



COURSE OUTLINE

1. **Course:** BIOL 305, The Human Organism - Summer 2023

Lecture 01 : MWF 10:00 - 11:50 in ICT 114

Instructor	Email	Phone	Office	Hours
Viktoriya Herbst	TBA	TBA	TBA	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:

All lectures will be in person. Students are strongly encouraged to attend regular-scheduled lectures to participate in the class discussion and ask questions about the material. The schedule below is provided as a guide to the major topics of the course material in the order in which they will be presented; the accompanying readings are from *Anatomy and Physiology 2e* for those who wish to do preparatory reading.

The lecture slides, with blanks to be filled in, will be posted under Content on the course D2L site before the appropriate lecture. Both PDF and PowerPoint formats will be available. The course notes, study guides and summary videos will be available for each module to facilitate your learning.

Re-Entry Protocol for Labs and Classrooms:

To limit the spread of COVID-19 on campus, the University of Calgary has implemented safety measures to ensure the campus is a safe and welcoming space for students, faculty and staff. The most current safety information for campus can be found [here](#).

Course Site:

D2L: BIOL 305 L01-(Summer 2023)-The Human Organism

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, Constance Finney (constance.finney@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):

One of Biology 30 or 205 or 241.

Antirequisite(s):

Not open for registration to Honours, Majors and Minors in the Department of Biological Sciences or to Natural Sciences program students with a Concentration in Biological Sciences, or to Neuroscience Program students. Credit for Biology 305 and any of Kinesiology 259, 260, Medical Science 404, Zoology 269, 461 or 463 will not be allowed.

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
Check-in Quizzes ¹	30%	Ongoing		
Critical thinking Assignments ²	35%	Ongoing		
Capstone Assignment ³	10%	Aug 08 2023		
Registrar Scheduled Final Exam	25%	Will be available when the final exam schedule is released by the Registrar	in person	Will be available when the final exam schedule is released by the Registrar

¹ Dates for individual assignments are provided in the Course Schedule below and on D2L.

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³ Details will be available on D2L.

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 %

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. [The Final Examination Schedule](#) will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

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:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness 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. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and 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):

Betts J.G., *Anatomy and Physiology 2e* : Openstax.org.

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:

No aids are allowed on tests or examinations.

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:

Students will not participate as subjects or researchers in human studies.

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.

- 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
- 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:

- 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](tel: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](tel: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 (FOIPP). 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.

THE COURSE SCHEDULE:

Note: This list is tentative; I may add, drop, or reorder topics according to our pace as a class. The lecture slides posted to D2L will have the most up-to-date information about upcoming topics and chapter information.

Session	Lectures	Learning activities
Module 1. Introduction to Human Body		
Monday, June 26	Introduction to the Human Body 13. - <u>Overview of Anatomy & Physiology</u> 14. - <u>Functions and requirements of human life</u>	Chapters: 1.1 – 1.7
Module 2. Human Body Organization		
Wednesday, June 28	Cellular Organization <ul style="list-style-type: none"> o - Cellular organelles and functions o - Types of cells o - Tissues and membranes 	Chapters: 3.1 – 3.2, 3.5 – 3.6, 4.1 – 4.6
Friday, June 30	Body organization <ul style="list-style-type: none"> o -Organs and organ systems 	Check-in Quiz 1: due on Monday, July 3 rd by 11:30 pm.
Monday, July 3	Monday followed Canada Day NO CLASSES	
Quiz 1 is due by 11:30 pm		
Module 3. Growth & development		
Wednesday, July 5	Growth, development, and reproduction <ul style="list-style-type: none"> o - Compare and contrast growth and reproduction o 	
Friday, July 7	<ul style="list-style-type: none"> o - Development o ---Fertilization o --- Embryonic development o --- Fetal development 	Chapters: 28.1 – 28.3 Check-in Quiz 2: due on Monday, July 10 th by 11:30 pm.
Module 4. Human Metabolism		
Monday, July 10	Metabolism and energy <ul style="list-style-type: none"> o - Catabolism o - Cellular respiration o - Anabolism o - Conjugate processes 	Chapters: 24.1 – 24.7 Assignment 1: due on Wednesday, July 12 th by 11:30 pm.
Quiz 2 is due by 11:30 pm		
Wednesday, July 12	Metabolic processes in <u>digestive tract</u> 15. - <u>Digestive processes and regulation: main and accessory organs</u> 16. - <u>Absorption</u> 17. - <u>Bacteria in digestive tract (<i>Helicobacter pylori</i>, symbiotic bacteria)</u>	Chapters: 23.1 – 23.7 Assignment 2: due on Friday, July 14 th by 11:30 pm.
Assignment 1 is due by 11:30 pm		
Friday, July 14	Oxygen supply by <u>respiratory system</u> 18. - <u>Organs and structure of the respiratory system</u> 19. - <u>The process of breathing</u> 20. - <u>Gas exchange</u>	Chapters: 22.1 – 22.5 Check-in Quiz 3: due on Monday, July 17 th by 11:30 pm.
Assignment 2 is due by 11:30 pm		
Monday, July 17	Nutrients and oxygen delivery by <u>circulatory systems</u> 21. - <u>Circulatory system overview</u> 22. - <u>Heart anatomy and cardiac cycle</u> 23. - <u>Circulatory pathways</u>	Chapters: 19.1 – 19.3, 20.1, 20.3, 20.5 Assignment 3: due on Wednesday, July 19 th by 11:30 pm.
Quiz 3 is due by 11:30 pm		
Module 5. Homeostasis and regulation		
Wednesday, July 19	Responsiveness as a function of <u>nervous system</u> 24. - <u>Structure and function of neurons: reflex, action potential and synaptic transmission.</u>	Chapters: 12.1 – 12.5 Assignment 4: due on Friday, July 21 st by 11:30 pm.
Assignment 3 is due by 11:30 pm		

