



**School of Arts & Science  
BIOLOGY DEPARTMENT**

**BIOL 124-003  
Evolution and Diversity  
2008F**

## **COURSE OUTLINE**

**The Approved Course Description is available on the web @ <http://online.camosun.ca/>**

Ω Please note: this outline will be electronically stored for five (5) years only.  
It is strongly recommended students keep this outline for your records.

### **1. Instructor Information**

(a)	Instructor:	Rosemary Mason		
(b)	Office Hours:	Tues, Thurs, Fri 9:30 – 10:20; Tues, Wed. 2:30 – 3:20		
(c)	Location:	Ewing 236		
(d)	Phone:	3301	Alternative Phone:	
(e)	Email:	<a href="mailto:masonr@camosun.bc.ca">masonr@camosun.bc.ca</a>		
(f)	Website:	<a href="http://online.camosun.ca/">http://online.camosun.ca/</a>		

Prerequisites: English 12 **or** assessment, **and** “C+” in Biology 12

### **2. Intended Learning Outcomes**

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

Upon completion of this course the student will be able to:

1. Identify and classify living organisms to their major taxonomic groupings, and to list their defining characteristics.
2. Describe the major lines of evidence for evolution.
3. Explain major topics in evolutionary theory.
4. Discuss the nature of scientific knowledge in biology, its limits and strengths, and how it is documented.

### **3. Required Materials**

- 1) (a) Texts Campbell, N. A. & J. B. Reece. 2007. Biology, 8<sup>th</sup> ed., Pearson Education, Inc., San Francisco, CA.
- 2) (b) Other Camosun College Biology Faculty. F 2008. Biology 124 Lab Manual, Camosun College, Victoria, B.C.

### **4. Course Content and Schedule**

*(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)*

## Course Content and Schedule

The schedule, which follows, is an attempt to outline the weekly activities of the class. It is subject to change or modification as the need arises.

Week	Date	Lecture Topic	Ch.	Labs
1	Sept. 2 - 5	Biological Diversity lecture Evolution – Darwinian	22 26	Introduction
2	Sept. 8 - 12	Phylogeny Population Evolution	22 23	Lab 4 Woodlice Lab 1 Phylogeny
3	Sept. 15 - 19	Species Evolution	24	Lab 2 Evolution
4	Sept. 22 - 26	Prokaryotes	27	Lab 3 Natural Selection Appendix 3 - Microscopes
5	Sept. 29 – Oct. 3	Protists	28	Microscope quiz Lab 5 Prokaryote lab
6	Oct. 6 - 10	Protists <b>Lecture Midterm 1</b>	28	Bacterial lab - complete Lab 6 Protist lab
<b>October 13 – Thanksgiving - Classes cancelled</b>				
7	Oct. 14 - 17	Seedless Plants	29 & 30	<b>Lab Midterm</b>
8	Oct. 20 - 21	Plants	29 & 30	Lab 8 Seedless plant lab
9	Oct. 27 - 31	Plants Fungi	30 31	Lab 9 Seed plant lab
10	Nov. 3 – 7	Fungi Animal Evolution	31 32	Lab 7 Fungi Lab
11	Nov. 10, Nov. 12 - 14	<b>Lecture Midterm 2</b> Invertebrates	32 33	No Lab
<b>Nov. 11 – Remembrance Day – College closed</b>				
12	Nov. 17 - 21	Invertebrates Vertebrates	33 34	Invertebrate Labs 10 & 11
13	Nov. 24 - 28	Vertebrates	34	Vertebrate Lab 12
14	Dec. 1 - 5	Review & Catchup		<b>Lab Final</b>

### 5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

Lab Exam I	10%
Lab Exam 2	15%
Lecture Midterm I	10%
Midterm II	15%
Final Lecture Exam	25%
Assignments/quizzes	25%
10% per paper	

\*\*\* Lab exams will be unit exams. Lecture exams will be cumulative.

## 6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

### Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

### Temporary Grades

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](http://camosun.ca) for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. ( <i>For these courses a final grade will be assigned to either the 3<sup>rd</sup> course attempt or at the point of course completion.</i> )
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

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

### 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, at Student Services or the College web site at [camosun.ca](http://camosun.ca).

### STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

### ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED

#### ***What this Course Promises You***

Who are we? How did we get here? At some point or points in our life we all ask these questions. Biologists ask these questions, too, but in a broader context. For a biologist, 'we' refers not just to humans but to all living organisms. In this course you will have the opportunity to explore these questions. You will also gain insight into other less high falooting questions. Why, for example, is it essential to continue a course of antibiotics until the prescription is used up even though you may feel better before? How likely are organisms to cope with global warming by changing? Why do those herbicides that are effective in the short term often fail in the long term? Where do those snooty Latin names come from and why do biologists use them? Why do drug companies systematically explore some families of organisms for medicines and not others? If you embrace and apply the ideas of this course you will understand how biologists think living organisms arose. This understanding will enable you to group all organisms into biologically meaningful patterns and name them. You will become a knowledgeable participant in the larger ongoing scholarly discussion about natural selection, evolution and biodiversity. You will also submit a web page for publication to the University of Michigan online evolutionary database.

#### **How You Will Fulfill These Promises**

To realize these promises you must take responsibility for your own learning and participate as an active learner. Can you be committed to this class? You must make this choice. This is not the type of class you can drop into occasionally; you have to be really involved.

To take charge of your education, you must be willing to read and write. If you do not learn to communicate in words, you cannot formulate fully developed thoughts. To accomplish these goals, you will be given assignments that you will read, analyze, and think about between each class. You will also write an abstract for a biological paper. In addition, you will research a local organism and write a paper that will be submitted to the Tree of Life Database run by the University of Michigan (<http://tolweb.org/tree/phylogeny.html> ). These assignments will help you refine your thinking and understanding so that it becomes clearer, more precise, logical, and well-grounded in fact.

### **Ways to Understand the Nature and Progress of your Learning.**

To evaluate your progress in reaching these goals (and to provide you with feedback on your learning) we will use at the following items:

1. Lecture and lab exams designed to assess your recall and understanding of the biological concepts relating to evolution and phylogeny. The lecture exams will be cumulative. The goal here is to encourage you to continue to learn and receive feedback on the critical concepts of the course.
2. Two papers mentioned above. The total grade will be based on both the final papers and the initial drafts. We will jointly polish these drafts to achieve the best final product.
3. Ongoing group quizzes and assignments designed to solidify and clarify concepts from the course. These will be group projects and will be jointly graded.

### **ADDITIONAL INFORMATION**

No programmable devices are allowed in exams.

Assignments are due at the **beginning** of the class period on the due date. Assignments not handed in at the beginning of class will be considered late, for which there is a 15% penalty/day.

**Note:** There is the option of **1** free late assignment. There will be no penalty provided the assignment is received **prior** to it being marked and returned to the class. Any assignment received after its return to the rest of the class will be marked but will not receive credit.

### **ACADEMIC CONDUCT POLICY**

<p>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. <a href="http://www.camosun.bc.ca/policies/Education-Academic/E-2-Student-Services-&amp;-Support/E-2.5.pdf">http://www.camosun.bc.ca/policies/Education-Academic/E-2-Student-Services-&amp;-Support/E-2.5.pdf</a></p>
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**Active cell phones are a nuisance and distraction to all members of the class, including the Instructor. Biology 252 is a "cell phone-free" class. You are required to TURN OFF all cell phones before commencement of class. Failure to comply with this class rule would be considered a serious infringement and can lead to further action in terms of the College's Academic Conduct Policy.**