

BSC 3096 - HUMAN PHYSIOLOGY

3 CREDITS ~ SPRING 2018

INSTRUCTOR: **Joslyn Ahlgren, Ph.D.**
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OFFICE HOURS: Posted at the CANVAS homepage for this course

MEETING TIME: MWF 3 (9:25-10:35am)

MEETING LOCATION: Mon: **FLG 270**; Wed/Fri: **CSE E231**

COURSE FORMAT: This course is considered “partially flipped.” In a fully flipped classroom, students perform passive learning (lecture videos, reading, etc.) on their own and participate in more active forms of learning (problem sets, practice questions, discussion, etc.) with the course instructor. In this class, students will come to a traditional, live lecture one day a week (Mon). Students should read the text in advance of lectures and be prepared to take notes/ask questions. At the other two class meetings, students will engage in active learning sessions (different location than lecture). In these active learning sessions, students will participate in small group discussions, problem-solving tasks, and computer-based activities using content/knowledge from recent lectures/reading.

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, exam results, and other information related to the course will be posted on the course E-Learning website (<http://lss.at.ufl.edu>). You are responsible for all announcements posted on the course website for this class. For help with E-Learning, 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*. 7th 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.

CLASSROOM RESPONSE SYSTEM: We will use the MasteringA&P for both homework outside of class and responding to in-class questions during active learning sessions. You will gain access to this with purchase of the course textbook using one of the two options above. An announcement in CANVAS will be posted on "How to register for MasteringA&P." If you have difficulty registering for the Pearson course content, contact Brad Maynard (brad.maynard@pearson.com). He can answer all Pearson related issues.

REQUIRED ONLINE SOFTWARE LICENSE: JustPhysiology, physiology simulation software, is \$10. The course instructor will send a list of student UF email addresses to Just Physiology administrators. They will then create an account for each student with the student's email address as the login name. A unique password is sent to each student. Students can login and the pay \$10 using PayPal.

COMPUTER REQUIREMENT: JustPhysiology (www.justphysiology.com) is a web application based on the HumMod simulation engine. To access/complete tutorials at this site outside of class, you must have a computer that runs the Windows operating

system. As of December 2016, all of the simulations also run on Intel-based Macs running Boot Camp or VMware. The course instructor cannot provide computer/technology support. You may be able to get assistance from the UF Computing Help Desk, but in the past, most students have gotten the best support from other students in the course via discussion posts.

COURSE POLICIES:

ATTENDANCE POLICY: Attendance at exams is mandatory. If you arrive at an exam after the first person has left, you will not be allowed to take the exam and you will receive a zero. Attendance at lectures is not mandatory, but may be recorded periodically. Attendance AND PARTICIPATION at active learning sessions is mandatory and will contribute to your grade. *Falsifying attendance sheets to cover 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.

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

- Read and refer to the syllabus
- Arrive to lecture and lab on time (*a few minutes early*)
- Show respect for the authority of the course instructor and graduate TAs through politeness and use of proper titles (e.g., “Dr. Ahlgren” or “Doc. A”)
- Use of professional, courteous standards for all emails and discussions:
 - Descriptive subject line
 - Address the reader using proper title and name spelling
 - Body of the email should be concise but have sufficient detail
 - Give a respectful salutation (e.g., thank you, sincerely, respectfully)
 - No textspeak (e.g., OMG, WTH, IMO)
- No texting or checking Face Book (or the like) during class/lab instruction time
- No personal conversations during class/lab instruction time
- Adherence to the UF Student Honor Code:
<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>
 - Honor code violations of any kind will not be tolerated and sanctions will be determined by the course instructor for first-time violators
 - Any use, access, or handling of technology during an exam will result in a zero on the exam **and** potential failure of the course
 - All allegations will be reported to the Dean of Students Office

EXAM MAKE-UP POLICY: Make-up exams will be given at the discretion of the instructor. To schedule a make-up exam, please fill out the **make-up exam request form** posted in CANVAS and submit it to your course instructor. Documentation will be

required. Unexcused missed exams will result in a zero on the exam (this includes contacting the instructor **after** the exam if you are ill). **You are absolutely not permitted a make-up exam for personal travel/vacations, so please make your travel arrangements accordingly.** If you have a serious emergency or life event, please contact the Dean of Students Office (www.dso.ufl.edu) and they will contact your instructor so that you do not have to provide documentation of the emergency/death in order to get a make-up exam. Requirements for class attendance and make-up exams, 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>.

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
Exams	35%
Just Physiology Modules	15%
MasteringA&P Homework	15%
Active Learning Sessions	35%

Exams – There will be four cumulative exams. Each exam will assess baseline knowledge and application/transfer of information from all chapters prior to the exam. This exam strategy is intended to promote consistent effort and mastery of concepts across the term as well as retention of knowledge. *Cramming for exams is discouraged.* Each exam could consist of multiple-choice, true-false, fill-in-the-blank, ordering, and numeric (basic calculations) types of questions that are intended to truly examine your knowledge and ability to implement the knowledge to solve problems. *Exams will be challenging but fair.* Each exam will be worth 8.75% of your total grade. The number of questions on each exam may vary slightly. Exams will be completed directly in CANVAS.

Just Physiology Modules – These online modules may be implemented during active learning sessions and/or on your own time as homework. They are intended to help you learn to think critically about the content you are learning, feel more comfortable with quantitative aspects of physiology, and design experiments to that integrate concepts you are learning across organ systems (among other things).

