

Human Physiology

BSC 3096 | 3 Credits | Spring 2023

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Course Info

INSTRUCTOR

Joslyn Ahlgren, PhD

Study tips and a personal note from Doc. A are on the last page.

Office: FLG 108

Office Phone: 352-294-1728

Email: jahlgren@ufl.edu

Preferred Method of Contact: Canvas email if you are a current student

OFFICE HOURS

Both *live* and *virtual* office hours will be offered this semester. A schedule, tips for how to best use office hours, and zoom info for office hours will be posted in CANVAS.

LECTURE TIME & LOCATION

MWF Period 3 (9:35-10:25am)
TUR L011

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.

PREREQUISITE KNOWLEDGE AND SKILLS

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.

REQUIRED AND RECOMMENDED MATERIALS

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). 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. 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 FORMAT

Students will physically attend a one-period class three days each week. Students should read required textbook pages and print out or download PDF slides posted in CANVAS before attending lecture and lab. Recorded lectures will not be provided unless the instructor is absent.

COURSE LEARNING OBJECTIVES:

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.

Course & University Policies

ATTENDANCE POLICY

Lecture attendance is not mandatory, but strongly encouraged. Recordings of lecture will **not** be provided unless the instructor is absent. If you are absent from a lecture for any reason, please get the notes from a friend in class or check the Sharing is Caring discussion board (where students regularly post their notes and audio recordings).

PERSONAL CONDUCT POLICY

Students should aim 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 any meetings (lecture, lab, exams, etc.)
- 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 class rather than during lectures
- Adherence to the UF Student Honor Code: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>
 - Use, access, or handling of resources or technology during an exam will result in both academic and educational sanctions. This *typically* results in a zero on the exam where cheating occurred.
 - All allegations, regardless of the severity, will be reported to the Dean of Students Office for University-level documentation, investigation, and processing.

EXAM MAKE-UP POLICY

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. The instructor will follow the recommendations from the DSO. You do not need to provide any documentation to the instructor regarding illness or family emergency unless you are comfortable doing so.

Once you have reached out to the DSO or have documentation of your emergency or illness, please fill out the **make-up request form** posted in CANVAS (orientation module) and submit it to your course instructor via CANVAS email. 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 make-up 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.

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>.

ACCOMMODATING STUDENTS WITH DISABILITIES

Your instructor is committed to creating a course that is inclusive in its design. If you encounter barriers, please let your instructor know immediately so they can determine if there is a design adjustment that can be made or if an accommodation might be needed. 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. Your instructor welcomes feedback that will assist in improving the usability and experience for all students.

Students who are already registered with UF's DRC should share their accommodation letter with the course instructor and discuss their access needs as early as possible in the semester.

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/>.

Getting Help

HEALTH & 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/>
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>
- 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 RESOURCES

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

- Dr. Ashley Smuder, APK IDEA Liaison, asmuder@ufl.edu
- Dr. Rachael Seidler, APK Graduate Coordinator, rachaelseidler@ufl.edu
- Dr. Joslyn Ahlgren, APK Undergraduate Coordinator, jahlgren@ufl.edu

Grading

COURSE COMPONENTS & CALCULATING YOUR GRADE

The following table outlines the point-accruing components of this course. Any changes to this due to mid-semester interruptions will be posted as an announcement in CANVAS.

Course Components (number of each)	% of Total Grade
Mastering A&P Homework	20%
Module Exams (4)	40%
Attendance (8)	15%
Reflections (2)	5%
Group Project (1)	20%

Mastering A&P Homework – Homework in MasteringA&P will be due Fridays at 11:59pm EST. 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 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.

Module Exams – Module exams will assess students only the chapters presented in each module. Exams will be multiple choice and true/false style questions. Exams will be taken during normal class times and in the same location as the lectures (see schedule below for dates). Exams will assess students on basic content presented as well as ability to use that information to solve clinically relevant problems.

Attendance and Extra Credit – Pop quizzes will be given in-class eight times during the semester. For attendance, simple completion of a quiz will count as full credit per quiz. Completion of 6 of the 8 attendance quizzes earns full credit for attendance. Completion of all 8 attendance quizzes can earn 2 points of extra credit toward the exam grade. Accuracy of the quiz answer can earn students up to 8 more points of extra credit toward your exam grade. In total, students can earn up to 10 points of extra credit from pop quizzes.

Reflections – At the midterm and at the end of the term, students will answer a few short essay questions prompting them to reflect on various aspects of the course. 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 the instructor, 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.

