



COURSE OUTLINE

1. **Course:** ZOOL 401, An Introduction to Invertebrate Zoology - Winter 2024

Coordinator(s)

Name	Email	Phone	Office	Hours
Dr Mindi Summers	mind.summers@ucalgary.ca	403 220-8761	BI 339	TBA

Section(s)

Lecture 01 : MWF 15:00 - 15:50 in TI FORUM

Instructor	Email	Phone	Office	Hours
Dr Mindi Summers	mind.summers@ucalgary.ca	403 220-8761	BI 339	TBA

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

Lecture:

01 MWF 15:00-15:50 TI 160 (Forum)

Labs:

01 T 9:00-11:50 BI 046

02 T 12:30-15:20 BI 046

03 Th 9:00-11:50 BI 046

04 Th 12:30-15:20 BI 046

Course Site:

D2L: ZOOL 401 L01-(Winter 2024)-An Introduction to Invertebrate Zoology

Note: Students must use their U of C account for all course correspondence.

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

The Biological Sciences Equity Committee acknowledges there are persistent barriers that prevent such accessibility and hinder our progress towards EDI. Our representatives (faculty, staff, postdocs, graduate and undergraduate students) are committed to addressing any concerns and work towards proactive solutions that enact necessary change within the department. To submit anonymous questions, comments or concerns regarding EDI related issues, please reach out to our Chair, Arshad Ayyaz (arshad.ayyaz@ucalgary.ca), or a committee representative of your choice at <https://science.ucalgary.ca/biological-sciences/about/equity-diversity-and-inclusion>

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Biology 371. Also known as: (formerly Zoology 375)

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Lab/Lecture Exam 1 ¹	28%	Ongoing		
Lab/Lecture Exam 2 ²	28%	Ongoing		
Lab Exercises ³	16%	Ongoing		
Assignments ⁴	16%	Ongoing		
Creature Feature ⁵	5%	Ongoing		
Course intro activities	1%	Jan 12 2024		
Portfolio Assignment 1	2%	Feb 28 2024		
Portfolio Assignment 2	3%	Apr 09 2024		
Course wrap-up activities	1%	Apr 09 2024		

¹ in lab Feb 13 or 15

² in lab March 26 or 28

³ due during scheduled lab, 2% each (8 in total)

⁴ due Fridays by 23:59 on D2L, 2% each (8 in total)

⁵ team submit on D2L April 2 by 23:59; present in lecture April 3, 5, and 8

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

*Please also see schedule on D2L for all assignment due dates.

* In the lecture component of the course for weeks 1-10, we will use the TopHat classroom performance system, where you will be asked to use a cell phone or other device to text answers to questions during class. The use of the TopHat system is optional, but highly recommended to enhance learning in the classroom. If you answer 85% or more of the in-class questions, up to 0.5% will be added to your final grade. If you answer less than 85% of the in-class questions, a grade of 0 will be assigned for this course component, and your final grade will not be modified. It is your responsibility to ensure that your participation is being properly recorded by the TopHat system. In the event of any discrepancy, you must contact the administrators of the TopHat system to have them corrected. Correction of any discrepancies must be done prior to 23:59 on April 9, 2024. If you are unable to use the TopHat system, please contact Dr. Summers within the first week of class to make alternate arrangements.

* Throughout the term, you will have five opportunities to make a meme that aligns with the content covered in the course (see assignment information and deadlines on D2L). For each complete meme, you can earn 0.25% onto your final grade, up to a maximum of 1% added to your final grade.

The University of Calgary offers a [flexible grade option](#). Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

4. Missed Components Of Term Work:

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation ([Section M.1](#)) for an excused absence, See [FAQ](#).

If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

5. Scheduled Out-of-Class Activities:

There are no scheduled out of class activities for this course.

6. Course Materials:

Recommended Textbook(s):

Pechenik, *Biology of the Invertebrates*: McGraw-Hill.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. Examination Policy:

In this course, our primary focus is to cultivate an equitable, inclusive, and accessible learning community that emphasizes individual critical thinking and problem-solving skills. To ensure a fair and consistent learning experience for all students, the use of advanced AI tools such as ChatGPT or Dall-E 2 is strictly prohibited for all academic (written/coding/creative/etc.) work, assignments, and assessments in this course. You are expected to complete all tasks without substantive assistance from others, including AI tools.

Any use of AI tools in your academic work may result in academic penalties and be considered an act of academic misconduct. If you have questions about the use of AI tools, please arrange a conversation with Dr. Summers.

Examination Policy: Prior to each lecture/lab exam, you may create one-page of hand-written notes. The maximum size of the notes is standard letter size (8.5 x 11"), and one side only. The page of notes should be entirely your own work and your name must be on the page. No other materials will be allowed during the examination. Calculators, rulers, and other devices will be available at any stations where these tools are required. Students should also read the Calendar, Section G, on Examinations.

Assignments & Portfolio Exercises: You are encouraged to discuss course material and study together during lectures and laboratories, and outside of class. You will then complete the assignments in this course on your own. Assignments and portfolio assignments are open-book, open-note, and you can consult outside resources to complete the assignments (other than other students and artificial intelligence tools).

Laboratory Exercises: You are encouraged to share observations and materials during laboratories, and to work with your team to understand the concepts and develop the skills required to complete each laboratory exercise. The work that you present in your laboratory notebook, should be entirely your own. Sharing of laboratory notebooks or work conducted during laboratory sessions is not permitted.

Internet and Electronic Device Information: Except when participating in TopHat, and unless instructed otherwise, cell phones should be turned off during lecture and laboratories. While you are encouraged to discuss course material during lecture and lab discussions, all communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.