Mastering A&P Homework – There will be questions available from each chapter that correspond with the reading assignments from the text. These are to be completed prior to the exam date covering that content. For example, if chapters 1-5 are on exam 1, then those homework assignments need to be completed by the day/time of the first exam. These homework problems are NOT designed as a study guide/practice for the

exams. Instead, these are to be used as a mechanism to keep you on-task and consistently checking your comprehension of basic physiological concepts/facts as you work through each chapter. The following grading policies apply to Mastering HW:

- You may open/close the HW as many times as you wish up to the due date.
- Late submissions will be penalized 50% and must be submitted within 24 hours of the deadline. No submissions will be accepted beyond that.
- For multiple choice and true/false questions, incorrect responses will be deducted: $100\% / (\# \text{options} - 1)$
- For other types of questions (such as drag and drop), you will get a 10% deduction for each incorrect submission attempt up to the final attempt. You are permitted six attempts.
- For fill in the blank questions, spelling and grammar count.

Active Learning Sessions – During active learning sessions, students will be seated at computer stations and will work both individually and in small groups. Students should arrive to class on-time and log into the CANVAS course in E-Learning. The activities during these sessions may vary greatly from day-to-day/week-to-week, so coming to class having attended lecture and having read/studied the material will be most beneficial to successful engagement and effective learning. Attendance will be taken at these sessions—you must attend class in order to earn points for participating. If you are unable to attend an active learning session, it is YOUR RESPONSIBILITY to work with your peers and your course instructor to find out what you missed and determine if a make-up assignment is possible. Any request for make-up work MUST be accompanied by documentation verifying the legitimacy of your absence. *Skipping class “just because” does not qualify you for any type of make-up.*

GRADING SCALE: Any discrepancies with the gradebook should be pointed out to the instructor before reading days. **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: www.registrar.ufl.edu/catalog/policies/regulationgrades. *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 critical tracking courses.

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

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. **Students registered with the DRC:** I strongly recommend that you submit all of your lecture exam requests through the DRC *in the first week of classes* to ensure that they are approved in time.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>.

UNIVERSITY POLICY ON COURSE EVALUATIONS: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open.

GETTING HELP:

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The

Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,
www.counseling.ufl.edu/cwc/

- Counseling Services
- Groups and Workshops
- Outreach and Consultation
- Self-Help Library
- Training Programs
- Community Provider Database

Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/
Computing Help Desk, First Floor HUB, helpdesk.ufl.edu, (352) 392-HELP
Library Help Desk, <http://guides.uflib.ufl.edu/content.php?pid=86973&sid=686381>

COURSE SCHEDULE:

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

Week	Dates	Weekly Content/Chapter/Topic
1	Jan 8-12	Mon - syllabus review and chapters 1/2 – FLG 270 Wed - introduction to active learning space – CSE E231 Fri - active learning – CSE E231
2	Jan 15-19	Mon - Jan 15 = holiday, no class; chapters 3/4 - lecture Wed - active learning Fri - active learning
3	Jan 22-26	Mon - chapters 4/5 - lecture Wed - active learning Fri - active learning
4	Jan 29-Feb 2	Mon - chapter 6 - lecture Wed - active learning Fri - exam 1 in CSE E231
5	Feb 5-9	Mon - chapters 7/8 - lecture Wed - active learning Fri - active learning

6	Feb 12-16	Mon - chapters 9/10 - lecture Wed - active learning Fri - active learning
7	Feb 19-23	Mon - chapters 11/12 - lecture Wed - active learning Fri - active learning
8	Feb 26-Mar 2	Mon - chapter 13 - lecture Wed - active learning Fri - exam 2 in CSE E231
9	Mar 5-9	Spring Break = no class
10	Mar 12-16	Mon - chapters 14/15 - lecture Wed - active learning Fri - active learning
11	Mar 19-23	Mon - chapters 16/17 - lecture Wed - active learning Fri - active learning
12	Mar 26-30	Mon - chapters 18/19 - lecture Wed - active learning Fri - active learning
13	Apr 2-6	Mon - chapter 20 - lecture Wed - active learning Fri - exam 3 in CSE E231
14	Apr 9-13	Mon - chapters 21/25 - lecture Wed - active learning Fri - active learning
15	Apr 16-20	Overflow week...in case we get behind at any point during the term
16	Apr 23-27	Mon/Wed - prepare for final exam Thurs/Fri, Apr 26/27 = reading days = no class, no exams
Exam 4 – Location TBA – Thurs May 3rd – 12:30-2:30pm		

STUDY and SUCCESS TIPS:

- Read the textbook and watch any video links in the chapters
- Review the chapter objectives prior to reading
- Study both independently AND with others
- Snowball your studies. Each time you review your course notes, start from day 1. Since exams are cumulative, this is REALLY necessary/helpful.

- Read and attempt to complete the MasteringA&P homework problems before attending lecture and active learning sessions each week
- 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
- Set aside dedicated time to study for this class every week (preferably every day). Put it in your planner and stick to the plan!
- Ask questions in and outside of class. If your syllabus doesn't have the answer, please ask!
- Don't get behind! This class will cover a LOT of content, so staying on-task is imperative.
- 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 come into play! 😊
- ***Check the CANVAS announcements daily. This is Doc. A's first offering of this course, so changes to the schedule are likely.***



PERSONAL NOTE FROM COURSE INSTRUCTOR: If you are totally overwhelmed by the stresses of your semester and feel like you just can't handle the pressure, please contact me or someone at UF's Counseling and Wellness center. I genuinely care for my students' wellbeing. Without you, I would have no one to teach...and that's uncool. Please take care! ~Doc. A