

BIO130

Human Anatomy and Physiology

Draft Course Syllabus

Term Year

Class Time	Tue, 1.5-hour period (Lecture) Thu, 1.5-hour period (Lecture)
Class Location	TBD
Instructor	David Murray-Stoker
Office Location	TBD
Office Hours	TBD (Hybrid)
E-mail Address	dstoker92@gmail.com

Course Overview

You will develop a comprehensive understanding of the structure and function of the human body. This course will provide an overview of the skeletal, muscular, nervous, endocrine, cardiovascular, and lymphatic systems. You will apply your knowledge to lecture and take-home activities, with activities also showcasing careers that are available in the health science and medical fields. This course is intended for students pursuing health science majors.

Learning Objectives

As you participate and engage in the course, you will be able to:

- Explain fundamental concepts of human physiology.
- Identify anatomical structures of the skeletal, muscular and nervous systems.
- Link the nervous and musculoskeletal systems.
- Evaluate the human body as a connected ‘system’ of cells, tissues, and organs.
- Apply your knowledge and understanding to personal health.
- Work independently and collaboratively to solve problems.
- Gain a broader perspective of the health and medical sciences.

Coursework

You should expect to complete 10-12 hours of study and work each week for this course, including time spent in lecture and lab. In other words, there will be ~7-9 hours of work outside of lectures and computer labs for you to complete the readings and course assignments. The course schedule is at the end of the syllabus, but the table below highlights the assignments and their weight towards your final grade.

Type	Description	Due Date	Weight
Lecture Quizzes	In-class lecture quizzes and activities	Ongoing	15%
Lecture Reflections	Directed reflections (weekly)	TBD	10%
Case Study Worksheets	Completion of case studies worksheet activities (5 total)	TBD	25%
Career Reflection	Reflection on career goals and developing a plan to achieve them	TBD	5%
Term Tests	Take-home term tests covering specific units (3 total)	TBD	30%
Group Term Tests	Take-home group tests covering specific units (3 total)	TBD	15%
Total			100%

Notes on Coursework

Lecture Quizzes (15%): We will use lecture quizzes to document progress through the learning process. Quizzes be evaluated for completeness – not correctness – and there will be the opportunity to learn the ‘correct’ answer in class, either from your peers, your instructor, or your own reflection. Quizzes will be administered using an iClicker device.

Reflections (10%): You will complete weekly reflections on recent course topics and to monitor your learning process. These reflections will have directed prompts to guide your reflection, but there will also be an open field for you to expand on any component of the lecture content. I will also emphasize metacognition in these reflections, or having you learn about your learning process: what works, what doesn’t work, how to study/learn more effectively. Reflections will likely be around 200-300 words (more if desired). Reflections will be submitted through the course website.

Case Study Worksheets (5% each, 25% total): Worksheets provide an opportunity to apply what you have learned to real-world scenarios and learn about careers in the health science and medical fields. You will have 5 total worksheets to complete over the semester. You may work with a partner or in a group on the case study worksheets, but please let me know if you choose this route before submitting.

Career Reflection (5%): You will complete a career reflection, where you reflect on your personal career goals and develop a plan to make those goals a reality. You will submit your first reflection at the end of the first week of class, and the final reflection will be due by the last day of class. By using this approach, you can see how your plans have been modified and refined over the course of the semester. Reflections will be submitted through the course website.

Term Tests (10% each, 30% total): The 3 take-home term tests will cover specific units and be due 72 hours after being released through the course website. The term tests will consist of case study evaluations and short answer/essay questions. It will also include directed reflection questions. The term tests will be submitted through the course website. The term test will be open book, but you are encouraged to take notes so you can develop knowledge recall and application in preparation for the final exam and when you apply your learning and understanding of biology to your everyday life.

Group Term Tests (5% each, 15% total): Science is a collaborative enterprise, like many careers inside and outside of science. To develop your ability to work effectively with others, there will also be 3 group term tests. Each of the group take-home term tests will be assigned after you received feedback on your individual term test. If you had difficulty with a question, the group test gives you the opportunity to clarify any questions or confusions that remain with your group members. Working as a group can actually help you better learn the material, because explaining a process or concept to another person also helps you better apply your learning.

Working as a group means each member needs to come prepared and willing to contribute to the group. To help with the group work, each group will set a community agreement where expected conduct and contributions will be determined. If there are any issues in your group at any point during the semester, please contact me so we can resolve any issues and move forward productively.

