

Human Biology I

BIOL 1813 FA01

Lectures: Dr. Wasundara Fernando
(she/her/hers)

Office: BIO 310

Office hours: M 10:30 am – 12:00 pm

E-mail: wasundara.fernando@acadiau.ca

Lecture: Huggins Science Hall, HSH 010
MWF 9:30-10:20 am

Please check [My Acadia](#)/ Self-Service for assigned classrooms, as they may change in the first week of classes.

Office hours are reserved for you to come and talk to me, ask questions, share stories, or simply say hi. I am here to assist you! If the time listed above does not fit with your schedule, please email me to set up an appointment.



Part 1: Course Information

Course Description

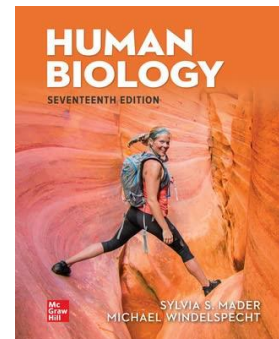
The human body is an incredibly complex machine that works through the intricate coordination of different systems at the cellular, tissue and organ levels. The focus of this course is to provide a superficial introduction (breadth not depth) to the structure and function of the major systems in the human body. This semester we will begin at the microscopic level by looking at cell structure and tissue. We will then move on to look at whole organ systems, with detailed examinations of the integumentary, cardiovascular, digestive, respiratory, and urinary systems.

Prerequisite(s)

There is no prerequisite(s) for this course.

Course Materials & Requirements

- Recommended textbook: Human Biology by Sylvia Mader and Michael Windelspecht (seventeenth edition), McGraw-Hill Education. Earlier editions and used textbooks should also work.
- The textbook is recommended (not required) and will provide further reading if you are interested in. All material for tests and examinations will be taken directly from lecture notes and other reading material provided to you during lectures.
- A tablet or laptop with internet access for quizzes and examinations. This is mandatory as all examinations will take place in class but online.
- Vaughan Memorial Library's Biology [LibGuide](#)



Course Structure

- Lectures will be in person and lecture material will be presented in 50 min lecture slots.
- Lectures will take place in HSH 010 - MWF 9:30 am - 10:20 am.
- Lecture slides will be made available on the lecture MOODLE page.
- I will not be recording or live-streaming lectures, and students are expected to attend all lectures in-person.

Learning Outcomes

This course establishes the foundation and knowledge required for several upper year courses. Lectures will help you:

1. Identify the major regions of the body.
2. Understand and use proper anatomical directional terminology.
3. Understand the hierarchical nature of the human body.
4. Understand the inner workings of a cell and the different types of tissue.
5. Identify the major anatomical features and the basic physiology of the integumentary, cardiovascular, respiratory, digestive, and urinary systems.

How to meet the Learning Outcomes?

1. Attend lectures on a regular basis, take notes, and ask for clarification when something is unclear.
2. Please ask questions in class, but if you'd prefer, email or come and meet me during my office hours.
3. Study on a regular basis. Keep up with the weekly lecture quizzes- they are designed to help you review and keep up to date.
4. Lecture evaluation will be via online quizzes, two tests, and one final exam.

Part 2: Course Plan

The instructors reserve the right to amend the course plan with reasonable notice.

Date	Topic
Section 1: Chemical and Molecular Foundations of Life	
Sep 4 – Sep 6	Introduction to BIOL 1813; The Characteristics of Life
Sep 9 – Sep 13	Science as a Process; Atoms and Molecules; Molecules of Life
Sep 16 – Sep 20	Lipids and Carbohydrates; Nucleic Acids; Proteins
Section 2: Organization of the Human Body	
Sep 23 – Sep 27	Review before Test 1; Sep 25 - Test 1 ; Organization and Structure of the Cell
Sep 30 – Oct 4	Sep 30: National Day for Truth and Reconciliation – No classes ; Biomembranes; Cytoskeleton and Cell Movement