Friday, July 11 Assignment 4 is due by 11:30 pm	Control and regulation as a function of nervous system - Central and peripheral system as centers of coordination and regulation	Chapters: 13.2 – 13.3 Check-in Quiz 4: due on Monday, July 24 th by 11:30 pm.
Monday, July 24 Quiz 4 is due by 11:30 pm	Homeostasis: <u>Endocrine system</u> 26. - <u>Hormones and glands</u> 27. - <u>Organs with secondary endocrine functions</u> 28. - <u>Hormones regulation by nervous system</u> 29. -	Chapters: 17.1 – 17.10 Assignment 5: due on Wednesday, July 26 th by 11:30 pm.
Wednesday, July 26 Assignment 5 is due by 11:30 pm	Homeostasis: <u>Urinary System</u> 30. - <u>Osmoregulation</u> 31. - <u>Anatomy and function of kidney</u> 32. - <u>Urine formation and tubular reabsorption</u> 33. - <u>Regulation of urinary system functions</u>	Chapters: 25.2 – 25.4, 25.6, 25.10 Assignment 6: due on Friday, July 28 th by 11:30 pm.
Module 5. Protection		
Friday, July 28 Assignment 6 is due by 11:30 pm	Protection: <u>Immune and Lymphatic system</u> 34. - <u>Anatomy of the lymphatic and Immune Systems</u> - <u>Barrier Defenses and Innate Immune Response</u>	Chapters: 21.1 – 21.2 Check-in Quiz 5: due on Monday, July 31 st by 11:30 pm.
Monday, July 31 Quiz 5 is due by 11:30 pm	<ul style="list-style-type: none"> o - Adaptive immune response T-, B-lymphocytes and Antibodies o - Blood typing o - Transplantation and cancer immunology o - Diseases associated with depressed and overactive immune response. - Vaccination	Chapters: 21.3 – 21.7 Assignment 7: due on Wednesday, August 2 nd by 11:30 pm.
Module 6. Support and Movement		
Wednesday, August 2 Assignment 7 is due by 11:30 pm	<ul style="list-style-type: none"> o Support and Movement: Muscular system o - Type of muscle tissues o - Muscle fiber contraction and relaxation o - Control of muscle tension 	Chapters: 10.1 – 10.9 Capstone Assignment: due on Tuesday, August 8 th by 11:30 pm
Friday, August 4	<ul style="list-style-type: none"> o Support and movement: Skeletal system o - Overview of skeletal system o - Functions of the skeletal system o - Calcium homeostasis o 	Chapters: 6.1, 6.7 Check-in Quiz 6 due on Monday, July 24 th by 11:30 pm.
Monday, August 7 Quiz 6 is due by 11:30 pm	Alberta Heritage Day NO CLASSES	
Tuesday, August 8 Capstone Assignment is due by 11:30 pm	End of classes Submit your capstone assignment if it is not done yet.	
TBD: August 10 to 14	REGISTER SCHEDULED FINAL EXAM	

* The course notes, study guides and slides are your primary source of information and will be enough for you to learn anatomy and physiology at the introductory level and prepare for exams. For deeper understanding and wider perspectives, you can read the outlined chapters from [Anatomy and Physiology 2e, Betts J.G. et al \(2022\), Openstax.org](#). However, the topics for each lecture can be found in any Human Biology text.

