

HUMAN PHYSIOLOGY

BSC 3096 ~ 3 CREDITS ~ SPRING 2022

INSTRUCTOR:

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PERSONAL NOTE FROM DOC. A: If you are totally overwhelmed by the stresses of your semester and feel like you just can't handle the pressure, please reach out to me—I'd like to help.

Also, it is important to me that you feel welcome and safe in this class; and that you are comfortable communicating with me, your TA, and your classmates. If your preferred name is not what shows on the official UF roll, please let me know. I would like to acknowledge your preferred name and pronouns that reflect your identity. You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Finally, Physiology is all about the human body. That includes subjects like differences and similarities from one individual to the next and identifying and correcting myths about how the body functions. . I am committed to using this course content to help students become comfortable, competent, and caring when discussing controversial issues related to the body and dismantling systems which put some students at a greater disadvantage than others. These attributes can help us all advocate for ourselves and others. If you have ideas for me along these lines or feel uncomfortable at any point, please reach out to me—I'd love to hear your perspectives and have a conversation.

OFFICE HOURS: This semester, my office hours will be held via zoom (virtual office hours, VOHs). A schedule, tips for how to best use office hours, and zoom links will be posted in CANVAS. Zoom VOHs are recorded and posted for those who are not able to attend at the provided times. If you are unable to attend VOHs, please feel free to post questions to the discussion boards in canvas, post questions to the class group me, and/or email your instructor questions that they can answer during recorded VOHs.

MEETING TIMES & LOCATIONS: MW Period 3 (9:35-10:25am EST) – MCCAG 186
F Period 7 (1:55-2:45pm) – CSE E231

COURSE FORMAT: Students will attend lectures on Mondays and Wednesdays. The lecture component of the course may be supplemented with online lecture videos *if needed*. During lectures, students will need to be physically present to take notes, as there are not pre-recorded videos available for this course and recordings will not be posted anywhere. On Fridays, students will meet in a different classroom for active learning. During active learning sessions, students will work in groups for the whole semester on discussions, practice problems, and collaborative exams.

GENERAL COURSE DESCRIPTION: The course involves the study of the functioning of human tissues, organs and organ systems, emphasizing the physical, chemical and mechanistic bases of normal physiology and the integrated function of the human body. The course also introduces pathophysiological changes associated with some human diseases.

PREREQUISITES: Either Integrated Principles of Biology 2 (BSC 2011) or Applied Human Physiology with Laboratory (APK 2105C); **and** General Chemistry 2 (CHM 2046) or Basic Chemistry Concepts and Applications 2 (CHM1031), all with a minimum grade of C, or permission of instructor.

COURSE GOALS: By the end of this course, students should be able to:

- Explain physiological mechanisms of humans by applying basic principles of biology and chemistry
- Describe the fundamental mechanisms underlying normal function of cells, tissues, organs, and organ systems in humans.
- Explain the basic mechanisms of homeostasis by integrating the functions of cells, tissues, organs, and organ systems.
- Effectively solve basic problems in physiology, working independently and in groups.
- Apply knowledge of functional mechanisms and their regulation to explain the pathophysiology underlying common diseases.
- Generate hypotheses about physiological processes, design experiments to test these hypotheses, and then analyze, interpret and report experimental results.

REQUIRED COURSE MATERIALS/TEXT:

COURSE WEBSITE (E-LEARNING): Class materials, including the syllabus, grades, and other information related to the course will be posted on the CANVAS website for this course. You are responsible for all announcements posted on the course website for this class. For help with CANVAS, call the UF Computing Help Desk at 352-392-4357, or visit E-Learning support: <https://lss.at.ufl.edu/help.shtml>.

PRIMARY COURSE TEXTBOOK: *Human Physiology: An Integrated Approach*. 8th Edition, by Dee Unglaub Silverthorn. Pearson, 2015. ISBN-13: 978-0321981226

Please note that this course will be participating in the UF All Access program. Students have two options to gain access to the REQUIRED MasteringA&P with materials when classes begin (both options provide access to the same materials):

1. Students will have the choice to "opt-in" to MasteringA&P access through Canvas once classes begin for a reduced price and pay for these materials through their student account.
2. Students who do not choose to "opt-in" will be able to purchase a standalone MasteringA&P access code through the UF Bookstore. There will also be a loose-leaf print version of the textbook available at the UF Bookstore for students who wish to have a physical copy of the text.

COURSE POLICIES:

ATTENDANCE POLICY: Attendance at lectures is not mandatory, but strongly recommended for success in the course. Attendance AND participation at active learning sessions is mandatory. Students may not complete collaborative exams unless they are in the classroom with their group. *Falsifying attendance records for a friend who is not actually in attendance is an honor code violation*—do not ask your classmates to do this for you. Instead, reach out to the instructor if you are struggling to make it to class.

