UF Department of Applied Physiology and Kinesiology
College of Health and Human Performance
UNIVERSITY of FLORIDA

Applied Human Physiology

APK2150 | 4 Credits | Summer 2025

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Course Info

INSTRUCTOR

Max Adolphs, PhD
Office: 106G
Office Phone: (352) 294-1731
Email: madolphs@ufl.edu
Preferred Method of Contact: Canvas email

OFFICE HOURS

Weekly office hours will be posted in CANVAS and students may request meetings by appointment via CANVAS email

MEETING TIME/LOCATION

Meeting Time: M,T,W,R,F Period 1 (8:00 AM – 9:15 AM)
Location: PUGH 170

Lectures will **not** be recorded and posted by the instructor. This is not an online course. All classes and labs are held in-person. Students are able to record lectures while present in-class for their personal use only in accordance with FL House Bill 233.

LAB TIME/LOCATION: Students meet for lab in-person twice per week for two periods:

CLASS #	LAB DAY AND MEETING TIME	LOCATION
10192	M W | Period 2-3 (9:30am-12:15pm)	FLG 107D
10193	T R | Period 2-3 (9:30am-12:15pm)	FLG 107D
10194	T R | Period 4-5 (12:30pm-3:15pm)	FLG 107D
10195	M W | Period 4-5 (12:30pm-3:15pm)	FLG 107D
10196	M W | Period 4-5 (12:30pm-3:15pm)	FLG 107E
10197	M W | Period 2-3 (9:30am-12:15pm)	FLG 107E
10198	T R | Period 2-3 (9:30am-12:15pm)	FLG 107E
10199	T R | Period 4-5 (12:30pm-3:15pm)	FLG 107E

COURSE DESCRIPTION

This physiology course will introduce students to the functions of the human body at the cellular, tissue, organ, systemic, and organismal levels with heavy emphasis on mechanisms of action.

PREREQUISITE KNOWLEDGE AND SKILLS

These must also match the UF course catalog and the SCNS. If there are no prerequisites for your course, state that.

REQUIRED AND RECOMMENDED MATERIALS

There are no course prerequisites for this course; however, students must have at least a sophomore standing. Any previous experiences in the following areas will be helpful to students: medical terminology, anatomy, physics, chemistry, and/or biology. To be clear: you do not need to have taken any of these courses to be successful in this course.

COURSE FORMAT

Students will attend live lectures five times per week (MTWRF Period 1) and live lab twice per week (2 period-block…see table above). Students should read required textbook pages, print out or download PDF lecture slides complete the appropriate PhysioEx lab module before coming to lecture or lab.

PURPOSE OF THE COURSE

The purpose of this course is to introduce students to physiology (the study of how the body's structures function) and to present information and engage students in a way that promotes critical and creative thinking within the context of health and movement studies. Students will be asked to not only identify important structures of the human body, but integrate the functions of these basic structures together at all levels of the hierarchical organization (molecular, cellular, tissue, organ, and organ system) so that the information can be applied to novel, clinical scenarios. This applied method of teaching physiology is intended to enhance the long-term retention of the concepts covered and prepare students for future courses and experiences which may require health or movement-based communication and problem solving.

GENERAL EDUCATION SUBJECT AREA GOALS

Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern biological systems. Students will formulate empirically-testable hypotheses derived from the study of living things, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

COURSE LEARNING OBJECTIVES

The following table describes the UF General Education student learning outcomes (SLOs) and the specific course goals for APK 2105c. By the end of this course, students should be able to:

Gen Ed SLOs	APK 2105c Course Goals	Assessment Method
Content: Demonstrate competence in the terminology, concepts,	• Describe the basic structures as well as the basic and more complex functions of the cell, the endocrine,	• Lecture exams • Online homework

methodologies and theories used within the discipline.	nervous, muscular, cardiovascular, respiratory, and renal systems • Name and give examples of key physiological themes and basic regulatory mechanisms for sustaining life/health (e.g. homeostasis, negative and positive feedback) • Explain how major systems of the body are integrated and how these interactions influence homeostasis	• Online lab modules
Communication: Communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.	• Use correct anatomical, physiological, scientific, and medical terminology to describe and explain physiological phenomena, experiments used to study such phenomena, and how disease or injury impacts those processes	• Lab reports (rubric and policies outlined in grading section)
Critical Thinking: Analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems.	• Predict how perturbations (e.g., disease, experimental manipulations) will alter physiological function and identify the mechanisms of action involved • Generate and interpret various graphical representations and results of physiological data	• Lecture exams • Online lab modules • Lab reports

