

BIOL 366: Human Anatomy & Physiology II

Spring 2021 — Online/Hybrid

Course Objectives:

This course is designed to provide an introduction to the anatomy and physiology of the human body. It is specifically focused on preparing students for future study of these topics in health-related professional schools. As such, it is a challenging course, but if you successfully complete it you will have a definite advantage in your future training.

This course is two semesters long. The second semester encompasses the organ systems, immunology, and endocrinology. This course contains a lecture and a required laboratory, which will feature dissections as well as physiological experiments.

Learning Outcomes:

- Identify structural components of the human body
- Understand physiological processes and functions
- Integrate anatomical and physiological knowledge of organs and organ systems
- Use critical thinking to solve clinical cases using basic concepts of anatomy and physiology

Prerequisites:

BIOL 365: Anatomy & Physiology I

Instructors:

Dr. Sara H. Burch, ISC 358, burch@geneseo.edu

Office Hours:

Online Monday 9:30–11:30am and Wednesday 2–4pm, or by appointment. **In person office hours by appointment only.**

Required Textbooks:

- Anatomy & Physiology: An Integrative Approach, 3rd Edition by McKinley, O'Loughlin, & Bidle (2018), **McGraw-Hill Connect Edition**. (see note below)
- A Photographic Atlas for Anatomy & Physiology by Hebert, Heisler, Krabbenhoft, Malakhova, & Chinn (2015), Pearson. ISBN 9780321869258

Connect site for courses: <https://connect.mheducation.com/class/s-burch-spring-2021>

NOTE: You do not need to purchase an additional code for Connect for this semester if you purchased the code last semester. Simply navigate to the course page listed above and register for the spring semester course.

Lecture Notes and Lab Handouts:

Powerpoint slides from the lectures will be placed on the course website 24 hours prior to class time. Handouts for labs will be placed on the course website at least 24 hours prior to the first lab day. You are responsible for printing out these handouts and bringing them to your lab section.

Assignments:

READINGS: The readings relating to each lecture are given in the schedule below. You should attempt to read through the sections given and study the figures and tables before each lecture. Optional, but highly-recommended, pre-reading assignments will be provided through the Connect module.

HOMEWORK: There will be 11 weekly homeworks assigned through the Connect system worth 4 points each; only 10 will be counted toward the final grade. These are designed to give you a chance to review the material and practice with questions similar to ones you would get on the test. They will be due before class as noted on the lecture schedule below. Homeworks will be scored as follows: 100–76%=4pts; 75–51%=3 pts; 50–24%=2pts; 25–5%=1pt

QUESTION OF THE DAY: Each lecture will be accompanied by a set of optional practice questions on Connect that will be similar to the types of questions you might get on a quiz or exam. These practice questions, QODs, will be due by midnight the day of the lecture given on the schedule below. In order to get full credit for these practice questions, you must score at least 50% or better. If you participate in these questions (4 dropped lectures permitted) you will receive an additional 5 extra credit points on your final number of points for the course.

Grades:

The first 3 exams are non-comprehensive and only cover material from lectures, readings and assignments since the previous exam. The final exam will be comprehensive, with 50% of the exam coming from the material covered since the third exam, and 50% of the exam coming from material from the entire semester. For this semester, you will get the opportunity to drop your lowest exam grade. This means that if you are happy with your grade going into the final exam, you can choose not to take the final exam.

Quizzes are designed to provide self-evaluation throughout the topic “block”, so that you can make sure your studying is on-track. There will be 10 quizzes given during the semester. Only 8 of these quizzes will count toward your grade, and 2 will be dropped.

The lab is considered to be part of your entire grade for this course and makes up about 35% of your total points. Lab grades are determined by 2 non-comprehensive practical exams, 2 lab reports based on physiology experiments in lab, and 8 lab worksheets. These lab worksheets

may include contain figures to label in class as well as questions to answer and submit on Canvas by the beginning of the next lab.

