

APPLIED HUMAN PHYSIOLOGY WITH LAB

APK 2105c ~ 4 CREDITS ~ SUMMER A 2018

INSTRUCTOR: **Joslyn Ahlgren, Ph.D.**
Office: FLG 108
Office Phone: 352-294-1728
Email: jahlgren@ufl.edu Preferred: CANVAS email

OFFICE HOURS: Posted at the CANVAS homepage for this course

COURSE WEBSITE: <https://lss.at.ufl.edu/>

LECTURE TIME/LOCATION: You will NOT attend lectures in a classroom. Instead, lectures will be available online in CANVAS. You will need your UFID to access the lecture videos.

LAB TIME/LOCATION: You WILL attend labs in a classroom on campus. Please note: **some labs meet twice a week for two periods** and **some labs meet four times per week for one period.**

SECTION	LAB TIME	LAB LOCATION
0848	TR 3-4 (11:00am-1:45pm)	FLG 107D
0849	MW 3-4 (11:00am-1:45pm)	FLG 107D
0850	MW 5-6 (2:00-4:45pm)	FLG 107D
0851	MW 3-4 (11:00am-1:45pm)	FLG 107E
0852	TR 3-4 (11:00am-1:45pm)	FLG 107E
0853	TR 5-6 (2:00-4:45pm)	FLG 107E
0854	TR 5-6 (2:00-4:45pm)	FLG 107D
0855	MW 5-6 (2:00-4:45pm)	FLG 107E
03C4	MTWR 2 (9:30-10:45am)	FLG 107D
03DD	MTWR 7 (5-6:15pm)	FLG 107D

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: There are no prerequisites for this course; however, 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.

GENERAL EDUCATION SUBJECT AREA OBJECTIVES: 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 GOALS: 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:

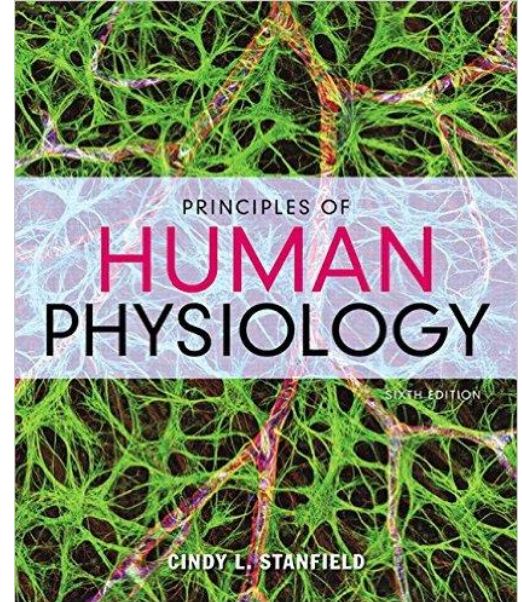
Gen Ed SLOs	APK 2105c Course Goals	Assessment Method
Content: Demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline.	<ul style="list-style-type: none"> • Describe the basic structures as well as the basic and more complex functions of the cell, the endocrine, 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 	<ul style="list-style-type: none"> • Collaborative exams • Individual exams • Lab quizzes
Communication: Communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Online lab module essay questions and post lab quizzes
Critical Thinking: Analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems.	<ul style="list-style-type: none"> • 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 of physiological data 	<ul style="list-style-type: none"> • Collaborative exams • Individual exams • Online and live lab quizzes/essays

REQUIRED COURSE MATERIALS/TEXT: For this course, students will need access to two resources: (1) the textbook, and (2) MasteringA&P website (where lab modules will be

completed). Options regarding how to gain access to these required course materials are described below.

Textbook: Principles of Human Physiology by Cindy L. Stanfield, 6th edition. Pearson.

Option A (recommended especially to students with financial aid issues): Students will have the choice to use UF's All Access program. Once classes begin, students can "Opt-In" to MasteringA&P access through a link provided in CANVAS for a reduced price and pay for these materials through their UF student account. This option gives students access to an e-version of the textbook AND access to MasteringA&P. To do this, log into your CANVAS account and navigate to the APK 2105c course homepage. On the left-hand side of the window, select My Lab and Mastering—then follow the prompts accordingly.



Option B: Students who do not choose to participate in UF's All Access program can purchase a standalone MasteringA&P access code through the UF Bookstore. There will also be a discounted, loose-leaf print version of the textbook available at the UF Bookstore for students who would like an additional printed resource for the course. Also, a textbook is available at Marston Science Library here on campus at the reserve desk.