Electronic Devices & Photography In Laboratories: You are welcome to bring electronic devices into laboratory sessions to display the laboratory exercises and look up information when needed using the internet. You may not take photographs of any specimens, or share photographs of specimens or your laboratory notebook with others.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. Human & Living Organism Studies Statements:

If you agree, your course work may be used for research purposes. Your responses will remain anonymous and confidential. Grouped data (no individual responses) may be used in academic presentations and publications. Participation in such research is voluntary and will not influence grades in this course. Students' signed consent forms will be withheld from instructors until after final grades are submitted. More information will be provided at the time student participation is requested.

See also [Section E.5](#) of the University Calendar.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. Students taking laboratory and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

Students are expected to be familiar with [Section SC.4.1](#) of the University Calendar.

11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work [form](#) to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Services:** For more information, see their [website](#) or call [403-210-9355](#).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](#). The complete University of Calgary policy on sexual violence can be viewed [here](#).
- d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.
- e. **Student Union Information:** [SU contact](#), Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca.
- f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities:

<https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the [Request for Academic Accommodation Form](#) and sending it to Lisa Gieg by email imgieg@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

- g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)
[Student Academic Misconduct Policy](#) and [Procedure](#)
[Faculty of Science Academic Misconduct Process](#)
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

- h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.
- i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

ZOOLOGY 401: Introduction to Invertebrate Zoology – Winter 2024

Tentative Course Schedule

Week	Lecture Topic	Lab Topic	Assignments & Due Dates
1 Jan 8-12	M - Course Introduction W - Porifera I F - Porifera II	No scheduled lab - complete course introduction activities	F: Course introduction activities & Team formation survey (by 23:59)
2 Jan 15-19	M - Porifera III W - Cnidaria I F - Cnidaria II	Porifera	T/Th: Porifera Lab Assignment 1 (in lab)
3 Jan 22-26	M - Cnidaria III W - Platyhelminthes I F - Platyhelminthes II	Cnidaria	T/Th: Cnidaria Lab Assignment 2 (in lab) F: Cnidaria Assignment 2 (by 23:59)
4 Jan 29-Feb 2	M - Platyhelminthes III W - Annelida I F - Annelida II	Platyhelminthes	T/Th: Platyhelminthes Lab Assignment 3 (in lab) F: Platyhelminthes Assignment 3 (by 23:59)
5 Feb 5-9	M - Annelida III W - Annelida IV F - Mollusca I	Annelida	T/Th: Annelida Lab Assignment 4 (in lab) F: Annelida Assignment 4 (by 23:59)

6	M - Mollusca II		
Feb 12-16	W - Mollusca III F - Parasites	Lab/Lecture Exam 1	
Winter Break			
7	M - Mollusca IV		T/Th: Mollusca Lab Assignment 5 (in lab)
Feb 26-Mar 1	W - Arthropoda I F - Arthropoda II	Mollusca	W: Portfolio Assignment 1 (by 23:59) F: Mollusca Assignment 5 (by 23:59)
8	M - Arthropoda III		T/Th: Arthropoda Lab Assignment 6 (in lab)
Mar 4-8	W - Arthropoda IV F - Echinodermata I	Arthropoda	F: Minor Phyla Arthropoda Assignment 6 (by 23:59)
9	M - Echinodermata II		T/Th: Echinodermata Lab Assignment 7 (in lab)
Mar 11-15	W - Echinodermata III F - Minor Phyla I	Echinodermata	F: Echinodermata 7 (by 23:59)
10	M - Minor Phyla II		T/Th: Minor Phyla Lab Assignment 8 (in lab)
Mar 18-22	W - Minor Phyla III F - Synthesis & Creature Feature	Minor Phyla	F: Minor Phyla Assignment 8 (by 23:59)
11	M - Creature Feature Prep		
Mar 25-28	W - Creature Feature Prep F - No Class, University Closed	Lab/Lecture Exam 2	
12	M - No Class, University Closed		
Apr 2-5	W - Creature Features Presentations F - Creature Features Presentations	NA	T: Creature Feature Presentations (by 23:59)
13	M - Creature Features Presentations		
Apr 8-9		NA	T: Portfolio Assignment 2 & with Creature Feature Individual and Peer Evaluation (by 23:59)

Optional activities:

Wednesdays 16:00: Class representative meetings - Please volunteer to be a class representative! Class reps are currently enrolled students in Zoology 401 who volunteer to collect and share student feedback on the course – you can attend any meetings at any time (no commitment is required). During our weekly meeting, class reps first share ideas and comments from students and then we discuss ways to improve the course. Class reps will also lead collection and analysis of mid-semester feedback on the course. If you can't attend the meetings yourself, please take the time to talk with the class reps so that your experiences and ideas are heard!

Wednesdays 16:30 and by appointment: Student hours – After class representative meetings on Wednesdays, Dr. Summers will be available to meet with individuals or groups to discuss any aspect of the course. If you would like to schedule a student hours session outside of these hours with Dr. Summers or another member of the instructional team, please email – we are looking forward to talking with you!

Week 7: Invertebrate Book, Movie, & Culture Club – There are many non-fiction and fiction books, movies, tv shows, video games, and other aspects of our culture that star invertebrates! You have the option of choosing a piece of culture that features invertebrates AND participating in a discussion on February 28 at 16:30 during student hours. Participating in the invertebrate book club is optional and is not associated with any marks in this course, but highly recommended as a fun way to expand your thinking about invertebrates.

I am looking forward to learning together this term!

Electronically Approved - Jan 08 2024 12:40

Department Approval