



Unit 2 - Biology Course Outline

BIO 205 - 001
Comparative Invertebrate Zoology (3)
Winter T1 (2019)
TTh 9:30 - 10:50am ASC-130

Lecture Instructor:

Name: Matthew Nelson
Office: SCI 316
Phone: 250.807.9683
matthew.nelson@ubc.ca
<http://www.natureboy.com>

Office Hours: MTWTh 11-12pm, TTh 2-3pm or by appointment

Laboratory Coordinator/Instructor:

Name: Tristyn Hay
Office: SCI 155
tristyn.hay@ubc.ca

Office Hours: TBA

Course Description:

BIOL 205 (3) Comparative Invertebrate Zoology

Introduction to the invertebrate phyla. [3-3-0]

Prerequisite: Either (a) BIOL 125 or (b) all of BIOL 117, BIOL 122.

This course is a survey of invertebrate phyla, emphasizing the comparative aspects of their anatomy and physiology. Invertebrates are important organisms, comprising (by far) most of the animals both in terms of biomass, number of individuals, and number of species. This will likely be an introduction to a larger world, broadening your knowledge and appreciation of the diversity and scope of the animal kingdom.

Course Objectives:

The main objective of this course is to examine the diversity of the animal kingdom (exclusive of the vertebrates) while discussing taxa and evolutionary trends. Students should gain a basic knowledge of the phylogeny of the animals, and an appreciation for the astounding diversity of animal taxa.

Course Format:

This is a standard lecture course with a lab component. As always, you must pass both the lecture and lab to pass the course.



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Laboratory Meeting times:

BIOL 205 labs are held in SCI 142 and start on the week of SEP 10. Please check your registration to determine your lab section and time.

Note: Attendance at labs is mandatory unless there is a valid medical or compassionate reason. Students who are late and miss the introductory lecture without a valid excuse will not be allowed into the lab, and will receive a mark of zero for that laboratory assignment. Students must pass both the lecture and laboratory part of a course to pass the course; please refer to the Repeat Course Policy.

Required Materials:

Biology of the Invertebrates. 7th Edition. Jan A. Pechenik. McGraw-Hill. 2010 ISBN 978-0-07-302826-2

PPEs for LAB: lab coat and goggles (available in bookstore) – for additional info regarding lab materials, please contact the lab instructor.

Course Evaluation:

Midterm #1	20%	oct 8
Midterm #2	20%	nov 14
Laboratory	30%	
Final	30%	TBA
Total	100%	

Final grades will be based on the evaluations listed above and the final grade will be assigned according to the standardized grading system outlined in the UBC Okanagan Calendar.

Note: Any requests for changes to final exams must be sent to the office of the Associate Dean of Students (bsasdeansoffice.ubco@ubc.ca).

Missed Assignments and Exams:

From UBC Okanagan Academic Calendar/Policies and Regulations/ Academic Concession

“Students who, because of unforeseen events, are absent during the term and are unable to complete tests or other graded work, should normally discuss with their instructors how they can make up for missed work, according to **written guidelines given to them**



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at the start of the course. Instructors are not required to make allowance for any missed test or incomplete work that is not satisfactorily accounted for. If ill health is an issue, students are encouraged to seek attention from a health professional. Campus Health and Counselling will normally provide documentation only to students who have been seen previously at these offices for treatment or counselling specific to conditions associated with their academic difficulties. Students who feel that requests for consideration have not been dealt with fairly by their instructors may take their concerns first to the Head of the discipline, and if not resolved, to the Office of the Dean. Further information can be found at:

<http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0>.

Students may be excused from laboratories only with a physician's certificate verifying illness or other supporting documents for a compassionate leave. If a student is unable to complete a laboratory or a laboratory exam for a good and verifiable reason, the marks may be redistributed. Please talk to your TA or the lab coordinator as soon as possible if ill or if you will be missing a laboratory or a lab exam. (Holidays are not acceptable reasons for missing labs).