COURSE POLICIES:

ATTENDANCE POLICY: LECTURE: There is no attendance necessary for lectures for this course since all lectures will be pre-recorded and available in CANVAS. LAB: Attendance will be taken in lab and will count for approximately 5% of your grade. Attend the lab section for which you are enrolled. If you have to miss your lab for any reason, please make arrangements with your TA to attend another lab section that week. **You must also fill out a lab make-up form (posted in CANVAS) and have the TA of the lab section you attended instead of your own sign it and return it to your TA.** Any un-made-up lab will result in a partial letter grade penalty. For example, if you earned a B+ in the course, but missed two labs that were not made-up by attending another section, you would receive a B in the course. The following are not excuses for missing lab: work, volunteer position, personal travel/vacation.

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 social media sites 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 assessment will result in a zero on the assessment – at minimum
 - All allegations (including looking at your neighbor’s exam) 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 following table outlines the point-accruing components of the course.

Evaluation Components	Points Possible (out of 550)	% of Total Grade
Collaborative Exams (6)	10 pts x 6 exams = 60 pts	25%
Individual Exams (3)	20 pts x 3 pop exams = 60 pts	25%
Live Labs (6)	10 pts x 6 live labs = 60 pts	25%
Online Labs (6)	10 pts x 6 online labs = 60 pts	25%
Extra Credit	5 pts possible via research or project	

Collaborative Exams – You will have six collaborative exams during this semester. These exams will be administered online in CANVAS. You are permitted use of any course materials (text, notes, etc.) and you are encouraged to collaborate with peers in class. You may not collaborate with peers who are NOT registered for this class in THIS semester. Each exam will be between 10-20 questions and you will have 60 minutes to complete them. Exams will be open for 12 hours each Friday (7am-7pm), so you can take the exam at a time that is best suited for you and your collaborators. Questions will be in the following format: multiple choice, true-false, matching, and multiple correct answers (select all that apply). Exam content will include both lab and lecture material.

Individual Exams – You will take three exams that will be administered during lab meeting times. No resources or collaboration will be permitted on these exams. **It is a UF honor code violation to take the exam and share that information with students who have not yet taken the exam. If this becomes a problem, exams will be given on Mondays during period 1.** Questions will be in the following format: multiple choice, true false. Exam content will include both lab and lecture material.

Live Labs – For half of your labs, you will meet in a teaching lab and perform physiological experiments, including the collection and analysis of data. There are three components to earning your points for these live labs:

- **Attendance (2 pt/lab):** you are required to attend all labs. If you are too ill to attend lab, you must provide documentation to your Lab TA and make up the lab in some way. It is highly recommended that you attend another lab section during the week, but if that is not possible, your Lab TA will provide an alternative written assignment. Points will be removed if students are not participating or engaging in lab (e.g., on cell phone at inappropriate times). If you are late to lab, you will get one point off of attendance for the day and you may not be able to take the pre-lab quiz.
- **Prelab quiz (3 pts/lab):** you will take a pre-lab quiz at the beginning of the lab. This quiz will be administered on paper and will consist of multiple choice, true-

false, and short answer questions. This quiz will test your basic knowledge of the required readings for the lab. Questions will be in the following format: multiple choice, true-false, and short answer. Make-ups will not be given if you arrive late to lab.

- **Post-lab quiz (5 pts/lab):** you will take a post-lab quiz at the end of each lab— similar in format to the pre-lab quiz. These will be administered in lab (paper) and will cover the learning objectives, data, concepts, and methods used during that lab. On some assessments, data and or hand/written notes collected in the experiments might be allowed as a resource. This will vary depending on your specific TA and the topic of that day’s lab.

Online Labs – The other half of your labs will be online lab modules. These allow you to perform highly technical, invasive, and/or time-consuming physiological experiments in a short period of time. These online lab modules will be access through MasteringA&P in CANVAS should be **completed by Friday at 5pm of each week** (see lab schedules below for specific dates/deadlines). You will be able to open and close the labs as many times as you wish until the due date. Please take notes on the experiments so you can adequately answer the essay questions associated with the lab modules. For each online lab, you will answer a number of essay questions related to the experiments performed. Your Lab TA will grade only two of the questions (at random) to assign a grade for your completion (5 pts per question). You will receive a zero on the lab if you have not answered all of the essay questions. Plagiarism will not be tolerated and will result in an honor code violation. Students who consistently fail to meet Satisfactory or Excellent scores on online labs (see rubric below) will be invited to a meeting to discuss academic roadblocks/progress in the course.

