

BSC3096 Human Physiology Syllabus- Fall 2020

Syllabus Policy

You are responsible for reading and following the instructions, guidelines and schedules in this syllabus, and for checking the e-Learning announcements at least weekly for announcements regarding any changes. Not having read the information will not constitute an excuse for missing an assignment or deadline.

Course Description

The course involves the study of the functioning of human tissues, organs and organ systems, emphasizing the physical, chemical and mechanistic basis of normal physiology and the integrated function of the human body. The course also introduces pathophysiological changes associated with human diseases. 3 credits.

The class will meet **synchronously online** MWF Period 2 (8:30-9:20), but lectures will be recorded so students have the option of approaching the course asynchronously (assignment and exam due dates still apply). I encourage you to attend lecture at normal times to participate in the conversation, be able to ask questions, and maintain some normalcy.

Prerequisites

One semester of general biology (BSC 2010), and two semesters of general chemistry (CHM 2046 or CHM 2047 or CHM 2051 or CHM 2096) and two semesters of general physics (PHY 2049 or PHY 2061), all with a minimum grade of C.

Instructors

Course Instructor

Connie Rich, PhD,

Lecturer, Department of Biology

Office hours: Mondays 9:30-10:30am, Wednesdays 1-2pm on Zoom. If you need to meet outside of office hours, just email me.

The best way to contact your instructor is through the Canvas mail system. However, you may also use the following email: c.rich@ufl.edu

Course TAs

Ella Nicklin (e.nicklin@ufl.edu), Steve Cassidy (stevenccassidy@ufl.edu)

Ph.D. candidates, Department of Biological Sciences

Undergraduate TAs: Nicole Saporito (nicolesaporito@ufl.edu), Viviana Belean (viviana.belean@ufl.edu), Nick Sheehan (nsheehan@ufl.edu)

Please contact the undergraduate TAs with questions about your group project.

Course Objectives

At the end of the 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.

You will reach these objectives through a combination of in-class lessons, in-class problem-based learning (“active learning” questions), discussions, and a group project.

Required Course Materials, Software and Hardware

Primary Course Textbook

Human Physiology: An Integrated Approach. 8th Edition, by Dee Unglaub Silverthorn. Pearson, 2019. ISBN-13: 978-0-13-460519-7

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.

- 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. The price for UF All Access is **\$116.00**.
- Students who do not choose to "opt-in" will be able to purchase a standalone MasteringA&P access code through the UF Bookstore. The price for the standalone MasteringA&P access code is **\$156.00**. Both options provide access to the same materials. Note that the UF All Access is less expensive.

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. The price for the loose-leaf print version is about **\$38.00**.

Computer Requirement

The course instructor will not provide any computer 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.

Grading

Assessments

Assessment Type	Quantity	Percent of Total
Midterm Exams	3	36%
Final Exam	1	12%
Group project	1	15%
Quizzes	8	8%
Learning Catalytics	4	15%
Mastering A&P	4	14%
Case studies	6	6%
Concept maps	4	4%
<i>Total</i>		110%

Grade Distribution

Point Range (%)	Letter Grade	Point Range (%)	Letter Grade
93.33 or higher	A	70-76.65	C
90-93.32	A-	66.66-69.99	D+
86.66-89.99	B+	63.33-66.65	D
83.33-86.65	B	60-63.32	D-
80-83.32	B-	< 60	E
76.66-79.99	C+		

The letter grades will be assigned based on the point ranges given in the table above. There is a chance that the final grades will be curved, so if you get an 80 you are guaranteed at least a B-. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). More information on grades and grading policies is here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Assignments

Exams

There will be **four exams**: three midterms and a final. These will consist mostly of problem-based, multiple choice, fill-in-the-blank, ordering and numeric (calculation) questions. Each midterm will consist of approximately 30 questions. All exams will be closed-book and you will not be allowed to use notes. You will be allowed to use scratch paper and a calculator.

The final exam will focus primarily on the last portion of the course but assumes that you have retained the general principles and information that you learned in earlier in the course. It will also consist of approximately 30 questions and will be administered during the final exam period (2 hours duration).

All exams will be held online using Honorlock. Student guidance is located [here](#). DRC accommodations regarding time will be upheld, and I will do my best to accommodate any other way I can.

Group Project

You will complete a group project focusing on the physiological mechanisms of developmental disabilities culminating in a poster presentation. There will be multiple small assignments over the course of the semester designed to help with time management and allow you to build your poster gradually. Details and rubrics are located under Files and Assignments in Canvas.

Quizzes

There will be 9 quizzes given over the course of the semester. They will be open-note, open-book, and collaborative. These quizzes will be an extra form of studying through questions that will be challenging enough to facilitate conversation and debate with your classmates. This will greatly aid your understanding; Googling the question will not. There will be 9 quizzes and your lowest 1 will be dropped, **so no make-ups will be offered**. It is your responsibility to budget this for illnesses, post-graduate school interviews, university sanctioned events, religious holidays, sleeping-in, etc.

