



## Unit 2 - Biology Course Outline

BIO 205 - 001  
Comparative Invertebrate Zoology (3)  
2020W T2 (spring 2021)  
W 2:30-4pm, Th 2-3:30, online

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### **Lecture Instructor:**

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Office: SCI 316

Phone: 250.807.9683

[matthew.nelson@ubc.ca](mailto:matthew.nelson@ubc.ca) (you can imessage me here as well)

<http://www.natureboy.com>

**Office Hours:** WTh 12-1pm, online via ZOOM

### **Laboratory Coordinator/Instructor:**

Name: Tristyn Hay

Office: SCI 155

[tristyn.hay@ubc.ca](mailto: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.



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### **Course Format:**

BIOL 205 has both a lecture and laboratory component. *Students must pass both components to pass the course.* The lecture portion of this course will be taught as an asynchronous (recorded, not live) class, with the exception of exams, which will require your presence at the set class time.

Lecture recordings will be posted on Canvas during class times, but you may watch them and take notes at your convenience. Probably the best way to approach this is to watch them either during the scheduled class time, or come up with a regular time that works for you, and do it at the same times every week. That way you will be sure to keep up with the material.

Exams will be given using Proctorio remote proctoring software. (The full requirements for Proctorio are listed below.) **Canvas modules** will guide you through the course material. **Canvas** and **Canvas mail** will be used to post announcements and to provide course-related material. It is your responsibility to check the Canvas site at least once a week.

In order to be successful, I would recommend that you read the material first, and take a few notes. (Basically outline the chapter and make sure you know the words in bold.) When you watch the lecture recordings, use your chapter outline and take notes as you would if you were in the classroom. Then, when it is time to study for the exam, study your notes. (I would not go back and re-read the chapter.) If you choose to use them, it might be best to do them after you listen to the lecture.

On Canvas, the home page for the course will have links to most of the important material for the course, including modules, lecture recordings, practice quizzes, and review sheets. You may notice that some material is linked to <http://www.natureboy.com>, which is my website. Material on Canvas will be updated as we go, so you will need to be sure that you are looking at it often. If I need to communicate with you, I will do so using announcements on Canvas, so be sure that you have it set to send you these as emails.

### **Laboratory Meeting times:**

BIOL 205 labs are held online and start on the week of JAN 11. 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.



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### **Required Materials:**

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

### **Proctorio Requirements:**

Exams in this course will be given using Proctorio remote proctoring software. This will require students to use the Google Chrome browser with the Proctorio extension loaded and running. During each exam, Proctorio will enter full screen mode. The student will not be allowed to exit full screen mode during the exam. Proctorio will activate the webcam, and record the student as the exam is being taken. It will also capture the screen of the test taker. Prior to beginning the exam, the test taker will be required to verify identity by showing your UBC ID card to the camera. I will assign several practice quizzes during the semester to give you a chance to make sure your setup is working before the first midterm comes along.

### **In order to use Proctorio, the following hardware and software are required:**

- a laptop or desktop computer with at least:
- a webcam
- a microphone
- a reliable internet connection
- at least 2GB of free RAM
- 250MB disk space
- Google Chrome
- Proctorio extension

For the full system requirements, go to <https://proctorio.com/system-requirements>.

*note: Proctorio is not compatible with phones or tablets.*

### **ALL EXAMS WILL BE GIVEN USING PROCTORIO DURING CLASS TIME**

### **Course Evaluation:**

<b>Midterm #1</b>	<b>20%</b>	<b>feb 11</b>
<b>Midterm #2</b>	<b>20%</b>	<b>mar 18</b>
<b>Laboratory</b>	<b>30%</b>	
<b>Final</b>	<b>30%</b>	<b>TBA</b>
<b>Total</b>	<b>100%</b>	

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.



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**Note:** Any requests for changes to final exams must be sent to the office of the Associate Dean of Students ([bsasdeansoffice.ubco@ubc.ca](mailto: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 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 2020/2021 Winter Term 2 is (APR 16-29). 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.



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### **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 breakdown 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.

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### **Lecture Outline:**



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TOPIC	Readings	Tentative date
Intro and Organization		jan 13
Phylogenetic Analysis and Systematics	Ch. 2	jan 14
Poriferans and Placazoans	Ch 4	jan 20
Hydrostatic Skeleton, Ctenophora, Cnidarians	Ch 5, 6, 7	jan 21
Platyhelminths I (Aceolomates) - Turbellaria	Ch 8	jan 27
Platyhelminths II- Cestoda, Trematoda		jan 28
Mesozoans	Ch 9	feb 3
Rotifers and Acanthocephalans	Ch 10	feb 4
Nemertean	Ch 11	feb 10
<b>MIDTERM 1 (ch. 2,4-10)</b>		<b>feb 11</b>
Molluscs I- smaller groups	Ch 12	feb 24
Molluscs II - Gastropods, Cephalopoda		feb 25
Annelids - Polychaeta	Ch 13	mar 3
Annelids - Clitellata - Oligochaeta and Hirudinea		mar 4
"Lophophorates", Ecdysozoans - smaller groups	Ch 17-19	mar 10
Nematodes	Ch 16	mar 11
Onychophora, Tardigrades	Ch 15	mar 17
<b>MIDTERM 2</b>		<b>mar 18</b>
Arthropods I - Chelicerates	Ch 14	mar 24
Arthropods II - Crustacea		mar 25
Arthropods II - Crustacea		mar 31
Arthropods III- Insects		apr 1
Echinoderms	Ch 20	apr 7
Hemichordates	Ch 21	apr 8

**Final Exam (During Exam period (APR 16-29), 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](mailto:biology.okanagan@ubc.ca) or to the Department Assistant (Jennifer Rhodes, SCI 154) 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.

### **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](http://svpro.ok.ubc.ca) or call us at 250.807.9640.

### **Independent Investigations Office (IIO):**

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.



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

Email: [director.of.investigations@ubc.ca](mailto: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](mailto:earllene.roberts@ubc.ca)

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

### **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 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](mailto:healthwellness.okanagan@ubc.ca)

Web: [www.students.ok.ubc.ca/health-wellness](http://www.students.ok.ubc.ca/health-wellness)

### **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](mailto:equity.ubco@ubc.ca)

Web: [www.equity.ok.ubc.ca](http://www.equity.ok.ubc.ca)



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### **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](http://www.security.ok.ubc.ca)