MAKE-UP POLICY: To schedule a make-up exam or assignment extension, please fill out the **make-up request form** posted in CANVAS (orientation module) and submit it to your course instructor via CANVAS email. Documentation will be required. Make-ups will not be granted for personal travel/vacations. Additionally, many students will encounter having multiple exams in one day. Only if another exam is scheduled for the same time/overlaps with this course's exams will a request be considered. Should a student miss an exam due to an unexcused reason (e.g., overslept, mixed up the exam time, etc.), the exam can be taken with a 20% penalty if taken within 24 hours of the original exam time or with a 40% penalty if taken within 48 hours of the original time.

A student experiencing an illness should visit the UF Student Health Care Center or their preferred healthcare provider to seek medical advice and obtain documentation. If you have an illness, family emergency or death, please contact the Dean of Students Office (www.dso.ufl.edu) and follow the DSO Care Team procedures for documentation and submission of a request for make-up assignment (<https://care.dso.ufl.edu/instructor-notifications/>). The DSO will contact the instructor. Do not provide any documentation to the instructor regarding illness or family emergency. This is your personal and protected information. The DSO is qualified to receive and verify the documents you provide. The instructor will follow the recommendations from the DSO.

Requirements for class attendance and make-ups, assignments, and other work are consistent with the university policies that can be found at <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

USABILITY, DISABILITY AND DESIGN: I am committed to creating a course that is inclusive in its design. If you encounter barriers, please let me know immediately so that we can determine if there is a design adjustment that can be made or if an accommodation might be needed to overcome the limitations of the design. I am always happy to consider creative solutions as long as they do not compromise the intent of the assessment or learning activity. You are also welcome to contact the Disability Resource Center's Getting Started page at <https://disability.ufl.edu/students/get-started/> to begin this conversation or to establish accommodations for this or other courses. I welcome feedback that will assist me in improving the usability and experience for all students. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester. *It is imperative that you verify your specific access needs with your course instructor at least 48 hours PRIOR to scheduled assessments.*

RECORDING POLICY: Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. **Recording will not be permitted in active learning sessions.** Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. A student who publishes a recording without written consent may be subject to a civil

cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

PERSONAL CONDUCT POLICY: Students are expected to exhibit behaviors that reflect highly upon themselves and our University:

- Read and refer to the syllabus
- Be in your seat and prepared at the start of the lab meeting time or for exams
- Use of professional, courteous standards for all emails and discussions
- Reserve cell phones or other technology for course-related uses only
- Chat with peers before and after lab rather than during presentations
- Adherence to the UF Student Honor Code:
<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>
 - Honor code violations of any kind will not be tolerated
 - Any use, access, or handling of resources or technology during an exam will result in a zero on the exam **and** further educational sanctions per UF
 - All allegations, regardless of the severity, will be reported to the Dean of Students Office for University-level documentation and processing

COURSE EVALUATIONS: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

GRADING:

The table below outlines point-accruing components of the course and their relative weight in the overall grading scheme.

Evaluation Components	% of Total Grade
MasteringA&P Homework	30%
Active Learning Sessions	50%
Reflections (4)	5%
Group Project (1)	15%
Students can earn up to 10 points of EC – associated with the group projects	

MASTERING A&P HOMEWORK – Homework in MasteringA&P will be due Fridays at 11:59pm EST each week. Homework problems are multiple choice, true/false, fill in the

blank, multiple answer, and matching. These questions are specific to the textbook, so that should be the primary resource for answering those questions. These are open-resource assignments, so students are encouraged to work on these question sets with peers. These assignments are NOT intended to be used as the primary study tool for preparing for individual or collaborative exams. The function of the homework assignments is to (a) get students more familiar with the textbook, and (b) to get students eased into answering physiological questions. The following are specific homework grading guidelines to keep in mind:

- You may open/close an assignment as many times as you wish until it is due.
- For the fill in the blank questions, spelling and proper tense of the word counts.
- For multiple choice and fill-in-the-blank questions, you are penalized 50% if you miss on the first attempt and 100% if you miss on the second attempt.
- For true/false questions, you are penalized 100% if you miss on the first attempt.
- You are penalized a small fraction for opening a hint if one is available.
- Late submissions will be penalized 25% per day.