Learning Catalytics

Learning Catalytics is included in the cost of Mastering A&P so that's what we're going with. You can access Learning Catalytics through Canvas by clicking on "MyLab and Mastering" and then clicking "Open MyLab & Mastering." Then click on "Course Home." You will see a "Learning Catalytics" button. This is the best way to access Learning Catalytics to ensure that it is using **your UF email address as your user ID**. This allows for your Learning Catalytics grade to be transferred directly to Canvas.

There will typically be 3-5 questions associated with each lecture, and they will be available as "Self-paced" questions from 8am until 11:59pm on the day of lecture. You are encouraged to work together on LC questions. For each question you answer, you will get 0.25 points whether it is right or wrong. You will get an addition 0.75 points if the answer is correct. You will drop 25% of your incorrect/ missed

questions, so there will be no make-ups. It is your responsibility to budget these for illnesses, post-graduate school interviews, university sanctioned events, religious holidays, sleeping-in, etc.

MasteringA&P

You will be asked to answer questions and solve problems as homework problems. You will provide your answers using an online system (MasteringA&P). You are allowed to collaborate with others on MasteringA&P homework, but you should ensure that you are able to answer **similar questions** on the exam **on your own**.

Case Studies

In order to reinforce the big picture as well as the interconnectedness of the human body, you will be presented with 3 sets of case studies. There will be various questions associated with these case studies that you must answer in order to demonstrate your ability to think critically and make connections.

Concept Maps

I ♥ concept maps, but I also ♥ any way that you engage with the material and learn more deeply. We will cover concept maps a lot, and you will have the opportunity to submit your own concept maps or other unique study materials for a grade. Further are under Assignments on Canvas.

From a Spring 2020 student: “I got questions [on the MCAT] concerning nephrons that I knew exactly how to answer thanks to all your lectures and concept maps! Yay concept maps!”

Extra Credit

Extra credit has already been worked into this course. In addition to the 10% extra credit that can be added onto your grade (see Grading above), there will be extra credit in exams and associated with the group project. Any other requests for extra credit will be denied with annoyance.

Grading Discrepancies

Concerns regarding the accuracy of graded assignments will only be taken into consideration if the respective instructor has been notified **within 3 working days** after the assignment grade is posted. Keep a copy of all assignments in case there is a problem.

Time Commitment

The UF College of Liberal Arts and Sciences assumes that you will devote 3-4 hours per week per credit-hour to each course during the regular fall and spring semesters. Because this course is 3 credits (including the Discussion session), you should therefore expect to devote 9-12 hours per week to this course. If you find yourself spending more than 12 hours per week on average, discuss this with your course instructor to see if you can refine your work and study habits. If you find yourself spending less than 12 hours per week on average, you should recognize that you may have difficulty fully learning and comprehending the material in this time.

Communication

Updates and changes to the course schedule, this syllabus, and any other aspects of the class content and structure will be communicated to you via announcements on the course e-Learning site. You are responsible for checking this site regularly for announcements.

Communicating electronically with the Instructor and Graduate Teaching Assistant

There are two primary modes of electronic communication for this class -- the discussion forum and Canvas mail. To ensure that your questions are answered as promptly as possible, please follow the communications guidelines below:

Discussion Forum: This course is participatory. Use the discussion forum on the course website for questions/answers about the course content, structure, assignments and activities. You are strongly encouraged to respond to your peers if you know the answer or can provide guidance. The instructor will monitor this area, but the instructor may not be able to read every posting and therefore this should **not** be used to communicate with the instructors.

Direct Canvas Mail to the Instructors: Direct email to Dr. Rich should be used only for messages that are **private** in nature or that have been posted to the Discussion Forum but were not solved. Use the Mail tool in Canvas for all such direct email. If you use any other email tool please include the course code as it may be filtered as spam or otherwise not be seen by your instructor. If you send a directly email to the instructor please include your course code.

Technical Support

MasteringA&P: Contact Christina Bolton, our Pearson representative at christina.bolton@pearson.com.

E-Learning in Canvas. For help with E-Learning, call the UF Computing Help Desk at 352-392-4357, or visit the E-Learning support website: <https://lss.at.ufl.edu/help.shtml>.

Course Policies

Fun things for Fall 2020...

Our class sessions [and office hours] may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. [These recordings will only be posted through Canvas.] Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared.

As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Academic Honesty

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TA in this class.

Policy Related to Absences and Make-up Work

Requirements for class attendance and make-up exams, assignments, and other work are consistent with university attendance policies: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

If you must miss an assignment or exam due to an allowable scheduled absence (for example, to participate in a sanctioned university function), you must notify the instructor as soon as the event is scheduled or during the first week of classes. If you miss an assignment or exam due to an allowable but unscheduled and unpredictable absence (e.g., illness), you must submit proper documentation to the Dean of Students Office before you will be allowed a makeup.

Late Work

Late work will not be accepted unless it is the direct result of an allowable but unscheduled and unpredictable absence (e.g., illness), as defined above, at the discretion of the instructor.

Campus Resources

Health and Wellness

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Accommodations for Students with Disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center (DRC) by visiting the [Get Started page](#). 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.