Final Examination:

The examination period for 2019/2020 Winter Term 1 is (DEC 2-17). Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 24-hour period) or unforeseen events, students will be permitted to apply for out-of-time final examinations only if they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member. Unforeseen events include (but may not be limited to) the following: ill health or other personal challenges that arise during a term and changes in the requirements of an ongoing job. Further information on Academic Concessions can be found under Policies and Regulations in the Okanagan Academic Calendar <http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0>. Out-of-time examination forms can be found at (<http://ikbsas.ok.ubc.ca/students/undergrad/forms.html>) and must be sent to the Dean's office.

Lecture Outline:

TOPIC	Readings	Tentative date
Intro and Organization		sep 5
Methods of Phylogenetic Analysis and classification	Ch. 2	sep 10
Poriferans and Placazoans	Ch 4	sep 12
Hydrostatic Skeleton and The Cnidarians	Ch 5, 6	sep 17



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TOPIC	Readings	Tentative date
Ctenophores	Ch 7	
Platyhelminths I (Aceolomates) - Turbellaria	Ch 8	sep 19
Platyhelminths II- Cestoda, Monogenea, Trematoda		sep 24
Mesozoans	Ch 9	sep 26
Rotifers and Acanthocephalans	Ch 10	oct 1
Nemertean	Ch 11	oct 3
MIDTERM 1 (ch. 2,4-10)		oct 8
Molluscs I- Polyplacophora, Aplacophora, Monoplacophora	Ch 12	oct 10
Molluscs II- Gastropods		
Molluscs III – Bivalvia, Scaphopoda		
Molluscs IV - Cephalopoda		oct 15
Annelids - Segmented worms (coelomates) and Sipunculans- Polychaeta	Ch 13	oct 17
Annelids – Clitellata - Oligochaeta and Hirudinea		oct 22
“Lophophorates” and Entoprocts	Ch 19	oct 24
Blastocoelomates: nematodes	Ch 16	
Ecdysozoans - smaller groups	Ch 17	oct 29
Onychophora, Tardigrades	Ch 15	oct 31
Arthropods I - Chelicerates	Ch 14	nov 7
MIDTERM 2		nov 14
Arthropods II – Crustacea		nov 19
Arthropods III- Insects		nov 21
Echinoderms	Ch 20	nov 26
Hemichordates	Ch 21	nov 28

Final Exam (During Exam period (DEC 2-17), TBA)



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Repeat Course Policy:

Students who have successfully completed a course with a lab who wish to repeat the course for a more favorable grade, or a student who wishes to repeat the failed portion of the course may do so, if, and only if, the following requirements are met:

- If the student failed the laboratory portion of the course, but achieved a grade of at least C (60%) in the lecture portion of the course, the student may opt to repeat only the laboratory portion.
- If the student failed the lecture portion of the course, but achieved a grade of at least C (60%) in the laboratory portion of the course, the student may opt to repeat only the lecture portion.
- The course must be taken again **within two years** of the term in which the student was originally enrolled in the course (e.g. if the course was originally taken in the Fall term of 2014, the last possible term in which the student can repeat the course is Fall of 2016).
- In situations where the weighting of the lab/lecture component changes from year to year (e.g. 30% lab, 70% lecture in one year; 40% lab, 60% lecture in another year), it will be at the discretion of the instructor teaching the course the second time to decide the weighting in the calculation of the new grade.
- The student must complete the "Repeat course" form found on the Biology web page (<http://biol.ok.ubc.ca/forms.html>) and submit it by email to biology.okanagan@ubc.ca or to the Unit Administrative Assistant (Ms. Jennifer Janok, SCI 161) by the last day of the late registration period.

Please note that the university policy is that the student must register and pay for the complete course, and not just a portion of the course.