Lecture:

Exams (3)	100 pts each	300 pts
Quizzes (8)	10 pts each	80 pts
Homeworks (10)	4 pts each	40 pts

Lab:

Practical Exams (2)	50 pts each	100 pts
Lab Reports (2)	50 pts	100 pts
Lab Worksheets (8)	5 pts	40 pts
Total Points		660 pts

The grading scale for this course is the following:

A: 93%–100%	A–: 90%–92%	B+: 87%–89%	B: 83%–86%
B–: 80%–82%	C+: 77%–79%	C: 73%–76%	C–: 70%–72%
D: 60%–69%	E: <59%		

Excuse Policies:

NO MAKE-UP EXAMS will be given except in cases of extenuating circumstances (a direct and unavoidable conflict of an academic or professional nature). Vacations, weddings, and leaving early for holidays are not acceptable excuses for taking an exam early or late. If you can't make the scheduled exam date you must contact Dr. Burch at least **ONE WEEK PRIOR** to the exam time. In cases of severe illness or family affairs, please contact Dr. Burch as soon as you are able to schedule accommodations. Exam dates are final and will not be changed.

Academic Honesty:

Lecture exams and quizzes will be given online due to the nature of the course this semester. As such, these exams are open book, open notes, and open to internet resources such as Wikipedia. However, they are NOT collaborative. You may not work with any other students in this or previous courses on exams or quizzes, and you will be required to certify this by clicking a button at the beginning of each exam/quiz. Please be aware that it is usually pretty easy to tell if people are working together, and if you are caught, all parties involved will receive a zero on that exam/quiz. Anyone caught a second time will be reported to the college for academic dishonesty.

Accommodations:

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility will coordinate reasonable accommodations for persons with physical, emotional, or cognitive disabilities to ensure equal access to academic programs, activities, and services at Geneseo. Students with letters of accommodation should submit a letter to each faculty member and discuss their needs at the beginning of each semester. Please contact the Office of Accessibility Services for questions related to access and accommodations.

Lecture Schedule

DATE		TOPIC	READING
Feb	1 M	1. Course Intro & CV: Blood Intro & Plasma	Sections 18.1–18.2
	3 W	2. CV: Blood Cells & Physiology	Sections 18.3–18.4
	5 F	3. Autonomics	Chapter 15 (review)
	8 M	4. CV: Heart Anatomy [Quiz 1] [HW 1]	Sections 19.1–19.4
	10 W	5. CV: Cardiac Stimulation	Sections 19.5–19.7
	12 F	6. CV: Cardiac Output	Sections 19.8–19.9
	15 M	7. CV: Circulatory Histology & Capillary Flow [Quiz 2] [HW 2]	Sections 20.1–20.3
	17 W	8. CV: Circulatory Physiology	Sections 20.4–20.7
	19 F	9. CV: Cardiopulmonary & Craniocervical Circulation	Sections 20.8–20.9, 20.10a
	22 M	10. CV: Circulation in the Body Wall	Sections 20.10–20.11
	24 W	11. CV: Heart & Circulatory Development [Quiz 3] [HW 3]	Section 19.10
	26 F	Review	
Mar	1 M	EXAM #1: Cardiovascular	
	3 W	12. Resp: Respiratory Anatomy I	Sections 23.1–23.3
	5 F	13. Resp: Respiratory Anatomy II	Sections 23.3–23.4
	8 M	14. Resp: Respiratory Physiology I	Sections 23.5–23.6
	10 W	15. Resp: Respiratory Physiology II [Quiz 4] [HW 4]	Sections 23.7–23.8
	12 F	16. Resp: Lung Development	Section 20.12, lung development handout
	15 M	17. Endocrine System: Gland Structure &	Sections 17.1–17.6
	17 W	18. Endocrine System: Major Glands & Control [Quiz 5]	Sections 17.7–17.10
	19 F	Review [HW 5]	
	22 M	EXAM #2: Respiratory & Endocrine	
	24 W	NO CLASS – REJUVENATION DAY	