Oct 7 – Oct 11	Cellular Metabolism; Tissues and Organ Systems and Test 1 Review; Connective Tissue
Oct 14 – Oct 18	Oct 14: Thanksgiving Day; Oct 15-18: Fall study break - No classes.
Oct 21 – Oct 25	Muscular and Nervous Tissues; Oct 23: Self review in-class activity; Epithelial Tissue

Section 3: Maintenance of the Human Body

Oct 28 – Nov 1	Review before Test 2; Oct 30 - Test 2 ; The Integumentary System
Nov 4 – Nov 8	The Cardiovascular System – Heart and Blood Vessels; The Cardiovascular System – Blood; Lymphatic System
Nov 11 – Nov 15	Nov 11: Remembrance Day – No classes ; Biology of Infectious Diseases; Test 2 Review
Nov 18 -Nov 22	The Digestive System and Nutrition; The Accessory Organs; The Respiratory System – Structure
Nov 25 – Nov 29	The Respiratory System – Function; The Urinary System – Structure; Course Review – 1
Dec 2 – Dec 4	The Urinary System – Function; Course Review – 2

Part 3: Assessment and Grading

Evaluation	Percentage	Date
Quizzes	20%	Weekly
Test 1	20%	Sep 25
Test 2	20%	Oct 30
Final (Cumulative)	40%	December exam period

1. Weekly quizzes (20%) - Weekly quizzes integrate lecture and reading material. Quizzes will be made available to you on MOODLE (online) at the beginning of the relevant week. The number of attempts is unlimited, and the quizzes can be completed at any time within the next two weeks. They will not be re-opened once they are closed.
2. Test 1 and 2 (20% each) – The in-class tests will be written in the lecture time and classroom unless you are registered with the Accessibility Services. If you have to miss a test, you need to contact me before the test. Missed tests without a valid reason will result in 0%. Make-up tests will not be provided. Both tests are closed book exams.
3. Final Exam (40%) - This cumulative exam is based on lecture material. Material from guest lectures will be on the final exam. The exam will be written in the April exam period. It is a closed book exam.
4. If you are registered with Accessibility Services, appropriate accommodation will be made for in-class tests and the final exam.

Part 4: Course Policies

***Studies have shown that students who take notes by hand (rather than typing on a computer) perform significantly better in their ability to retain information. While you are

permitted to use laptops or tablets to take notes in lecture, please limit their use to classroom material only. Using them for other purposes (i.e. social media) will negatively impact your ability to learn, and it is distracting to myself and others. If your use of electronic devices becomes a distraction to me or others, you will either be asked to put your device away or to leave the classroom.

Lectures will be delivered in-person. In the event of a campus closure (e.g., due to weather) or a change in the public health situation, the lectures may be moved on-line. You will be notified via e-mail and MOODLE in the event of a change in delivery mode.

Lecture:

Students are expected to attend all classes sessions in person.

Make-up tests for either absence, or poor performance, will not be provided as an option. In the event that you have a valid excuse for missing either of the tests, the weight from the missed test will be distributed to the final exam. If you are going to miss a test, it is your responsibility to let me know before the exam. Missed test(s) without a valid excuse will result in a mark of zero. University policies on missing classes, etc. can be found here:

<https://registrar.acadiau.ca/RecordsandOtherRequests.html>

Part 5: University Policies

University policies are available in the Acadia University Academic Calendar or through the Registrar's website: <https://registrar.acadiau.ca/welcometotheregistrarsoffice.html>

Equity, Diversity and Inclusion

Acadia University is committed to becoming a culturally safe and anti-oppressive community. This can only be achieved where there are simultaneous efforts to eliminate all forms of discrimination and harassment from our campus community, including the elimination of all discrimination, harassment and violence based on one's identity, including but not limited to, gender, race, class, ethnicity, sexual orientation, disability, gender identity, gender expression, and Indigeneity. The policy against harassment and discrimination, and resources for students who believe they may have experienced, or witnessed, discrimination or harassment, are available here:

<https://www2.acadiau.ca/student-life/equity-judicial/equity.html>

Last Drop Day

Last day to drop a course and receive a "W". Please check the Acadia University calendar dates, which are available here: <https://registrar.acadiau.ca/AcademicCalendars.html>

Inform Your Instructor of Accommodations

Acadia University is dedicated to improving access to campus life for all students with disabilities. While we attempt to ensure that all courses are accessible, we recognize that there are barriers that need to be addressed on an individual basis. Students who require accommodation to complete coursework or otherwise fully participate in class should contact Accessible Learning Services directly as soon as possible.