Course & University Policies

UF Student Computing Requirements

As a course with online components, and as per the UF student computing requirements, "access to and on-going use of a computer is required for all students." UF does not recommend students relying on/regularly using tablet devices, mobile phones or Chromebook devices as their primary computer as it may not be compatible with specific platforms used in this course or UF (https://it.ufl.edu/policies/student-computing-requirements/). Access to fast, secure Wi-Fi will be necessary for this course. If a student is an area with limited wi-fi access, UF students can access eduroam for free with their GatorLink log-in credentials.

How to connect to eduroam:
1. If you can get a Wi-Fi signal at any of the eduroam locations (see below) and your mobile device (laptop, smartphone, or tablet) has already been configured for eduroam, then you will automatically connect.
2. Otherwise, follow the instructions for connecting here: https://helpdesk.ufl.edu/connecting-toeduroam-off-campus/.

There are more than 100 Wi-Fi hotspots in Florida, including several state university campuses and community colleges. You don't have to sit in a car--many locations have open spaces and communal rooms available so you can get online while socially distancing and following CDC guidelines in an air-conditioned space. Also, in Florida all of the UF/IFAS Research and Education Centers (REC) are equipped with eduroam, so if you live in a rural area

of your county you can visit an REC to securely watch course videos and take care of your academic needs. Here's a link to all the eduroam sites in the U.S.: https://incommon.org/eduroam/eduroam-u-s-locatormap/.

If you have any problems connecting to eduroam you can call (352-392-HELP/4357) or email the UF Computing Help Desk.

ATTENDANCE POLICY

LECTURE: Although attendance is not required, it is ABSOLUTELY imperative for your success in this course. Students who have planned travel during this course are encouraged to register for a different semester if multiple days of class will be missed. *Lecture video links are for use only by students currently registered for the **WEB** section of APK2105c. You are in the **LIVE** section of APK2105c.* ***Watching the video lectures should NOT be substituted for attending live lectures as content and emphases in the live lectures may deviate from pre-recorded lectures**. Saving, sharing or posting of these lecture videos anywhere is strictly prohibited and will be processed as an Honor Code violation.*

LAB: Attendance will be taken in lab, but there are no points given for participation. Attend the lab section for which you are enrolled, not the one most convenient for you on any given day. If you have to miss your lab for any reason, please make arrangements with your TA to attend another lab section that week. Although 5 attendance is not required for the lab, it is absolutely IMPERATIVE for your success in this course as there will be lab quizzes during your designated lab period on most weeks.

PERSONAL CONDUCT POLICY

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

- Read and refer to the syllabus
- Be prompt to office hours
- Use of professional, courteous standards for all emails and discussions:
- 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 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, regardless of the severity, will be reported to the Dean of Students Office for University-level documentation and processing
    - **Any and all lecture video links are for the specific use by students that are currently registered for the WEB section of APK2105c only.**
    - *Sharing or posting of the lecture videos anywhere is strictly prohibited and will be processed as an Honor Code violation. Students who are aware of such sharing/posting of the lecture videos are obligated to disclose that information to their course instructor.*

ASSIGNMENT/EXAM MAKE-UP POLICY

In order for students to make-up any assignment (exam, quiz, PhysioEx, etc) without loss of all points, the instructor must be contacted before the assignment is due. Documentation proving the need for missing the assignment, which is dated before the assignment due date, must be provided. Under rare circumstances (documented by the student and determined acceptable by the instructor) documentation which is provided promptly after the assignment due date may be accepted but this is never guaranteed and unlikely to be approved.

Students will not be permitted a make-up assignment for personal travel/vacations, work, or volunteering conflicts. This includes requesting to take an assignment early for personal travel/vacations. With regard to lecture exams, many students will encounter having multiple exams in one day and this is not a permissible reason for a make-up exam. Only if another exam is scheduled for the same time/overlaps with this course's exams will a request be considered. 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

Any type of documentation must be dated and officially contain the student's name and or other identifying information in order to be accepted. Non-specific medical or other documentation will not be accepted under most circumstances. While sensitive information should be redacted from medical documentation, it must at minimum explain or show the reason why the student should be excused from completing the assignment on the due date. Documentation which simply states that a student was/is under the care of a provider and can return on a specific date will rarely be accepted. If the medical reason for the absence is perceived as sensitive to the student, this must be stated by the provider, and then may be accepted but is not guaranteed.

If a student arrives late to an exam, they will be permitted to take the exam without penalty with the remaining time left as long as no other student has submitted their exam and has left. If a student is late to the exam and at least one student has already completed their exam and has left, the late-arriving student will be subjected to the policy below with a penalty deduction on their exam.

In the case that a student is late and another student has already left or misses an exam due to an unexcused reason (i.e. 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 exam time. If a student is unable to take the exam within 48 hours of the original exam time, this will result in a ***zero grade for that exam.***

ACCOMMODATING STUDENTS WITH DISABILITIES

Students requesting accommodation for disabilities must first register with the Dean of Students Office (http://www.dso.ufl.edu/drc/). DRC-registered students must request their accommodation letter to be sent to their instructors via the DRC file management system prior to submitting assignments or taking quizzes/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 may reach out and contact their course instructor to verify receipt of their accommodation letter.

Students registered with the DRC: DRC-registered students will take their exams at the DRC. I strongly recommend that you **submit all exam requests through the DRC *in the first week of classes/after the drop-add period* to ensure that they are approved in a timely manner.** It is the DRC students' responsibilities to submit their request in accordance to the DRC policies and failure to do so results in an inability for the student to take their lecture exam at the DRC and may have to test with the regular class without their accommodations.

COURSE EVALUATIONS

Students in this class are participating in GatorEvals. This evaluation system is designed to be more informative to instructors so that teaching effectiveness is enhanced and to be more seamlessly linked to UF's CANVAS learning management system. Students can complete their evaluations through the email they receive from

GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/ . Thank you for serving as a partner in this important effort.

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 opti on 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/

Grading

The following table outlines the point-accruing components of the course. To calculate the final grade, total points earned in the course will be summed and divided by 700. If any evaluation component ends up having less points than listed at the end of the semester**, that component will still be worth the *percentage* of the total grade listed no matter the number of total pointes awarded in the course.**

Evaluation Components	Points Possible (out of 700)	% of Total Grade
Lecture Exams (4)	100 pts X 4 exams = 400 pts	400 / 700 = 57.1%
Lab Quizzes (10)	10pts X 10 quizzes = 100 pts	100 / 700 = 14.3%
Homework	200 pts	200 / 700 = 28.6%

Lecture Exams – Each exam will consist of 40 questions, 2.5 points per question. Questions will be multiple choice and true/false. **Exams are closed book and students are not permitted access to any kind of materials or notes during these exams**. Exam questions are generated by the course instructor and the majority of focus should be given to the lecture notes **and student learning objectives (SLOs) from each chapter** when studying (i.e. not the textbook). All lecture exams are held in-class during normal class time in the same room where normal lectures are held. Students will be allowed a class period (i.e. 50 minutes) to complete the exam. ***If you are late to an exam and the exam has already started:*** *you will still be allowed to take the exam provided that no one has already turned in their exam and scantron and has left the room and you will only have the remaining time in the exam period to finish. If a student has already handed in their exam and has left, you will be able to take the exam, but with a penalty. Please refer to the make-up exam policy on page 6.*

Exam Reviews: Once lecture exam grades are posted all students are highly encouraged to come to office hours to review their exams. This will allow students to go through the questions and see their correct/incorrect answers and have any questions regarding the exam answered. An announcement on CANVAS will be made when exam reviews will start. If students are unable to attend the review sessions during office hours, students may also schedule an appointment to go over their exam in-person. You will not be allowed to review all your previous lecture exams simultaneously at the end of the semester. Students will be allowed to review their exams up until the next lecture exam (i.e. can only review Lecture Exam 1 before students take Lecture Exam 2, etc.).

Homework – Following most lectures videos, students will take untimed multiple-choice and/or short answer quizzes (homework) over the lecture material. Quizzes for the week will always be due on the Friday of that week at midnight Eastern time. There will be approximately 200 quiz points throughout the semester but will be worth 28.6% of the total grade regardless of the number of total points. Quiz due dates are also posted on Canvas. Quizzes are graded on the accuracy of answers, NOT on completion. *It will be the student's responsibility to know the due dates and to complete the homework assignment in a timely manner (all deadlines are in EST)*. It is highly recommended that students complete their homework assignment early than waiting last minute.