DATE		TOPIC	READING
	26 F	19. GI: Intro and Upper GI	Sections 26.1–26.2
	29 M	20. GI: Lower GI & Accessory Organs	Section 26.3
	31 W	21. GI: Gastrointestinal Embryology	GI development handout
April	2 F	22. GI: Digestive Physiology [Quiz 6] [HW 6]	Sections 26.1–26.3
	5 M	23. GI: Digestion of Nutrients & Metabolism	Section 26.4, 27.5, 27.6, 27.8
	7 W	24. Fluid Balance	Chapter 25
	9 F	25. UG: Intro and Kidney Anatomy [Quiz 7] [HW 7]	Sections 24.1–24.3
	12 M	26. UG: Blood Flow & Filtration	Sections 24.4–24.6
	14 W	27. UG: Urination	Sections 24.7–24.8
	16 F	Review [Quiz 8] [HW 8]	
	19 M	EXAM #3: Gastrointestinal & Urinary	
	21 W	28. UG: Pelvis and Perineum	Sections 11.7, 28.1
	23 F	29. UG: Female Reproductive System	Section 28.3
	26 M	30. UG: Male Reproductive System	Section 28.4
	28 W	31. UG: Development & UG Dev [Quiz 9] [HW 9]	Sections 29.1–29.4, 28.5
	30 F	32. UG: Pregnancy	Sections 29.5–29.8
May	3 M	33. Lymphatics	Chapter 21
	5 W	34. Immunology I [Quiz 10] [HW 10]	Sections 22.1–22.4
	7 F	35. Immunology II	Sections 22.5–22.9
	11 T	Review [HW 11]	
	17 M	EXAM #4: Reproductive and Immune	

Human Anatomy & Physiology Lab Information

The lab for this course is designed to provide hands on experience with the anatomy and physiology of the human body through dissections, studies of models, and physiological experiments.

In the lab we will be dissecting organs of mammals including sheep, pigs, and cows.

Dissection is a *required* part of this lab and all students are expected to take part in dissection. Students who do not dissect will lose participation points as part of the lab grade.

This semester, labs will take a hybrid format. You will spend approximately 1.5 hours in the lab, working with the models, bones, and dissections. The remaining 1.5 hours of lab time, you are expected to work on the questions for the worksheets related to that lab.

Instructors

Dr. Sara H. Burch, ISC 358, burch@geneseo.edu

Mr. Joshua Baecker, ISC 332B, baecker@geneseo.edu

Required Lab Manual

The only required text for the lab portion of this course is the Atlas listed below. Additional materials will be provided through Canvas.

- A Photographic Atlas for Anatomy & Physiology by Hebert, Heisler, Krabbenhoft, Malakhova, & Chinn (2015)

Additional Supplies: Some tool for drawing and coloring lab worksheets will be required. Colored pencils are recommended.

Assignments:

Questions from anatomy lab worksheets will be turned in (submitted through Canvas) by the end of the week (Sunday night). Instructors will check lab worksheets for completion of drawing- and labeling-based activities. Physiology-based labs will result in a lab report to be written up and turned in at the date given during the lab session. Details on how to write lab reports will be provided on Canvas. You may work with your group on the content of the lab report, but each student must submit a typed report written in their own words. The lab report will be due one week after experiments are performed, at the beginning of your assigned lab section. Late lab reports will be penalized by 5 points (one letter grade) for each day they are late.

It is important that you understand what plagiarism is and that if you do plagiarize in this course the consequences are very serious. Punishments range from receiving a failing grade on the plagiarized assignment to failing the course and having your name sent to the Dean. The following link explains plagiarism. http://library.geneseo.edu/~elmore/Types_plagiarism.htm If you have questions please feel free to ask the faculty or someone in the library.

Lab Schedule

DATES	LAB	TOPIC
Feb 2-4		Hematology Lab
Feb 9-11		Heart Anatomy
Feb 16-18		Cardiac Physiology
Feb 23-25		Circulatory Anatomy
Mar 2-4		NO LAB - BREAK
Mar 9-11		Respiratory Anatomy & Physiology
Mar 16-18		LAB PRACTICAL #1
Mar 23-25		NO LAB - BREAK
Mar 30-Apr 1		GI Anatomy
April 6-8		Digestion & Urinalysis
April 13-15		Urinary Anatomy
April 20-22		NO LAB - BREAK
April 27-29		Reproductive Anatomy
May 4-6		LAB PRACTICAL #2