GRADING SCALE

Any discrepancies with the gradebook should be pointed out to the instructor immediately. There is no curve for this course and final grades will not be rounded up. More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>. *Any requests for additional 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 General Education courses, such as this one. Should points need to be altered during the term (not likely, but things like hurricanes and pandemics can really muck things up), these percentages will still be used to calculate grades (i.e., 90% = A).

Letter Grade	Percent of Total Points Associated with 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

Weekly Course Schedule

CRITICAL DATES & UF OBSERVED HOLIDAYS

- Jan 16 – Martin Luther King Jr. Day
- Mar 11-19 – Spring Break
- Apr 27-28 – Reading Days

WEEKLY SCHEDULE

The following table represents current plans for the term. 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 before coming to class on day one. Earning a 100% on the syllabus quiz will give you access to all course contents (lecture and lab slides, etc.).

Homework for each chapter is due every Friday at 11:59pm EST. You must register for MasteringA&P (instructions posted in CANVAS) to access the homework.

Specific pages to read from the textbook are posted in CANVAS for each chapter.

Week	Dates	Lecture Schedule (Chapters/Topics)
1	Jan 09 – Jan 13	Intro to the class and Ch. 1 – Intro to Physiology Ch. 2 – Molecular Interactions
2	Jan 16 – Jan 20	<i>Mon is a holiday...no class or labs</i> Ch. 3 - Compartmentation
3	Jan 23 – Jan 27	Ch. 4 – Energy and Cellular Metabolism Ch. 5 – Membrane Dynamics
4	Jan 30 – Feb 03	Module 1 Exam – Mon, Jan 30, 9:35am, TUR L011 Ch. 6 – Communication, Integration, Homeostasis
5	Feb 06 – Feb 10	Ch. 7 – Introduction to The Endocrine System

6	Feb 13 – Feb 17	Ch. 8 – Neurons, Cellular and Network Properties
7	Feb 20 – Feb 24	Ch. 9 – Central Nervous System Module 2 Exam – Friday, Feb 24, 9:35am, TUR L011
8	Feb 27 – Mar 03	Ch. 11 – The Efferent Division Ch. 12 - Muscles
9	Mar 06 – Mar 10	Ch. 13 (if time) – Integration of Muscles with Nervous System
10	Mar 13 – Mar 17	<i>Spring Break – no classes</i>
11	Mar 20 – Mar 24	Ch. 14 – Cardiovascular Physiology
12	Mar 27 – Mar 31	Ch. 15 – Blood Flow and Control of Blood Pressure Module 3 Exam – Friday, Mar 31, 9:35am, TUR L011
13	Apr 03 – Apr 07	Ch. 17 – Mechanics of Breathing
14	Apr 10 – Apr 14	Ch. 18 – Gas Exchange and Transport
15	Apr 17 – Apr 21	Ch. 19 – The Kidneys
16	Apr 24 – Apr 28	Ch. 20 – Fluid and Electrolyte Balance <i>Thurs/Fri are reading days</i>
Finals Week		Module 4 Exam – Thursday, May 04, 12:30-2:30pm, TUR L011

SUCCESS AND STUDY TIPS

The following tips have been provided by both your course instructor as well as students who've been successful in the course.

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 day. Then, after the second lecture, begin your studies with day one notes. Continue this all the way up to the exam.
- **Study from lectures notes...not the text.** If there is something in the textbook that was NOT covered in lectures, you are not expected to know 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 brainstem in your lecture notes, Google "brainstem images" and see if you can identify the structures from the lecture on a different image.

- **Google diseases.** For example, if we are studying bone tissue, Google “bone disease.” Click on any link and just read a paragraph to see if you can understand based on what you now know about bone tissue anatomy. If you don’t understand it, that’s okay...did you recognize any words?
- **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 on the sample test questions, googling things to discuss, or even creating practice exam questions for yourselves.
- **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 for each chapter. Many students share google docs and split up the work to make comprehensive study guides.

SUCCESS TIPS:

- **Stay on top of your schedule.** This course moves at a FAST pace...and 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.
- **Utilize office hours.** Office hours are a time for you to engage with the instructor as well as classmates. You can ask clarification questions, listen to questions from others, and discuss related clinical topics.
- **Set up canvas notifications** so that you receive and read all class 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 extra money on notes for this class.
- **Have a positive attitude!** *THIS STUFF IS COOL!*

PERSONAL NOTE FROM DOC. A

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. 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 can show you how to change it. I would like to acknowledge the name and pronouns that reflect your identity.

Welcome to Physiology...it’s going to be a great semester!