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.
- There are no second attempts, so you will want to be confident in your answer before submitting.
- *You are encouraged to complete questions as you go (i.e. complete questions as you complete each lecture video).*
- ***There are no late submissions of homework. Missed homework will result in a zero grade.***

Lab Quizzes – Each lab quiz is worth 10 points, consisting of 10 questions and will be a combination of multiple choice, true/false, fill in the blank, matching or multiple answers and will be taken in Canvas. Students are expected to bring their laptops/smart tablets to lab to take their lab quiz. The lab quiz will only be accessible to students during their designated lab times; TAs will provide the appropriate passcode to access the quiz during your lab time. In the event a student is unable to take their quiz electronically, the TA will have physical copies of the quiz as back-up on hand. The quizzes are based on the content of the previous week's lab. These quizzes will be closed-book individual quizzes, there will be no collaboration between students. Quiz questions are pulled from a question bank and students will randomly receive 10 questions of varying difficulty and level of inquiry.

GRADING SCALE

All grades will be posted directly into the CANVAS gradebook. Any discrepancies with points displayed in gradebook should be pointed out to the instructor before the last day of class. **There is no curve for this course and final grades will not be rounded up**. See the UF undergraduate catalog web page for information regarding current UF grading policies: 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.

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

The following table represents current plans for the term. Any changes to this plan will be posted in CANVAS as an announcement.

All assessment (i.e. homework, exams, quizzes, etc.) deadlines/dates are in EST (Eastern standard time).

Before the first day of classes: *review the course syllabus carefully*

Week	Dates	Lecture Topic	Lab
1	May 12 – May 16	Chapter 1 & 2 – Intro to Physiology & Cell Structure Chapter 3 – Cell Metabolism	**No Lab on Monday or Tuesday** **Lab 1 – Graphs and Data**
2	May 19 - May 23	Exam 1 May 19th Chapter 4 – Cell Membrane Transport Chapter 5 – Chemical Messengers	**Lab 2 – Metabolism** Quiz 1 (Graphs, Data) ***Lab 3 Transport Mechanisms*** Pre-lab 1 prior to lab *Quiz 2 (Metabolism)*

3	May 26 – May 30	**No Class May 26th** Chapter 6 – Endocrine Chapter 7 – Neural Signaling Chapter 8 – Neural Integration	***Lab 4 Endocrine*** *Pre-lab 2 prior to lab* *Quiz 3 (Transport Mechanisms)* ***Lab 5 N*europhys** *Pre-lab 3 prior to lab* *Quiz 4 (Endocrine)*
4	Jun 2 – June 6	Chapter 8 – Neural Integration Exam 2 June 3rd Chapter 12 – Muscle Physiology Chapter 13 – Cardiac Function	**Lab 6 – Neuromuscular** *Quiz 5 (Neurophys)* **Lab 7 – Muscle Phys** Pre-lab 4 prior to lab Quiz 6 (Neuromuscular)
5	Jun 9 – Jun 13	Chapter 14 – Vessels and Pressure Exam 3 June 13th Chapter 16 – Pulmonary Function	**Lab 8 – Cardiovascular Phys** *Quiz 7 (Muscle Phys)* **Lab 9 – Cardiovascular Function** Pre-lab 5 prior to lab Quiz 8 (Cardiovascular Phys)
6	Jun 16 – Jun 20	**No Class June 19th** Chapter 17 – Gas Exchange Chapter 18 – Renal Function Chapter 19 – Fluid/Electrolyte Balance Exam 4 June 20th	**Lab 10 – Pulmonary Function** Quiz 9 (Cardiovascular Function) **Lab 11 – Renal Physiology** Pre-lab 6 prior to lab Quiz 10 (Pulmonary and Renal)

Success and study tips:

- Read the book/ PowerPoints/ Papers before watching video lectures.
- Physiology is highly conceptual. Trying to memorize everything does not work (plus that approach is boring). When lectures are going on, focus less on taking notes and more on trying to comprehend concepts. This will help tremendously on exams.
- Go over the goals/ learning objectives section after each lecture and see if you can answer the learning objectives which correspond to the material that was covered. If you are struggling to understand them, meet with me!
- To expand on the last point, you should study daily. Trying to cram everything in before an exam in physiology is a huge mistake that almost never ends well.
- Repetition is key to learning complex concepts. Go over the material again and again.