



## COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/envr.html>

Ω Please note: the College electronically stores this outline for five (5) years only.  
 It is **strongly recommended** you keep a copy of this outline with your academic records.  
 You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

### 1. Instructor Information

(a)	Instructor:	Kristiina Ovaska & David Denning		
(b)	Office Hours:	Friday morning 10:30 am – 11 am (after lecture) or by arrangement		
(c)	Location:	Fisher 314A		
(d)	Phone:	250-727-9708 (9am-8pm)	Alternative Phone:	
(e)	Email:	<a href="mailto:kovaska@shaw.ca">kovaska@shaw.ca</a> ; <a href="mailto:ddenning@telus.net">ddenning@telus.net</a>		
(f)	Website:			

### 2. Intended Learning Outcomes

*(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)*

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

1. Use standard biological lab equipment, especially microscopes.
2. Use logic, critical thinking, and the scientific method in combination with biological terminology pertinent to invertebrates to evaluate and assess the current status of BC invertebrates.
3. Use biological identification keys for selected groups of invertebrates of B.C.
4. Sample fresh water and marine habitats, soil and terrestrial debris in order to determine the types of living organisms present.
5. Preserve and/or culture various selected invertebrates.
6. Sample terrestrial and aquatic habitats for invertebrates and understand basic methods of habitat restoration.
7. Describe biodiversity issues including rare and endangered species, introduced species, overharvesting impacts and affects of habitat loss.
8. Discuss the principles of systematics, evolution and wildlife management as they apply to the important ecological or economic invertebrate species of B.C.
9. Discuss the importance and impact of policy and legislation on wildlife management issues.

### 3. Required Materials

- a. Suggested acquiring a used copy of a good invertebrate zoology text (e.g. Barnes)
- b. Lectures, notes, reference lists, and selected materials available on course website or from instructors.

### 4. Course Content and Schedule

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

<b>Week #</b>	<b>Date</b>	<b>“Laboratory” Thursday 9:30-12:20</b>	<b>“Lecture” Friday 9:30 – 10:20</b>
1	Jan 9/10	Introductions  Course structure and grading	Diversity, evolution, and ecology of invertebrate phyla, Part 1

		Introduction to Invertebrates  Display and course pre-test with live specimens of major phyla	
2	Jan 16/17	Diversity of Invertebrates: Porifera, Cnidaria, Platyhelminthes	Diversity, evolution, and ecology of invertebrate phyla, Part 2  Marine invertebrates: Life histories & ecological role
3	Jan 23/24	Diversity of Invertebrates: Annelida & Mollusca	Invertebrate study design and sampling methods  Introduction to field project: Terrestrial invertebrate biodiversity
4	Jan 30/31	Diversity of Invertebrates: Echinoderms & Nematodes  <u>Optional (29 Jan):</u> Intertidal life (low tide at 8:12 pm)	Conservation & species at risk, Part 1
5	Feb 6/7	Diversity of Invertebrates: Chordates Field trip (leave at 9 am): Marine invertebrates (Oak Bay Marina), followed by lab	Conservation & species at risk, Part 2
6	Feb 13/14	No classes; work on assignments	No classes; work on assignments
7	Feb 20/21	Mid-term lab test  Diversity of Invertebrates: Arthropods, Part 1	Guest speaker (arthropods) or discussion
8	Feb 27/28	Diversity of Invertebrates: Arthropoda - Sampling techniques - Examination & sorting pitfall trap samples  <u>Optional (26 Feb):</u> Intertidal life (low tide at 8:31 pm)	Guest speaker (arthropods) or discussion
9	March 6/7	Terrestrial gastropods of BC (presentation) Use of identification keys for live & preserved specimens Trail following experiment	Invertebrates as environmental indicators
10	March 13/14	Freshwater invertebrates - Examination & identification of samples	Group project: Terrestrial invertebrate biodiversity study

		- Construction of foodweb	Preparation to field trip
<b>11</b>	March 20/21	Field trip: Terrestrial invertebrate biodiversity study (data collection) - artificial cover-objects - pitfalls (live) - quadrat surveys - moss samples	Threats, Part 1
<b>12</b>	March 27/28	Microscopic life in moss	Threats, Part 2
<b>13</b>	Apr 3/4	Plankton sampling, or  Field trip: Intertidal life - sampling across ecotone (note: low tide 2:19 pm; would need to switch lab time to afternoon)	Aquaculture in BC
<b>14</b>	Apr 10/11	Student presentations: Invertebrate biodiversity project  Review	Use of photography in invertebrate studies: Presentation & demonstrations
<b>Final exam</b>	TBA	Exam period: 14 - 17 April 2014	

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

*(This section should be directly linked to the Intended Learning Outcomes.)*

<b>Description</b>	<b>% of total mark</b>
Attendance	Expected
Research projects (review paper: 10%; field project: 15%)	25
Lab & other hand-ins (4-6)	25
Mid-term lab test	15
Final Exam	30
Participation & effort (instructor discretion)	5
<b>Total</b>	<b>100</b>

### 6. Grading System

*(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College 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. (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.)
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 the College web site in the Policy Section.

### ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED