BIOL 365: Human Anatomy & Physiology I
Fall 2023; MWF 12:30–1:20pm, ISC 203

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 first semester focuses on the skeletal, muscular, and nervous systems and is organized regionally. 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

Instructors:
Dr. Sara H. Burch (she/her), ISC 358, burch@geneseo.edu (lectures, lab section 2)
Mr. Joshua Baecker (he/him), ISC 351, baecker@geneseo.edu (lab sections 4, 6, 7)
Dr. Samuel Newberry (he/him), ISC 139B, snewberry@geneseo.edu, (lab section 3, 5)

Office Hours:
Burch: Monday 3:15–4:15pm and Friday 8:30–10:30am, or by appointment.
Baecker: Monday 10:30–11:30am; Tuesday 12:30–1:30pm; Wednesday 11:30am–12:30pm
Newberry: Wednesday & Thursday 11:30am–1:00pm

Required Textbooks:
- Anatomy & Physiology: An Integrative Approach, 4th Edition by McKinley, O'Loughlin, & Bidle (2021), **McGraw-Hill Connect Edition.** (see note below)
- A Photographic Atlas for Anatomy & Physiology by Hebert, Heisler, Krabbenhoft, Malakhova, & Chinn (2015), Pearson. ISBN 9780321869258

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

NOTE: The university bookstore is only selling the Atlas required for lab. You will have to purchase an access code for the Connect edition of the main textbook, or you can purchase access directly through the course site (recommended). The online Connect (ebook) version of the textbook is required for weekly homeworks that will be assigned through that system. If you would like a hard copy, you can purchase a loose-leaf copy through Connect.
https://connect.mheducation.com/class/burch-fall-2023

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, reading assignments will be given through the Connect module and due the same day as the given lecture. They will not be graded for points, but if you complete all of these reading assignments, you will earn 2 extra credit points on the relevant exam.

HOMEWORK: There will be 10 weekly homeworks assigned through the Connect system worth 4 points each. 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%=3pts; 50–24%=2pts; 25–5%=1pt

QUESTION OF THE DAY: At various points during every class period you will be given a question to do in a small group or to answer via TopHat. If you participate in these questions (5 missing days permitted; "excused" absences will only be considered when related to official accommodations, college sports, or required quarantine/isolation) you will receive an additional 5 extra credit points on your final number of points for the course. Attendance will primarily be marked via TopHat responses, but you will also turn in an answer sheet for the main QOD. Everyone from your group who is present for the question must sign the answer sheet in order to receive credit for the question. Any group that submits a group-member's name that is not present at the time the question was done will lose all credit for that question. Additionally, any student who is found to be answering TopHat questions remotely (not in class) will not receive credit for attendance that day.

Exams:
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. You may choose to have the comprehensive portion of the final exam replace ONE of your previous exam scores. You must inform me if you wish to take this option BEFORE 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 8 quizzes given during the semester. Only 6 of these quizzes will count toward your grade, and 2 will be dropped.

Lab Assignments & Exams:
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 3 non-comprehensive practical exams, 1 lab report based on physiology experiments in lab, and 9 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. 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. Lab reports will be due TWO WEEKS 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.

Lecture:		
Exams (3)	100 pts each	300 pts
Final Exam	200 pts	200 pts
Quizzes (6)	10 pts each	60 pts
Homeworks (10)	4 pts each	40 pts
Syllabus Quiz (5)	5 pts	5 pts
Lab:		
Practical Exams (2)	50 pts each	100 pts
Histology Exam (1)	50 pts	50 pts
Lab Reports (1)	50 pts	50 pts
Lab Worksheets (9)	5 pts	45 pts
Total Points		850 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%		

Course Policies and Resources

Attendance & Exam Excuse Policies
Attendance is not a required part of your lecture grade. However, missing significant numbers of class days will impact your ability to gain the QOD extra credit. Attendance is required for lab, and is reflected by your lab worksheet grades. Make-up exams and quizzes will only be given 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 your instructors at least ONE WEEK PRIOR to the exam time. In cases of severe

illness, family affairs, or quarantine restrictions, please contact your instructors as soon as you are able to schedule accommodations. Exam dates are final and will not be changed. If in doubt about an absence, contact one of your instructors.

Communication

You should feel free to email your instructors whenever you have a question or concern about the course, and we will get back to you as soon as we are able. However, please do not expect a response outside of regular business hours (9am–5pm M–F) or within 24 hours, because we may not see your email right away.

Academic Dishonesty

Academic dishonesty includes cheating, knowingly providing false information, plagiarizing, and any other form of academic misrepresentation. In this course, consequences of a first offense are a zero (0) on the relevant assignment or exam. Consequences of a second offense are a failing grade (E) overall in the course. For the college's fully policy, see: https://www.geneseo.edu/handbook/academic-dishonesty-policy

Academic & Personal Support Resources

Many students find A&P to be a very demanding class. In order to prepare you for your future professional schools, we will cover a lot of material in a short amount of time, and if you fall behind it can be difficult to catch up. This, combined with the stresses we are all under can mean you may find yourself overwhelmed at various points in the semester. We want you all to have the best chance of succeeding in this course and in your future anatomy courses, so if you feel like you are struggling, we urge you to seek assistance. Please see the Canvas page titled "Academic & Personal Support Resources" for a list of on and off-campus resources to help.

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. Office of Accessibility Services in Erwin Hall 22 or access@geneseo.edu or 585-245-5112.