Course Resources

Chapter Readings: We will be using Anatomy and Physiology by Betts et al. (2013), which is freely available on OpenStax ([click for link to the textbook](#)).

Technology: You will need access to a device (e.g., laptop, tablet) with internet access for lecture activities, email correspondence, using the course website, and completing assignments. You are also

encouraged to use a laptop or equivalent device with Microsoft Office installed (software subscription included with your university email) or use Google Docs to complete the coursework. **If you do not have reliable access to the internet and/or a suitable device, please contact me so we can find a positive solution.**

Evaluation

We will be using the ‘ungrading’ approach to all evaluations rather than traditional grading systems. Evaluation and assessment will be more of a conversation between you and me, and we are able to do this through a combination of feedback and reflection.

For assignments evaluated for correctness, I will return ‘graded’ assignments with a summarized feedback form. I will not provide any written scores, but I will maintain a spreadsheet of scores that each student earned on the assignment. You will evaluate your work and determine the number of points you think you earned. I will then compare the points I think you earned, your self-assessment, and the average of your score and my score. If my score is higher than your point total, we will typically use my point total. For all assignments evaluated for correctness, you have the opportunity to earn back half-credit for any points that were lost by completing the self-evaluation and reflection.

Below I will expand on the evaluation for each type of coursework and how ungrading will be applied.

Lecture Quizzes (15%): Lecture quizzes will be submitted via iClicker devices and evaluated for completion. If you attend the lecture and complete the quiz, you will receive credit.

Reflections (10%): Lecture reflections are designed for you to articulate what you learned from the lecture and lab. I will provide comments and feedback on each reflection, offering advice, clarification, and encouragement as appropriate. I will also be using these reflections to help identify common challenges, misconceptions, or misunderstandings, so it is important that reflections also discuss challenging topics. Reflections will be evaluated for addressing the directed reflection prompts.

Case Study Worksheets (30%): Each worksheet will allow to demonstrate what you have learned. Worksheets will be posted on the course website for you to download and complete. Worksheets may be completed individually or in pairs/groups. Worksheets will be evaluated for correctness, with feedback to guide your self-evaluation.

Career Reflection (5%): The career reflection will help you think about your career and what you need to do and learn to achieve those goals. I will provide feedback on both the initial and final career reflections. Reflections will be evaluated for completion.

Term Tests (10% each, 30% total): The take-home term tests will cover specific units and be due 72 hours after being released through the course website. The term test will consist of case study evaluations and short answer/essay questions. It will also include directed reflection questions. The term test will be submitted through the course website. There is no cumulative final exam, but term tests will require you to understand and apply what you learned in previous units to new contexts. All term tests will be open book, but you are encouraged to take notes so you can develop knowledge recall and application in preparation for the final exam and when you apply your learning and understanding of biology to your everyday life.

Group Term Tests (5% each, 15% total): The 3 take-home group term tests will cover specific units and be due 5 days after being released through the course website (extra time to allow your group to meet while accommodating other commitments). The group term tests will consist of case study evaluations and short

answer/essay questions that expand on questions from the individual term tests. There will be a space at the end of each term test for group members to note their contributions. The term tests will be submitted through the course website. The group term tests will also be open book, but you are encouraged to take notes so you can develop knowledge recall and application in preparation for the final exam and when you apply your learning and understanding of biology to your everyday life.

Teaching Methods

BIO130 is an active learning class where you are part of the learning process. You are expected to come to class having read the assigned chapters and be ready to engage in the material by participating in lecture activities, collaborating with your peers, and applying the concepts learned to case studies.

Learning can also bring about discomfort, and I will be challenging you in this course. I will challenge you because **I know we all have the potential to grow and learn.**

Ungrading is central to this course. While ungrading does require work from both you and me, that work has lasting benefits beyond any single lecture or discussion. I want to help you learn about and have fun with building data literacy, but I am also here to help you grow as a learner. **Through the process of ungrading, we will stress less on any grade and focus more on learning.**

Lectures: Lectures will expand on aspects of the assigned readings by going into great depth and applying knowledge to case studies and examples. You are responsible for reading the assigned readings before class to get the most out of the lectures. All lectures will be recorded and posted to the course website within 24 hours.

