

COURSE OUTLINE

Please note: This outline will not be kept online indefinitely. It is recommended students keep this outline for their records.

1. Instructor Information

- (a) Instructors: Kristiina Ovaska & Christian Engelstoft
- (b) Office hours & contacting instructors: TBA & discussed with students
- (c) Office Location: 314A
- (d) Phone: Christian @ home 250.652.9770 (between 9 am - 8 pm only)
- (e) E-mail: kovaska@shaw.ca; cengelstoft@gmail.com

2. Intended Learning Outcomes

At the completion of this course, students will possess the expertise and proficiency to 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. None
- b. Lectures, notes, reference lists, and selected materials available on course website or from instructors.

4. Course Content and Draft Schedule (to be adjusted from discussion with students; see separate document for topics & options)

<u>Week #</u>	<u>Date</u>	<u>“Lecture”</u> Tuesday 9:30-10:20	<u>“Laboratory”</u> Thursday 9:30-12:20	<u>Notes</u>
1	Sept 3/5	<p>Introductions</p> <p>Overview of invertebrate diversity & conservation</p> <p>Discussion of course structure (to be continued)</p>	<p>Discussion of course structure and evaluation (continued)</p> <p>Designing invertebrate biodiversity studies</p> <p><u>Student activities:</u> Testing of gastropod keys in Burke (2013) for a book review</p> <p>Examining specimens of different phyla, Part 1</p>	<p>Set up of transects at Metchosin site on Sun Sept 8th; volunteers needed</p>
2	Sept. 10/12	<p><u>Student presentations</u> (5 min): Value of invertebrates, followed by discussion on topics and evaluations</p>	<p><u>Student presentations</u> (5 min): Value of invertebrates (continued)</p> <p>Sampling set up for biodiversity studies of terrestrial invertebrates at Camosun property in Metchosin</p> <p><u>Student activities:</u> Designing datasheets for invertebrate biodiversity study at the Metchosin property</p> <p>Examining specimens of different phyla, Part 2</p>	
3	Sept. 17/19	<p>Use of photography in invertebrate identification</p> <p>Open</p>	<p>Field surveys with group experts: Dragonflies & other insects at Beaver Ponds (Rick & Libby Avis)</p> <p><u>Optional/additional:</u> Evening moth survey on campus (Wdn 18 Sept)</p>	<p>Note:Thr field trip is weather dependent</p>
4	Sept. 24/26	<p>Open</p> <p>Guest speaker 2 or topic related to</p>	<p>Field surveys for terrestrial invertebrates at Metchosin site (consider early departure to site, e.g. 8:30 am)</p>	<p>Note:Thr field trip is weather dependent</p>

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		conservation of invertebrates		
5	Oct. 1/3	Invertebrate Conservation Strategies, Part 1 : approaches	Specimen sorting & processing using different lab methods (Metchosin samples), Part 1 Introduction to the “Challenges to Invertebrate Conservation” poster Handling of data	
6	Oct. 8/10	Invertebrate Conservation Strategies, Part 2: Species at Risk <u>Student activity:</u> Discussion on “Challenges to Invertebrate Conservation” poster by Jenny Heron	Discussion on “Challenges to Invertebrate Conservation” poster by Jenny Heron (continued) Specimen sorting & processing using different lab methods (Metchosin samples), Part 2	
7	Oct. 15/17	<u>Student presentations:</u> Invertebrate surveys at Metchosin	<u>Student presentations:</u> Invertebrate surveys at Metchosin (continued) <u>Group project:</u> Students select and start a mini-project on invertebrate behaviour or ecology	
8	Oct. 22/24	Guest speaker: Jenny Heron	Group project, continued Use of Identification keys	
9	Oct. 29/31	Rare gastropods presentation or OPEN	Group project, continued	
10	Nov. 5/7	Threats to invertebrates: Introduced species	Threats to invertebrates: Introduction to IUCN threats calculator with BC invertebrate examples OPEN	
11	Nov. 12/14	<u>Student presentations:</u> Group project	<u>Student presentations:</u> Group project (continued) OPEN (e.g., discussion on invertebrates as indicators or analysis of recovery strategies	

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			or status reports)	
12	Nov. 19/21	Guest Speaker 3	Field trip: RBCM or Pacific Forestry Centre	
13	Nov. 26/28	Habitat restoration	Open	
14	Dec. 3/5	Student presentations: COSEWIC candidate species rationales	Student presentations: COSEWIC candidate species rationales (continued) “Photographing Amazon invertebrates” Open	
Final exam	TBA			

5. Basis of Student Assessment

DRAFT - to be discussed with students

<u>Description</u>	<u>% of total mark</u>
Attendance	Expected
Mini-presentations (4)	30
Presentations and reports on field projects (2)	30
Other written hand-ins (5)	20
Effort & attitude (instructor discretion)	15
Final Exam	5
Total	100
Bonus projects (1 per student or group)	5

6. Grading System

The following percentage conversion to letter grade will be used:

A+ = 90 - 100%
A = 85 - 89%
A- = 80 - 84%
B+ = 77 - 79%

B = 73 - 76%
B- = 70 - 72%
C+ = 65 - 69%
C = 60 - 64%

D = 50 - 59%
F = 0.0 - 49%

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

EARNING 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>

ACADEMIC 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