Unsatisfactory (U) Does Not Meet Minimum Expectations (0-5 pts)	Satisfactory (S) Meets Minimum Expectations (6-7 pts)	Excellent (E) Exceeds Expectations (8-10 pts)
<ul style="list-style-type: none"> • Incomplete sentences • Excessive grammatical errors, including spelling (≥ 3) • Answer demonstrates lack of understanding 	<ul style="list-style-type: none"> • Complete sentences • Few grammatical errors, including spelling (< 3) • Answer demonstrates <u>basic</u> understanding • Mostly correct use of scientific/medical terminology 	<ul style="list-style-type: none"> • Complete sentences • Little to no grammatical errors, including spelling (≤ 1) • Answer demonstrates a more <u>comprehensive</u> understanding • Correct use of scientific/medical terminology

Extra Credit: You can earn up to 5 points of extra credit for participating in an approved research study (list of approved studies will be posted in CANVAS) or by completing a project as outlined by your individual Lab TA. **Details will be provided at your second lab meeting.**

GRADING SCALE: Any discrepancies with points displayed in the 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/ugrad/current/regulations/info/grades.aspx>. *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

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:** Because exams in this course are online, once you submit your DRC letter to me, I can facilitate your accommodations accordingly. Your Lab TA can also facilitate your requests on lab assessments. To make this more manageable, please provide your letter to me in the first two days of class.

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.

	Day - Date	Lecture Topic (Textbook Chapter: Pages)
Week 1	M- May 14	Intro to Physiology (1:1-12) Cell Structure & Function (2: 18-50) Cell Metabolism (3: 56-87)
	T- May 15	
	W - May 16	
	R - May 17	
	F - May 18	Collaborative Exam 1
Week 2	M - May 21	Cell Membrane Transport (4: 93-120)
	T - May 22	Chemical Messengers (5: 124-145)
	W - May 23	Endocrine System (6: 149-163)
	R - May 24	Individual Exam 1 given during lab time Wed/Thurs
	F - May 25	Collaborative Exam 2
Week 3	M - May 28	HOLIDAY
	T - May 29	Neural Signaling (7:166-193) Neural Integration (8:196-209)
	W - May 30	
	R - May 31	
	F - Jun 01	Collaborative Exam 3
Week 4	M - Jun 04	Muscle Physiology (12: 322-350) Cardiac Function (13: 359-370, 373-390) Individual Exam 2 given during lab time Wed/Thurs
	T - Jun 05	
	W - Jun 06	
	R - Jun 07	
	F - Jun 08	Collaborative Exam 4
Week 5	M - Jun 11	Vessels & Pressure (14: 394-426) Pulmonary Ventilation (16: 448-469) Gas Exchange (17: 473-499)
	T - Jun 12	
	W - Jun 13	
	R - Jun 14	
	F - Jun 15	Collaborative Exam 5
Week 6	M - Jun 18	Renal Function (18: 503-527) Fluid/Electrolyte Balance (19: 531-548) Individual Exam 3 given during lab time Wed/Thurs
	T - Jun 19	
	W - Jun 20	
	R - Jun 21	
	F - Jun 22	Collaborative Exam 6

The following are **lab schedules**. You will NOT physically meet for Online Labs. You WILL physically meet for Live Labs. Your TA will have office hours during your lab meeting time on days when you are assigned an Online Lab.

	Day - Date	Labs that meet 2X/week: M/W or T/R
Week 1	M - May 14	Live Lab 1: Introduction and graphs (pre and post lab quizzes)
	T - May 15	
	W - May 16	Online Lab 1: Transport mechanisms (due: 5/18 5pm)
	R - May 17	
	F - May 18	No labs on Fridays – UGTA Reviews Offered
Week 2	M - May 21	Live Lab 2: Enzyme kinetics (pre and post lab quizzes)
	T - May 22	
	W - May 23	Online Lab 2: Endocrine (due: 5/25 5pm)
	R - May 24	Individual Exam 1 given during lab time Wed/Thurs
	F - May 25	No Labs on Fridays – UGTA Reviews Offered
Week 3	M - May 28	HOLIDAY – NO LAB
	T - May 29	
	W - May 30	Live Lab 3: Metabolism (pre and post lab quizzes) Online Lab 3: Nervous (due: 6/1 5pm)
	R - May 31	
	F – Jun 01	No Labs on Fridays – UGTA Reviews Offered
Week 4	M – Jun 04	Live Lab 4: Neuromuscular (pre and post lab quizzes)
	T – Jun 05	
	W – Jun 06	Online Lab 4: Cardiovascular (due: 6/8 5pm)
	R - Jun 07	Individual Exam 2 given during lab time Wed/Thurs
	F - Jun 08	No Labs on Fridays – UGTA Reviews Offered
Week 5	M - Jun 11	Live Lab 5: Cardiovascular (pre and post lab quizzes)
	T - Jun 12	
	W - Jun 13	Online Lab 5: Gas Exchange / Renal (due: 6/15 5pm)
	R - Jun 14	
	F - Jun 15	No Labs on Fridays – UGTA Reviews Offered
Week 6	M - Jun 18	Live Lab 6: Pulmonary (pre and post lab quizzes)
	T - Jun 19	
	W - Jun 20	Online Lab 6: Acid/Base Balance (due: 6/22 5pm)
	R - Jun 21	Individual Exam 3 given during lab time Wed/Thurs
	F - Jun 22	No Labs on Fridays – UGTA Reviews Offered