<https://www2.acadiau.ca/student-life/accessiblelearning.html>

The Use of Animals in Teaching and Research

The use of animals in teaching and research at Acadia University is done in accordance with guidelines on the care and use of animals published by the Canadian Council on Animal Care (CCAC). For more information on the CCAC, please visit their website at <http://www.ccac.ca>

Commitment to Integrity

It is standard practice in Biology to check exams and assignments for cheating and plagiarism. Cheating in the class and/or lab, including plagiarism, will not be tolerated. Please read the appropriate sections of the current Acadia University Academic Calendar: <https://registrar.acadiau.ca/AcademicCalendars.html>

Information on copy-write and course content from Acadia University is available through the Vaughan Memorial Library: <http://libguides.acadiau.ca/c.php?g=433650&p=5027078>

The spoken and written course content (including the syllabus, handouts, lectures, presentations, labs, assignments, quizzes, tests, and exams) are the intellectual property of the instructor and may only be copied for personal use. Sharing these materials or uploading them where they may be accessed by others is a violation of copyright. If you wish to make audio, video, or photographic recordings in class, you must first obtain the consent of the instructor and of any other persons (e.g., guest speakers, other students) who may be captured in such recordings. In the case of personal use by students with disabilities, the instructor's consent shall not be unreasonably withheld.

Part 6: Program Learning Outcomes

The Biology Department maps Program Learning Outcomes (PLOs) in each course throughout our program in order to align content and skills across courses. As BIOL 1813 is a first-year course, PLOs here will be Introduced; in upper-level courses, some of these will be Reinforced or indicated as Proficient as you develop advanced skills in upper-level courses. All PLOs do not apply to all courses but represent the entire program.

Foundations of knowledge		Course specific examples	Proficiency 1-Introduction 2-Reinforcement 3-Proficient
Scientific method, inquiry and hypothesis testing	Find, understand, explain and apply information from the literature; understand how to use the scientific method to examine problems from different perspectives.	Explain the scientific process and practice the scientific method, scientific writing, and use of citations.	1
Chemical and molecular foundation of life	Explain the chemical and molecular building blocks of life.	Review macromolecules and learn scientific process.	1

Organization of the human Body	Describe the structure and organization of cells, tissues and organ systems.	Introduce the structure and function of the cell. Explain the organization of tissues and types of tissues.	1
Maintenance of the human Body	Explain how the human body is maintained, and the main components/organ systems involved in human body maintenance.	Explain the structure and functions of integumentary, cardiovascular, lymphatic, digestive, respiratory and urinary systems.	1
Professional skills			
Ethical practices	Demonstrate ethical conduct, apply principles of academic integrity, and understand the principles of EDI in science	Ethical practices and accountability in both independent and group work.	1
Collaboration and group work	Work effectively in groups within and across disciplines	Small group work in the lecture, within discipline.	1
Critical thinking	Analyze and evaluate information to make science-based decisions	Lecture, in practical work and assessments.	1
Computer proficiency	Use common and discipline-specific software	MS Word, Excel, PowerPoint and also MOODLE.	1
Scientific communication	Communicate science effectively to both scientific and general audiences	Iterative writing with opportunity for feedback and developing skills.	1

Acadia is a scent-free and smoke-free campus. Everyone on campus should refrain from wearing scented products such as perfume/cologne/after-shave/hair spray etc. Violation of this policy could lead to your removal from class/lab/tutorial and potential academic penalties because of missed work.