Academic Resources

E-learning technical support: 352-392-4357 (select option 2) or e-mail to Learningsupport@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center: Reitz Union, 392-1601. Career assistance and counseling.
<http://www.crc.ufl.edu/>

Library Support: <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Course Evaluation Process

I strongly welcome your thoughts on this course at any time in the semester. Please feel free to contact me or come to office hours if you feel the course could be improved. I will also ask directly for your feedback periodically in the semester.

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://gatorevals.aa.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.

Course Schedule (subject to change)

Any changes to the schedule will be reflected on Canvas and will be flagged in announcements.

Wk #	Week of	Reading Topic (Chapter)
1	Aug 31	Intro, Chapter 1 (Intro to Physiology) and Chapter 2 (Molecular Interactions)
2	Sep 7	*No class Monday* Chapter 4 (Energy and Cell Metabolism) and Chapter 3 (Compartmentation: Cells and Tissues)
3	Sep 14	Chapter 3 (Compartmentation: Cells and Tissues) and Chapter 5 (Membrane Dynamics)
4	Sep 21	Review, EXAM WEDNESDAY SEPTEMBER 23 (Ch. 1-5) Chapter 6 (Communication, Integration, Homeostasis)
5	Sep 28	Chapter 6 (Communication, Integration, Homeostasis) and Chapter 18 (Gas exchange and transport) *No class Friday*
6	Oct 5	Chapter 14 (Cardiovascular Physiology) and Chapter 15 (Blood flow, pressure)
7	Oct 12	Chapter 15 (Blood flow, pressure) Review, EXAM FRIDAY OCTOBER 16 (Ch 6, 14, 15, 18)

8	Oct 19	Chapter 7 (Endocrine System), Chapter 8 (Neurons)
9	Oct 26	Chapter 9 (Central Nervous System), Chapter 11 (Autonomic and Somatic Nervous Systems)
10	Nov 2	Review, EXAM WEDNESDAY NOVEMBER 4 (Ch 7, 8, 9, 11) Chapter 12 (Muscles)
11	Nov 9	GROUP PROJECT WEEK *No class Wednesday*
12	Nov 16	Chapter 12 (Muscles) and Chapter 13 (Control of movement integration)
13	Nov 23	Chapter 19 (Kidneys) *No class Wednesday or Friday*
14	Nov 30	Chapter 19 (Kidneys) and Chapter 20 (Fluid and electrolyte balance integration)
15	Dec 7	POSTER SESSIONS! *No class Friday*

	Dec 17	Final Exam - Chapters 12, 13, 19, 20
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Assignments are due at 11:59 p.m. on the date indicated on the course e-Learning site schedule

SUGGESTED STUDY METHODS

Come to class (even remotely) and participate

There is tremendous variation in how people learn and in the foundation they have upon entering this course. However, one thing that is certain is that you will not do well if you do not **participate and work**. Seniors have failed or withdrawn from this class and had to repeat it. Some of them had GPAs above 3.5 and were already conditionally accepted to medical or dental schools. They decided they would miss class and get through by cramming for exams. They were wrong and it cost them. You will need to “participate” in the class and work hard to do well.

Answer and understand the concepts behind the homework and Learning Catalytics questions.

There is a large amount of material covered. Exams will be limited to the concepts and material in the homework and Learning Catalytics questions. Work on these questions as we progress. Compare your answers with those of other students, ask Dr. Rich and the TAs for guidance, and share answers and uncertainties with other students on the discussion boards (see below). Dr. Rich will not post complete answers to all of these questions, as the best way to learn is to discover the answer yourself. However, we are always happy to help YOU come to the correct answers or CONFIRM if you are correct. Review questions and try to anticipate how different versions of the questions might show-up on exams.

Participate in discussion boards

There are many other students in the class trying to learn the same material. Post and answer general questions and comments related to daily lectures and Learning Catalytics questions. Use the discussion boards to ask and answer questions about the study questions as you prepare for exams. Teaching other students is a great way to make sure you know the material. I will monitor and direct the discussions as necessary. These are read by all students and instructors, so make sure your comments are appropriate and respectful.

Keep up with material

This is likely to be one of the most conceptually difficult courses you will take. It also has the potential to be one of the most stimulating and rewarding. You will be required to build on what you have learned in other courses and to **apply** concepts as opposed to memorizing facts. Physiology is where you actually get to apply what you learned in courses like algebra, physics, chemistry, biochemistry, and cell biology. You will need to be able to interpret graphs, calculate quantitative physiological variables, and integrate multiple physiological systems to understand and predict outcomes. This will require you to learn incrementally and build on concepts as they are learned. Everyone learns differently, but the best advice I can give you is to stay current on the notes, study questions, reading, and synthesis of material.

A Final Note...

I really want you to do well in this class. And I want you to go on to do well wherever you go from here. You're happy, I'm happy, everybody wins. So if you're unhappy or stressed or overwhelmed, please come talk to me or talk to someone at UF's Counseling and Wellness Center. We are here for you, because without you we don't have a job and don't get to do what we love.