COURSE COMPONENTS:

LECTURES:

The lectures will focus on the course concepts and their application. Each lecture includes active learning activities. I encourage you to complete class assignments: notes, questionnaires, individual and group activities to help you gain a deeper understanding of the concepts, develop the necessary skills, and develop problem-solving strategies.

You are expected to attend the lecture sections to keep up with course content. The lectures will be complemented by recommended pre-reading and posted handouts.

WEEKLY CHECK-IN QUIZZES:

The weekly check-in quizzes are designed to check your understanding of the material covered in the course. These check-ins will help you build routines in your studying so that you stay on track with material throughout the semester, and so that you can reach out for support or clarification before a bigger assessment like a term test.

All quizzes will be open book: you are permitted to access your own course notes, the course materials, and anything that may be posted to the D2L site; but you are not allowed to communicate on the subject of a quiz with your classmates or anyone other than your instructor after having opened it and before you and others have submitted it. Questions in the quizzes will be randomized; that means that you and your classmates will have a different version of the quiz.

The quizzes will be delivered and conducted using D2L. You are required to answer a series of autograded questions and may need to submit handwritten answers through D2L. The autograded score will be adjusted according to your handwritten solution. Students will require stable access to internet, a computer/laptop/other device, and ability to handwrite solutions and copy it to a .pdf file.

You will have THREE attempts for each quiz. During the first attempt you will answer about 25 randomized (mostly multiple choice) questions related to the topics discussed over the week. The following attempts allow you to retake incorrect questions. Each attempt will be designed to be completed in about 30 minutes.

The quizzes will be available any time from Friday to Monday. Once the quiz is started, assessment solutions must be submitted within 30 minutes (as specified in the quiz instructions). Before you start a quiz review your notes and reading materials. You will not have time to search for information.

A detailed schedule of Bi-Weekly quizzes due dates is posted in the course schedule above, as well as the course D2L. More details on the activities for each week will be provided on D2L.

There will be no extension for bi-weekly quizzes. One quiz may be excused if warranted (due to illness or other emergency circumstances) and if such circumstances are communicated to the course instructor Dr. Herbst (vkostenk@ucalgary.ca) within a reasonable time (no later than 48 hours after the assessment date).

FINAL EXAM:

This course will have a final exam that will be scheduled by the Registrar. The Final Examination Schedule will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

Alternate time accommodation for students facing a significant barrier to writing the assessment during the scheduled time will be done on a case-by-case basis. Students seeking such accommodation should contact the course instructor (Dr. Herbst, vkostenk@ucalgary.ca) at least 7 days prior to the test date.

ASSIGNMENTS:

Instruction: These assignments are critical thinking questions that help you to review the course concepts and build an enduring understanding of the structure and functions of the selected human organ systems. Each assignment consists of three written-response questions. Answer these questions in a short paragraph at the D2L Assignments. Each assignment is weighed 5% of your final grade.

A detailed schedule of Assignments due dates is posted in the course schedule above, as well as the course D2L. More details on the activities for each week will be provided on D2L.

The extension is possible for the Assignments if warranted (due to illness or other emergency circumstances) and if such circumstances are communicated to the course instructor Dr. Herbst (vkostenk@ucalgary.ca) within a reasonable time (no later than 48 hours after the assessment date).

Late Submission Policy: Submission of the assignments and lab reports are expected no later than the appointed due date. Overdue assignments and lab reports will be deducted 25% per day if late up to three days. After three days, submissions will not be accepted. If you are having trouble with completing an assignment, you must let your instructor know in advance of the due date to ask for help or negotiate for an extension.

Electronically Approved - Jun 24 2023 08:40

Department Approval