	Day - Date	Labs that meet 4X/week: MTWR
Week 1	M- May 14	Live Lab 1: Introduction and graphs (pre lab quiz)
	T- May 15	Live Lab 1: continued (post lab quiz)
	W - May 16	Online Lab 1: Transport mechanisms (due: 5/18 5pm)
	R - May 17	
	F - May 18	No Labs on Fridays – UGTA Reviews Offered
Week 2	M - May 21	Live Lab 2: Enzyme Kinetics (pre lab quiz)
	T - May 22	Live Lab 2: continued (post lab quiz)
	W - May 23	Online Lab 2: Endocrine (due: 5/25 5pm)
	R - May 24	Individual Exam 1 given during lab time Thurs
	F - May 25	No Labs on Fridays – UGTA Reviews Offered
Week 3	M - May 28	HOLIDAY – NO LAB
	T - May 29	Live Lab 3: Metabolism (pre lab quiz)
	W - May 30	Live Lab 3: continued (post lab quiz)
	R - May 31	Online Lab 3: Nervous (due: 6/1 5pm)
	F – Jun 01	No Labs on Fridays – UGTA Reviews Offered
Week 4	M – Jun 04	Live Lab 4: Neuromuscular (pre lab quiz)
	T – Jun 05	Live Lab 4: continued (post lab quiz)
	W – Jun 06	Online Lab 4: Cardiovascular (due: 6/8 5pm)
	R - Jun 07	Individual Exam 2 given during lab time Thurs
	F - Jun 08	No Labs on Fridays – UGTA Reviews Offered
Week 5	M - Jun 11	Live Lab 5: Cardiovascular (pre lab quiz)
	T - Jun 12	Live Lab 5: continued (post lab quiz)
	W - Jun 13	Online Lab 5: Gas Exchange/Renal (due: 6/15 5pm)
	R - Jun 14	
	F - Jun 15	No Labs on Fridays – UGTA Reviews Offered
Week 6	M - Jun 18	Live Lab 6: Pulmonary (pre lab quiz)
	T - Jun 19	Live Lab 6: continued (post lab quiz)
	W - Jun 20	Online Lab 6: Acid/Base Balance (due: 6/22 5pm)
	R - Jun 21	Individual Exam 3 given during lab time Thurs
	F - Jun 22	No Labs on Fridays – UGTA Reviews Offered

STUDY TIPS FOR DOC. A's CLASS:

- Read from the text BEFORE watching the lectures. Do not take notes, underline, highlight, or attempt to memorize anything...JUST READ and enjoy!
- Snow-ball your lecture 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 each exam.
- If there is something in the textbook that was NOT in lectures, you are not expected to know it. There is a lot in the text that we don't have time to cover.
- Re-write questions. Taking complex questions and breaking them down to identify exactly what the question is REALLY asking for is very helpful. It is also very helpful to look at incorrect answer choices and identify what makes those choices wrong. Ask yourself, "How could I make that statement correct?" **You can practice this with the critical thinking questions at the end of each chapter.**
- Google diseases or drug mechanisms of action. For example, if we are studying neurophysiology, Google "brain diseases". Click on any link and just read a paragraph to see if you can understand based on what you now know about nervous tissue structure and function. If you don't understand it, that's okay...did you recognize any words?...did you at least have a *clue* what was going on? This makes for GREAT discussion during group study.
- Use the learning objectives for each chapter as a guide to important, testable concepts/content. All assessments are derived from the learning objectives.

SUCCESS TIPS FOR DOC. A's CLASS:

- Do not fall behind. This course moves at a FAST pace...and you can easily get overwhelmed if you procrastinate. Avoid studying at the last minute.
- 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. Make a list every Monday morning of what you need to do that week and stick to the plan.
- Check CANVAS announcements/emails **daily**...just pretend it is Facebook for school. Your course instructor will post important and helpful information (such as friendly reminders of due dates) as announcements.
- Utilize the Undergraduate Teaching Assistants (UGTAs). These students have earned an A in my course recently and WANT to help you succeed in learning Physiology.
- Have a positive attitude! THIS STUFF IS COOL!

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 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