Time Management and Learning Practices

If you find you are struggling with time management or keeping up with the material, please come to office hours or we can schedule a private, one-on-one meeting. You may also talk to your academic advisor or go to the Academic Skills Center for guidance and advice on time management and effective learning practices. **I know that every student can succeed in this course, but sometimes the learning environment and support systems just need to be restructured to make that happen.**

Procedures and Policies

E-Mail Policy: The official method of correspondence with students is through their academic e-mail accounts. It is the student's responsibility to keep his/her/their academic e-mail account active and check it on a regular basis.

To help me better respond to emails, please include BIO130 in the subject line and then your student number either in the text or signature of your email. I also ask for patience when responding to emails. I will try to respond as quickly as possible but give me at least 24 hours to respond to any message. I likely will not respond to emails over the weekend, but I will aim to respond to by 5 PM the following Monday.

Attendance and Participation: Attendance is essential for your learning, as is your participation in active learning during lectures and laboratory activities. I will not take attendance during lecture, but attendance will be taken during labs.

Absences: Absences from laboratory assignments must be communicated to me by email before that class period is over. Please send the email with a brief explanation for the absence. For an absence to be excused, it must meet university/college-approved and beyond-your-control criteria. Absences beyond university/college guidelines may be excused on a case-by-case basis.

Religious Observance: You are encouraged to observe and express your religious identity. I will make reasonable accommodations to allow any student to observe their religious practices without penalty. Please look at the course schedule below and let me know if there are any potential conflicts. Accommodations do not absolve students of responsibility for the coursework, but they can result in extensions.

Late Policy: Term tests will have a penalty of 10% for each day the assignment is late up to a maximum of 3 days, after which late submissions will not be accepted. Only term tests will be accepted with a late penalty; no other assignments be accepted after the due date except for extreme circumstances. I have this policy to encourage you to stay on top of the material, which is to your benefit and that of your peers.

Extensions: If you require an extension to complete an assignment due to injury, illness, or accessibility, please let me know as soon as possible and preferably at least 24 hours advance of the due date. Extensions beyond accessibility and illness will be granted on a case-by-case basis.

Academic Integrity

University/College statement on academic integrity.

Course Schedule

Week	Unit	Tuesday Lecture	Thursday Lecture
1	Unit 1	Syllabus Anatomical Orientation and Nomenclature Chapter 1.1-1.2 and 1.5-1.6	Chemical Foundations Chapter 2.1-2.5
2		Building from the Cell I Chapter 3.1-3.3	Building from the Cell II Chapter 3.4-2.6
3		Integrating Bones and Muscles I Chapter 4.1, 4.3, 4.4, 6.3, 6.4, 6.7, 10.2	Integrating Bones and Muscles II Chapter 4.1, 4.3, 4.4, 6.3, 6.4, 6.7, 10.2
4		Control by the Nervous System I Chapter 4.4, 10.2-10.4, 11.1	Control by the Nervous System II Chapter 4.4, 10.2-10.4, 11.1
5		Human Skeleton I Chapter 9.4-9.5, 7.3-7.4, 8.1-8.4	Human Skeleton II Chapter 9.4-9.5, 7.3-7.4, 8.1-8.4
6	Unit 2	Upper Body Movement Chapter 11.5, 9.4-9.5	Lower Body Movement Chapter 11.6, 9.4-9.5
7		Nervous System and Tissue I Chapter 12.1-12.2	Nervous System and Tissue II Chapter 12.3-12.5
8		Anatomy of the Nervous System I Chapter 13.1-13.2	Anatomy of the Nervous System II Chapter 13.3-13.4
9		Endocrine System I Chapter 17.1-17.5	Endocrine System II Chapter 17.6-17.11
10	Unit 3	Cardiovascular System: Blood I Chapter 18	Cardiovascular System: Blood II Chapter 18
11		Cardiovascular System: Heart I Chapter 19.1-19.4	Cardiovascular System: Heart II Chapter 19.1-19.4
12		Cardiovascular System: Circulation I Chapter 20.1-20.2	Cardiovascular System: Circulation II Chapter 20.3-20.5
13		Lymphatic and Immune System I Chapter 21.1-21.4	Lymphatic and Immune System II Chapter 21.5-21.7
14		Metabolism and Nutrition I Chapter 24.1-24.4	Metabolism and Nutrition II Chapter 24.5-24.7
15	No Class (Final Exams)		