



UBC's Point Grey Campus is located on the unceded, traditional and ancestral territory of the x^wməθk^wəyəm (Musqueam).

This syllabus is a general representation of the course as previously offered and is subject to change.

BIOL 205 - Comparative Invertebrate Zoology

General Course Syllabus (as of October 2023)

Course Description: The field of invertebrate zoology is so vast that we can only scratch the surface in one 4-unit course. Consequently, we will treat most groups only superficially. However, over the next 14 weeks you will be introduced to a diverse array of animals that you may never have seen before and at present cannot even imagine! The course is organized along three major themes that are fundamental to zoology: (1) form, function and system compatibility [**functional morphology**]; (2) development and life history [**ontogeny**]; and (3) unity, diversity and evolutionary history [**phylogeny**].

Course Format: Lecture and Laboratory

Credits: 4 credits

Prerequisites: One of BIOL 121, SCIE 001. (Or 8 transfer credits of first-year biology.)

Learning Objectives:

The objectives of the course are:

- (1) to *introduce* you to how animals are organized, how they work, and how they reproduce themselves
- (2) to provide you with a basic *understanding* of animal diversity
- (3) to stimulate an *appreciation* of animals and their remarkable evolutionary innovations
- (4) to provide you with a solid *foundation* in the field of zoology.

In order to accomplish these goals, it will be necessary for you to assimilate a substantial amount of new factual information and vocabulary, but also to integrate and synthesize that information into ideas and concepts. Together, we can learn a great deal from animals, and we hope you will experience a high level of enjoyment during our exploration not only of these fascinating organisms but also the broader phylogenetic context within which each one of our species has evolved.

Resources:

Lecture

- Text: Brusca, R. C. & G. J. Brusca. 2003/2016. *Invertebrates*, 2nd Ed./3rd Ed.
- Other materials: 3-ring binder & color pens (red, blue & green) or ipad
- Lecture Outlines: PDFs available on Canvas
- Please download/print the PCol & relevant outlines before each lecture.

Laboratory

- Manual: BIOL 205 Laboratory Guide
- Please see the BIOL 205 laboratory syllabus on Canvas.

Evaluation:

A total of 500 points is available to you in this course. These points are distributed among one midterm lecture exam (100 pts), two laboratory exams (175 pts); small lab quizzes & assignments (25 pts) and one *cumulative* final lecture exam (200 pts). There will be no opportunity for a make-up midterm exam; however, your score on the final exam can be used to offset a missed midterm exam. In these circumstances, the final lecture exam must be taken at its normal scheduled time. Grades will be earned on a percentage basis (80% = A, 68% = B, 55% = C, 50% = D, with plus/minus marks as appropriate).

Midterm Lecture Exam	20%
Final Lecture Exam	40%
Overall Lab Score (Lab Exams & Quizzes)	40%

Academic Integrity:

The University expects each student to uphold honest and ethical behaviour during every lecture, laboratory session and exam. Please refer to the UBC Calendar for clarification of expected student conduct and discipline:

<http://www.students.ubc.ca/calendar/index.cfm?tree=3,54,0,0>

Schedule:

1	Introduction & orientation to the course Phylogenetic analysis & animal organization
2	Animal origins: Choanoflagellata & Porifera
3	Cnidaria: sea jellies, anemones & corals
4	Platyhelminthes (acoelomates): flatworms
5	Protostomes vs. Deuterostomes
6	Mollusca: Introduction Mollusca: Gastropoda
7	Lecture Midterm Exam 1 Mollusca: Bivalvia Mollusca: Cephalopoda Mollusca: development and wrap-up
8	Annelida: segmented (coelomate) worms
9	Annelida: reproduction & development Nemertea (ribbon worms)
10	Onychophora (velvet worms) Arthropoda: crustaceans
11	Arthropoda: spiders Arthropoda: hexapods
12	Blastocoelomates: nematodes Echinodermata: Intro and Crinoidea
13	Echinodermata: Asterozoa Echinodermata: Echinozoa Echinodermata: Holothurozoa
14	Chordates Phylogenetic overview

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University Policies:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence.

UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom.

UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances.

UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of how to access support are available on [the UBC Senate website](#).