ACTIVE LEARNING SESSIONS – Each Friday, students will meet in a specially-designed active learning space organized into pods of nine. At each pod, there is a computer for every student as well as a larger display monitor the pod can share—any member of the pod can display their computer screen on that monitor. During active learning sessions, students will work on discussion prompts, practice questions to help with difficult material, and collaborative quizzes. These quizzes are intended to challenge your knowledge and application of physiology and drive your group to engage in respectful discourse (talk things through, question each other’s ideas and assumptions, work together to select the best options). During collaborative quizzes, students are able to discuss **ONLY** within their pod, external resources will **NOT** be permitted, and each student will submit their **OWN** answers...so if any member of the group has a dissenting opinion, they can submit an answer they prefer. Students with **excused** absences on Fridays will receive a written make up assessment. Students with **unexcused** absences on Fridays will receive a zero and no opportunity for a make-up.

REFLECTIONS – Following each individual exam, students will answer a few short essay questions prompting them to reflect on what they have learned in that particular module. These will be CANVAS assignments and specific instructions will be provided. These will be graded on completion and alignment of the response to the prompt. Points will be removed for not answering the prompt(s) provided, incomplete answers, or lack of courtesy/professionalism. Out of respect for students who speak English as a second language or who may process language differently than me, grammar and spelling will not be considered in grading. However, please use complete sentences where applicable (capital letter at beginning of sentences, punctuation at end of sentences, etc.).

GROUP PROJECT – Students will work within their pods on one of two project options. For Option A, the group will develop and deliver a 40-50-minute lecture covering one of

several chapters not covered in class. The presentation will be recorded and posted in an open discussion board for others in class to view. Groups who select this option will get to explore a topic in physiology that interests them, develop teamwork and presentation skills, and clinically apply what they've learned. This option is specific, clearly defined, and allows a bit less room for creativity. The target audience for this presentation are your classmates. For Option B, the group will focus on **advocacy**. The group will identify a historically under-represented group of people and develop a 20-30-minute presentation centered around something physiological that your selected group has been negatively impacted by, not given equitable access to, or the like. Groups who select this option will explore societal implications/applications of physiology, develop skills in explaining physiological concepts to individuals who may not have a STEM background, and develop problem solving skills to address the issue. This option allows quite a bit of room for interpretation, so you may need to correspond with the course instructor regularly for feedback to ensure you are staying on-target with the direction of the project. The target audience for this presentation is the general public (could be anyone, assume adults). All students will receive the same grade on the project—so it is imperative that all members contribute equitably.

EXTRA CREDIT – Students can earn up to 10 points of extra credit by watching 2 presentations from groups they were not in. Students will be asked to compose a brief summary of the presentations and provide feedback on them. Each summary will be worth 5 points of extra credit in the exam section of the gradebook.

GRADING SCALE: Any discrepancies with the gradebook should be pointed out to the instructor before the last reading day. **There is no curve for this course and final grades will not be rounded up.** See the UF undergraduate catalog for information regarding current UF grading policies: <https://catalog.ufl.edu/search/?search=grading+policies>. *Any requests for extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.* Minus grades are not assigned for this course. A minimum grade of C is required for all critical tracking courses.

LETTER GRADE	% OF TOTAL POINTS FOR EACH LETTER GRADE	GPA IMPACT OF EACH LETTER GRADE
A	90.00-100%	4.0
B+	87.00-89.99%	3.33
B	80.00-86.99%	3.0
C+	77.00-79.99%	2.33
C	70.00-76.99%	2.0
D+	67.00-69.99%	1.33
D	60.00-66.99%	1.0
E	0-59.99%	0

GETTING HELP:

HEALTH AND WELLNESS

- U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575
- Counseling and Wellness Center: <https://counseling.ufl.edu/>, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies)
<http://www.police.ufl.edu/>

ACADEMIC RESOURCES

- E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>
- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu/>
- Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY (IDEA) RESOURCES

For suggestions or concerns related to IDEA, please reach out to any of the following:

- Dr. Rachael Seidler, APK Graduate Coordinator, rachaelseidler@ufl.edu
- Dr. Joslyn Ahlgren, APK Undergraduate Coordinator, jahlgren@ufl.edu

COURSE SCHEDULE:

Any changes to this plan will be posted in CANVAS as an announcement.

