists Chapter 18, pp. 376-386
Fungi Chapter 18, pp. 387-393
Plants Chapter 19, pp.396-413, 503
Invertebrates Chapter 20, pp. 415-437
Vertebrates Chapter 21, pp. 440-452

Ecology
The biosphere
Introduction to ecology Chapter 35, pp. 744-763
Behavioural ecology Chapter 36, pp. 767-786
Population ecology Chapter 37, pp. 790-803
Community interactions Chapter 38, pp. 807-820
Symbioses Chapter 39, pp. 825-841
Ecosystem ecology Chapter 40, pp. 846-853
Conservation Chapter 41, pp. 858-876