

BIOL 102 Non-Majors Biology II Section 001 Winter 2009

COURSE OUTLINE

An introduction to biological diversity, evolution, ecology, scientific knowledge, and the biodiversity crisis. Includes a survey of the major taxonomic groups of living organisms, the evidence for evolution, natural selection, the nature of scientific knowledge, and the impact of humans on the ecology of populations, communities and ecosystems.

Prerequisites: English 12 or assessment. Math 10 recommended.

Section	001-A	001-B
Lecture	W/Th 9:30-10:50 in F200	
Lab	M 9:30-12:20 in F224	M 1:30-4:20 in F224

1. Instructor Information

Instructor: Annette Dehalt, M.Sc.

Office hours: drop-in Wed & Th 11:00-1:00 and Fri 11:30-12:30

and by appointment if necessary

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2. Intended Learning Outcomes

- identify and classify living organisms to their major taxonomic groupings and to list their defining characteristics
- describe the major lines of evidence for evolution
- explain the mechanisms of natural selection and speciation
- discuss the nature of scientific knowledge, its limits and strengths, and how it is produced
- explain basic concepts in population and ecosystem processes, and ways in which these threats might be mitigated
- recognize and explain the major threats to biodiversity and ecosystem processes, and ways in which these threats might be mitigated

3. Required Materials

- (a) Textbook: Audesirk et. al., 2007. **Biology: Life on Earth** *with Physiology*, 8th ed. Pearson/Prentice Hall.
- (b) BIOL 102 Laboratory Manual
- (c) optional: Garrett. 2007. Get Ready For Biology, 7th ed. Pearson/Benjamin Cummings

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4. Course Content and Schedule

The following tentative schedule is subject to change if deemed necessary by the instructor. Note:

Midterms are scheduled for the first lecture of the week, unless specified otherwise.

Wk	Wk of	Lecture (chapter no.'s in brackets)	Lab/Field	
1	Jan 5	Introduction, Science (1), Principles of Evolution (14)	Safety and Laboratory Procedures	
2	Jan 12	Micro-evolution (15), Speciation/Macro-evolution (16)	7. Science, Graphs, Statistics	
3	Jan 19	History of Life (17) Extinction (16,17)	6. Evolution	
4	Jan 26	MIDTERM I Systematics (18) Viruses, Bacteria (19)	1. Microscopes	
5	Feb 2	Protists (20) Fungi (22)	2. Bacteria, Protists, Fungi	
6	Feb 9	Plants (21) Animal Evolution (23)	LAB EXAM I	
7	Feb 16	Invertebrates (23) Aquatic Vertebrates (24)	3. Plants	
8	Feb 23	Terrestrial Vertebrates (24) Human Evolution (17)	4. Animals	
9	Mar 2	MIDTERM II Animal Behavior (25)	5. Diversity Review	
10	Mar 9 last d2W	Population Ecology (26)	8. Ecological Simulations	
11	Mar 16	Community Ecology (27)	9. Field-trip: Mt. Doug	
12	Mar 23	Ecosystem Ecology (28,29)	Seminar: Oral Group Presentations	
13	Mar 30	Biodiversity Crisis (30)	LAB EXAM II	
14	Apr 6	Biodiversity Crisis cont.	No lab (lecture review)	

Final Exam during final exam period (April 14-22) – scheduled by registrar

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5. Basis of Student Assessment

Exams:

Midterm I	15%
Midterm II	15%
Lab Exam I	15%
Lab Exam II	15%
Final Exam	30%

Assignments & Quizzes 8%

Seminar: Group Presentation 2% (see hand-out for details)

Midterms and lab exams will be unit exams (i.e. not cumulative).

The final lecture exam will be cumulative, with proportionately greater emphasis on the last unit (ecology). Midterm and final exams will be a mix of multiple choice and short answer/short essay questions. Lab exams will consist of a series of "stations" consisting of equipment and/or specimens, with accompanying questions testing both practical and theoretical knowledge. The final exam will be held after classes, during the final exam period – check CAMLINK for dates during the latter part of the semester. Avoid making travel or work plans during the exam period, as you are expected to give priority to your exam schedule!

6. Grading System

The following percentage conversion to letter grade will be used:

A+ = 90 - 100%	B = 73 - 76%	D = 50 - 59%
A = 85 - 89%	B- = 70 - 72%	F = 0 - 49%
A- = 80 - 84%	C+ = 65 - 69%	
B+ = 77 - 79%	C = 60 - 64%	

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at camosun.ca for further information.

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

STUDENT CONDUCT POLICY

There is an Academic Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at http://www.camosun.bc.ca

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ADDITIONAL INFORMATION

<u>Academic Conduct</u>: Be sure that you are familiar not only with the Student Conduct Code (s.a.), but also with the General Department Policies, which are stated in the lab manual. **Cheating or plagiarism will not be tolerated in any form, and may result in "0".** Each student is required to sign and hand in a Laboratory Safety Contract prior to commencing laboratory work in the course.

<u>Attendance</u>: You are expected to attend all classes and labs, and be on time. It is your responsibility to acquire *all* information given during a class missed, incl. notes, hand-outs, assignments, laboratory data, changed exam dates etc.

<u>Exams</u>: Exams have to be written when scheduled. There are no make-up exams during the term. A missed exam results in "0" except in case of <u>documented</u> emergency or illness (doctor's note required stating that student is too sick to attend class during a specified time period). Valid documentation of illness/emergency needs be received <u>within 1</u> <u>week</u> of the illness/emergency. With a valid excuse, the weighting of the missed exam will be added to the final exam, along with additional questions on untested course material. Please bring a pen and soft pencil to all exams. No programmable devices are allowed in exams.

<u>Labs</u>: You need to attend labs and lab exams during your assigned section (A or B). Switching between sections on a permanent or temporary basis requires instructor's permission. Lab assignments can only be handed in for labs actually attended (except in cases of documented illness/emergency). You are encouraged to discuss assignments with your lab partner, however, **each assignment has to be your individual work – beware of plagiarism.** It is absolutely necessary to read and mentally **work through each exercise before coming to lab**. Otherwise you may not be able to finish on time, annoy your lab partner, or flunk a pre-lab pop quiz.

<u>Assignments</u>: Unless otherwise stated, all assignments are due at the <u>beginning</u> of the lab/class of the due date. There is a **15%/day non-negotiable late penalty** (rounded to the nearest full mark) except in cases of documented illness/emergency. Late assignments will <u>not</u> be accepted after marked assignments have been returned to the rest of the class. A **professional format** is expected, i.e. a neat, legible, clean copy. "Rough" drafts risk rejection and a subsequent late penalty or reduced marks. If the assignment is more than one page, separate pages *must be stapled*.

<u>Study Habits</u>: You will probably find this course not very difficult, but surprisingly labor-intensive. Good (and regular!!) study habits are required to do well in this course. You should plan on a <u>minimum</u> of 6 hours outside of scheduled class time for the completion of assignments and for general studying. Joining a study group can help this make more fun. Some "study hints" are posted on the course web site, and the college also offers study skill courses and individual consultations.

Lecture notes will be provided in point form and posted on the web. These should be used as a guideline, not as your sole source of information! You will need to write down additional notes of examples and explanations given during lecture. It is also recommended practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook and other sources. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Exam questions will be based only on material covered or pointed out in class. However, studying additional details in the corresponding textbook sections will help you understand the material more thoroughly. It is not sufficient simply to memorize point-form notes! Please keep up with your readings, and take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.