Copyright disclaimer: Diagrams and figures included in lecture presentations adhere to Copyright Guidelines for UBC Faculty, Staff and Students <http://copyright.ubc.ca/requirements/copyright-guidelines/> and UBC Fair Dealing Requirements for Faculty and Staff <http://copyright.ubc.ca/requirements/fair-dealing/>. Some of these figures and images are subject to copyright and will not be posted to *Canvas*. All material uploaded to *Canvas* that contain diagrams and figures are used with permission of the publisher; are in the public domain; are licensed by Creative Commons; meet the permitted terms of use of UBC's library license agreements for electronic items; and/or adhere to the UBC Fair Dealing Requirements for Faculty and Staff. Access to the *Canvas* course site is limited to students currently registered in this course. Under no circumstance are students permitted to provide any other person with means to access this material. Anyone violating these restrictions may be subject to legal action.



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Permission to electronically record any course materials must be granted by the instructor. Distribution of this material to a third party is forbidden.

Academic Integrity:

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the break-down of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

A more detailed description of academic integrity, including the policies and procedures, may be found at:

<http://okanagan.students.ubc.ca/calendar/index.cfm?tree=3,54,111,0>

If you have any questions about how academic integrity applies to this course, please consult with your professor.

Sexual Violence Prevention and Response Office (SVPRO):

A safe and confidential place for UBC students, staff and faculty who have experienced sexual violence regardless of when or where it took place. Just want to talk? We are here to listen and help you explore your options. We can help you find a safe place to stay, explain your reporting options (UBC or police), accompany you to the hospital, or support you with academic accommodations. You have the right to choose what happens next. We support your decision, whatever you decide.

Visit svpro.ok.ubc.ca or call us at 250.807.9640.

Independent Investigations Office (IIO):



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If you or someone you know has experienced sexual assault or some other form of sexual misconduct by a UBC community member and you want the Independent Investigations Office (IIO) at UBC to investigate, please contact the IIO. Investigations are conducted in a trauma informed, confidential and respectful manner in accordance with the principles of procedural fairness.

You can report your experience directly to the IIO (investigationsoffice.ubc.ca):

Email: director.of.investigations@ubc.ca

Telephone: 604.827.2060

UBC Okanagan Disability Resource Centre:

The Disability Resource Centre ensures educational equity for students with disabilities, injuries or illness. If you are disabled, have an injury or illness and require academic accommodations to meet the course objectives, please contact Earllene Roberts, the Diversity Advisor for the Disability Resource Centre located in the University Centre building (UNC 214C).

Telephone: 250.807.9263

Email: earllene.roberts@ubc.ca

Web: <http://students.ok.ubc.ca/drc/welcome.html>

UBC Okanagan Equity and Inclusion Office:

UBC Okanagan is a place where every student, staff and faculty member should be able to study and work in an environment that is free from discrimination and harassment. UBC prohibits discrimination and harassment on the basis of the following grounds: age, ancestry, colour, family status, marital status, physical or mental disability, place of origin, political belief, race, religion, sex, sexual orientation or unrelated criminal conviction. If you require assistance related to an issue of equity, discrimination or harassment, please contact the Equity and Inclusion Office or your administrative head of unit.

UNC 216

Telephone: 250.807.9291

Email: equity.ubco@ubc.ca

Web: www.equity.ok.ubc.ca

Health & Wellness:

At UBC Okanagan health services to students are provided by Health and Wellness. Nurses, physicians and counsellors provide health care and counselling related to physical health, emotional/mental health and sexual/reproductive health concerns. As well, health promotion, education and research activities are provided to the campus



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community. If you require assistance with your health, please contact Health and Wellness for more information or to book an appointment.

UNC 337

Email: healthwellness.okanagan@ubc.ca

Web: www.students.ok.ubc.ca/health-wellness

SAFEWALK

Don't want to walk alone at night? Not too sure how to get somewhere on campus?

Call Safewalk:

Telephone: 250.807.8076.

Web: www.security.ok.ubc.ca