*****Watch the instructor welcome, read the syllabus, and take the syllabus quiz on or before day one. Earning a 100% on the syllabus quiz will give you access to all course contents (lecture slides).*****

*****Homework for each textbook chapter is due each Friday at 11:59pm EST*****

WEEK	DATES	CHAPTER/TOPIC
1	Jan 03	No class yet...semester begins on Wed (<i>maybe check out the syllabus?</i>)
	Jan 05	Intro to the class and Ch. 1 – Intro to Physiology
	Jan 06	Active Learning – Intro to the space and Ch. 2 – Molecular Interactions

2	Jan 10	Ch. 3 – Compartmentation
	Jan 12	Ch. 4 – Energy and Cellular Metabolism
	Jan 14	Active Learning
3	Jan 17	Holiday – no class
	Jan 19	Ch. 5 – Membrane Dynamics
	Jan 21	Active Learning
4	Jan 24	Ch. 6 – Communication, Integration, Homeostasis
	Jan 26	Ch. 6 continued
	Jan 28	Active Learning
5	Jan 31	Ch. 7 – Intro to Endocrine
	Feb 02	Ch. 7 continued
	Feb 04	Active Learning
6	Feb 07	Ch. 8 – Neurons: Cellular and Network Properties
	Feb 09	Ch. 9 – Central Nervous System
	Feb 11	Active Learning
7	Feb 14	Ch. 11 – Efferent Division
	Feb 16	Ch. 11 continued
	Feb 18	Active Learning
8	Feb 21	Ch. 12/13 – Muscles & Control of Movement
	Feb 23	Ch. 12/13 continued
	Feb 25	Active Learning
9	Feb 28	Ch. 14 – Cardiovascular Physiology
	Mar 02	Ch. 14 continued
	Mar 04	Active Learning
10	Mar 07	Spring Break – no class
	Mar 09	
	Mar 11	
11	Mar 14	Ch. 15 – Blood Pressure
	Mar 16	Ch. 15 continued
	Mar 18	Active Learning
12	Mar 21	Ch. 17 – Breathing Mechanics
	Mar 23	Ch. 17 continued
	Mar 25	Active Learning
13	Mar 28	Ch. 18 – Gas Exchange and Transfer
	Mar 30	Ch. 18 continued
	Apr 01	Active Learning
14	Apr 04	Ch. 19 – The Kidneys
	Apr 06	Ch. 19 continued
	Apr 08	Active Learning
15	Apr 11	Ch. 20 – Fluid Electrolyte Balance
	Apr 13	Ch. 20 continued
	Apr 15	Active Learning

16	Apr 18	<i>Work on group project</i>
	Apr 20	<i>Work on group project</i>
	Apr 22	<i>Reading Day – no class</i>
<p>Group presentations must be posted by Sunday, April 24th at 11:59pm. Reviews for extra credit are due Wednesday, April 27th at 11:59pm EST. Doc. A will try to get all grades posted for this class by Friday, April 29th at 11:59pm.</p>		

STUDY AND SUCCESS TIPS:

STUDY TIPS:

- Read from the text BEFORE attending the lectures. *Do not take notes, underline, highlight, or attempt to memorize anything...JUST READ and enjoy!*
- Snowball your notes. Begin studying lecture material immediately after the first lecture. Then, after the second lecture, begin your studies with day one lecture material. Continue this all the way up to the exam.
- If there is something in the textbook that was NOT in lectures, you are not expected to know it unless Doc. A specifically asked you to review it. There is a lot in the text that we don't have time to cover.
- Google novel images. For example, if there is a picture of the juxtaglomerular apparatus in your notes, Google "juxtaglomerular apparatus" and see if you can recognize what you are looking at in different images.
- Google diseases. For example, if we are studying cardiovascular physiology, Google "heart disease". Click on any link and just read a paragraph to see if you can understand based on what you now know. If you don't understand it, that's okay...did you recognize any words? If you are understanding what you're reading, do the symptoms listed make sense based on healthy physiology?
- Study with others! This does not mean review ppt slides together...you can do that on your own. When you study with others, do something more productive, like working googling things to discuss or even creating practice exam questions for yourselves.
- Make sure you understand the figures and graphs...this is a topic that most new physiology students struggle with and/or simply overlook. You should be able to look at just about any graph and describe what story it is telling. What are the axes? What are the variables? What the heck is going on and why? What might make this graph change and why? *This is where studying with others can really be helpful! ☺*
- Study from the Learning Objectives for each chapter. It is highly recommended that as you study (especially with others), you follow along with the learning objectives. Many students share google docs and split up the work to make comprehensive study guides.

SUCCESS TIPS:

- Stay on top of your schedule. You can easily get overwhelmed if you procrastinate. Complete the homework as you go and study for the exam on a daily basis.
- Stay organized. Keep track of all important due dates and move through each day in a uniform manner so that you are always aware of what you have done and what is left to be completed.
- Set up canvas notifications so that you read all announcements.
- Avoid Smokin' Notes...seriously...don't get me started on how bad these are for *LEARNING*. Take your own notes...swap notes with friends in class for comparison...but for goodness sake, don't spend money on notes for this class.
- Attend office hours and/or reach out to the course instructor ASAP if you feel you are getting off-track...do not wait until late in the semester.
- Have a positive attitude! ***THIS STUFF IS BEYOND COOL!***