Land Acknowledgment

Land acknowledgements are expressions of sorrow and remembrance to those whose historic territory one resides on. Geneseo resides on the homeland of the Seneca Nation of Indians and Tonawanda Seneca Nation. We encourage you to learn more about these original occupants and those indigenous to other places you have lived. You may consider using the Native Land app and/or websites such as sni.org to learn more about the community of more than 7,000 enrolled Indigenous Peoples.

Lecture Schedule

DATE			TOPIC	READING
Aug	28	M	1. Introduction & Organization	Sections 1.1–1.4
	30	W	2. Homeostasis & Cell Biology Review	Sections 1.5–1.7, 4.1–4.5, 4.6d
Sept	1	F	3. Tissues I: Epithelium & Membranes	Sections 5.1, 5.5
	4	M	NO CLASS – LABOR DAY	
	6	W	4. Tissues II: Connective Tissue **[Quiz 1] [HW 1 Due]**	Section 5.2
	8	F	5. Tissues III: Integument	Sections 6.1–6.3
	11	M	6. Bones: Intro & Histology	Sections 7.1–7.5, 7.7
	13	W	7. Bone Remodeling & Joints **[Quiz 2] [HW 2 Due]**	Sections 7.6, 7.8, 9.1–9.4
	15	F	8. Muscles: Intro & Histology	Sections 10.1, 10.2, 10.5, 10.9, 10.10
	18	M	9. Nerves: Intro & Histology	Sections 12.1–12.6
	20	W	Review **[HW 3 Due]**	
	22	F	**EXAM #1**	
	25	M	10. Neuromuscular Physiology I	Sections 12.7–12.9
	27	W	11. Neuromuscular Physiology II	Sections 12.9–12.11
	29	F	12. Neuromuscular Physiology III	Sections 10.3, 10.4, 10.6, 10.7
Oct	2	M	13. Spine & Spinal Cord **[Quiz 3][HW 4 Due]**	Sections 8.5, 14.1–14.3, 14.5a
	4	W	14. PNS I: Spinal Reflexes & General Sensation	Sections 14.6, 16.1, 16.2
	6	F	15. PNS II: Autonomics	Sections 15.1–15.6
	9	M	NO CLASS – FALL BREAK	
	11	W	16. Trunk	Sections 8.6, 8.10, 11.4–11.6, 14.5c
	13	F	17. Neck **[Quiz 4][HW 5 Due]**	Sections 8.3, 11.3d–e, 14.5d
	16	M	18. Organization of the Upper Limb (material from this lecture will NOT be on Exam #2)	Sections 8.8, 8.9, 11.8, 14.5e
	18	W	Review	

DATE			TOPIC	READING
	20	F	**EXAM #2**	
	23	M	19. Shoulder & Axilla	Sections 9.7b, 11.8a, 11.8b
	25	W	20. Elbow	Sections 9.7c, 11.8c
	27	F	21. Wrist & Hand	Sections 11.8d, 11.8e
	30	M	22. Organization of the Lower Limb **[Quiz 5] [HW 6 Due]**	Sections 8.11, 11.9, 14.5f,g
Nov	1	W	23. Hip & Gluteal Region	Sections 9.7d, 11.9a
	3	F	24. Knee	Sections 9.7e, 11.9b
	6	M	25. Ankle & Foot **[Quiz 6] [HW 7 Due]**	Sections 9.7f, 11.9c, 11.9d
	8	W	Review	
	10	F	**EXAM #3**	
	13	M	26. Skull & Cranial Meninges	Sections 8.2, 13.2
	15	W	27. Brain I	Sections 13.1, 13.3
	17	F	28. Brain II	Sections 13.4, 13.5, 13.7
	20	M	29. Brain III & Spinal Pathways **[Quiz 7][HW 8 Due]**	Sections 13.6, 13.8, 14.4
	22	W	NO CLASS – THANKSGIVING	
	24	F	NO CLASS – THANKSGIVING	
	27	M	30. Cranial Nerves I, II (Vision, Olfaction)	Sections 13.9, 16.3a, 16.4
	29	W	31. Cranial Nerves III, IV, & VI (Eye Movements)	Sections 11.3b, 13.9
Dec	1	F	32. Cranial Nerve V (Sensation, Mastication)	Sections 9.7a, 11.3c, 13.9
	4	M	33. Cranial Nerve VII (Muscles of Facial Expression) **[Quiz 8] [HW 9 Due]**	Sections 11.3a, 13.9, 16.3b
	6	W	34. Cranial Nerve VIII (Hearing & Balance)	Sections 13.9, 16.5
	8	F	35. Cranial Nerves IX, X, XI, XII (Tongue & Neck)	Sections 11.3c, 11.3d, 13.9, 23.3a
	11	M	Review **[HW 10 Due]**	
	13	W	**FINAL EXAM: 3:30–6:00pm**	

Lab Schedule
ISC 202

DATES	LAB	TOPIC
Aug 29–31	1	Introduction
Sept 5–7	2	Histology I
Sept 12–14	3	Histology II
Sept 19–21	4	**HISTOLOGY EXAM** Neuromuscular Physiology I
Sept 25–27	5	Neuromuscular Physiology II
Oct 3–5	6	Back & Thorax
Oct 10–12		NO LAB – MID SEMESTER BREAK
Oct 17–19	7	Neck, Abdomen & Pelvis
Oct 24–26	8	Upper Limb
Oct 31–Nov 2		**LAB PRACTICAL #1**
Nov 7–9	9	Lower Limb
Nov 14–16	10	Skull & Brain
Nov 21–23		NO LAB – THANKSGIVING
Nov 28–30	11	Muscles of Facial Expression, EENT
Dec 5–7		**LAB PRACTICAL #2**