BIOL 266: Human Anatomy & Physiology II
Spring 2019; MWF 1:30–2:20pm, Newton 202

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 265: Anatomy & Physiology I

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

Office Hours:
Monday 9:30–11:30 AM and Wednesday 3:00–5:00 PM, or by appointment.

Required Textbooks:
ISBN 9781259724527
- Anatomy & Physiology: An Integrative Approach, 2nd Edition by McKinley, O'Loughlin, & Bidle (2018), McGraw-Hill Connect Edition. (see note below) ISBN 9781259133008
- A Photographic Atlas for Anatomy & Physiology by Hebert, Heisler, Krabbenhoft, Malakhova, & Chinn (2015), Pearson. ISBN 9780321869258
- Connect site for course: https://connect.mheducation.com/class/s-burch-spring-2019

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

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: 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 question (4 missing days permitted) you will receive 5 extra credit points on your final grade. 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.

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. 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 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
Final Exam	200 pts	200 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 each	100 pts
Lab Worksheets (9)	5 pts	45 pts
Total Points		865 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 acceptible excuses for taking an exam early or late. If you can't make the scheduled exam date you must contact the instructor at least **ONE WEEK PRIOR** to the exam time. In cases of severe illness or family affairs, written documentation must be provided. Contact the instructor as soon as possible about these circumstances to make arrangements and provide documentation. Exam dates are final and will not be changed.

Cell Phone & Computer Policies:

Lecture slides will be posted online prior to each class session, and students are welcome to download the slides and bring them to class on a laptop to take notes. However, out of respect for your fellow classmates and the instructor, laptops are **NOT** to be used to check email, play games or other activities unrelated to the class during the entire 50 minute class period. In lab, texting will result in loss of points for participation score. Anyone seen with a cell phone out during an exam or quiz will immediately be given a zero (0) for that exam or quiz.

Accommodations:

SUNY Geneseo will make reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities. Accommodations will be made for medical conditions related to pregnancy or parenting. Requests for accommodations including letters or review of existing accommodations should be directed to Ms. Heather Packer in the Office of Disability Services in Erwin Hall 22 or disabilityservices@geneseo.edu or 585-245-5112. Students with letters of accommodations should submit a letter to each faculty member at the beginning of the semester and discuss specific arrangements.

Lecture Schedule

DATE			TOPIC	READING
Jan	23	W	Course Intro & CV: Blood Intro & Plasma	Sections 18.1–18.2
	25	F	CV: Blood Cells & Physiology	Sections 18.3–18.4
	28	M	Lymphatics	Chapter 21
	30	W	Immunology I **[Quiz Day] [HW Due]**	Sections 22.1–22.4
Feb	1	F	Immunology II	Sections 22.5–22.9
	4	M	Autonomics	Chapter 15 (review)
	6	W	CV: Heart Anatomy **[Quiz Day] [HW Due]**	Sections 19.1–19.4
	8	F	CV: Cardiac Stimulation	Sections 19.5–19.7
	11	M	CV: Cardiac Output	Sections 19.8–19.9
	13	W	CV: Heart Development **[Quiz Day] [HW Due]**	Sections 19.10
	15	F	Review	
	18	M	**EXAM #1: Blood and Heart**	
	20	W	CV: Circulatory Histology & Capillary Flow	Sections 20.1–20.3
	22	F	CV: Circulatory Physiology	Sections 20.4–20.7
	25	M	CV: Cardiopulmonary & Craniocervical Circulation **[Quiz Day] [HW Due]**	Sections 20.8–20.9, 20.10a
	27	W	CV: Circulation in the Body Wall	Sections 20.10–20.11
Mar	1	F	Resp: Respiratory Anatomy I	Sections 23.1–23.3
	4	M	Resp: Respiratory Anatomy II **[Quiz Day] [HW Due]**	Sections 23.3–23.4
	6	W	Resp: Respiratory Physiology I	Sections 23.5–23.6
	8	F	Resp: Respiratory Physiology II	Sections 23.7–23.8
	11	M	CV & Resp: Circulatory & Lung Development **[Quiz Day] [HW Due]**	Sections 19.10, 20.12, lung development handout
	13	W	Review	
	15	F	**EXAM #2: Circulation and Respiration**	
	18	M	NO CLASS – SPRING BREAK	

DATE			TOPIC	READING
	20	W	NO CLASS – SPRING BREAK	
	22	F	NO CLASS – SPRING BREAK	
	25	M	Endocrine System: Gland Structure & Hormones	Sections 17.1–17.6
	27	W	Endocrine System: Major Glands & Control	Sections 17.7–17.10
	29	F	GI: Intro and Upper GI	Sections 26.1–26.2
Apr	1	M	GI: Lower GI & Accessory Organs **[Quiz Day] [HW Due]**	Section 26.3
	3	W	GI: Gastrointestinal Embryology	GI development handout
	5	F	GI: Digestive Physiology	Sections 26.1–26.3
	8	M	GI: Digestion of Nutrients & Metabolism **[Quiz Day]**	Section 26.4, 27.5, 27.6, 27.8
	10	W	Review **[HW Due]**	
	12	F	**EXAM #3: Endocrine & GI**	
	15	M	Fluid Balance	Chapter 25
	17	W	NO CLASS – GREAT DAY	
	19	F	UG: Intro and Kidney Anatomy	Sections 24.1–24.3
	22	M	UG: Blood Flow & Filtration	Sections 24.4–24.6
	24	W	UG: Urination **[Quiz Day] [HW Due]**	Sections 24.7–24.8
	26	F	UG: Pelvis and Perineum	Sections 11.7, 28.1
	29	M	UG: Female Reproductive System	Section 28.3
May	1	W	UG: Male Reproductive System **[Quiz Day] [HW Due]**	Section 28.4
	3	F	UG: Development & UG Dev	Sections 29.1–29.4, 28.5
	6	M	UG: Pregnancy	Sections 29.5–29.8
	8	W	Review **[HW Due]**	
	16	R	**FINAL EXAM: 12:00–2:30pm**	

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 cats as well as organs of other mammals including sheeps, 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.

The lab is scheduled for three hours, and in most cases your tasks will consume the entire lab time. If you find that you have completed the days tasks prior to the end of lab, you should use the extra time to review the material from previous labs. Students observed leaving early from lab without a legitimate excuse and permission from the instructor will lose participation points.

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 (uploaded to Canvas) at the end of each lab period. 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.

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
Jan 29–31	1	Hematology Lab
Feb 5–7	2	Heart Anatomy
Feb 12–14	3	Cardiac Physiology
Feb 19–21	4	Circulatory Anatomy
Feb 26–28	5	Respiratory Anatomy
Mar 5–7	6	LAB PRACTICAL #1: Heart, Circulation & Respiratory Anatomy Respiratory Physiology I
Mar 12–14	7	Respiratory Physiology II
Mar 19–21		NO LAB — SPRING BREAK
Mar 26–28	8	GI Anatomy
Apr 2–4	9	Digestion Lab
Apr 9–11	10	Urinary Anatomy
Apr 16–18		NO LAB — GREAT DAY
Apr 23–25	11	Reproductive Anatomy
Apr 30–May 2	12	LAB PRACTICAL #2: GI & UG Anatomy Urinalysis