

PHYSIOLOGY OF EXERCISE & TRAINING

APK 3110c ~ 3 CREDITS ~ FALL 2018

- INSTRUCTOR:** **Joslyn Ahlgren, Ph.D.**
Office: FLG 108
Office Phone: 352-294-1728
Email: jahlgren@ufl.edu Preferred: CANVAS email
- OFFICE HOURS:** Office hours will be posted in CANVAS and students may request private meetings or moving meetings (walk and talk) via CANVAS email.
- LECTURE TIME/LOCATION:** M,W,F | Period 8 (3:00 PM - 3:50 PM) / FLG 280

COURSE FORMAT: Students will attend live lectures three times each. Students should read required textbook pages and print out or download PDF lecture slides before coming to class.

COURSE DESCRIPTION AND GOALS: This introductory course in exercise physiology is designed to provide a basic understanding of acute and chronic physiological responses to exercise. Particular attention will be placed upon muscle bioenergetics, metabolism, and the cardiopulmonary responses to exercise. At the completion of this course, students should:

1. Understand the physiological responses to acute exercise—specifically regarding:
 - The cardiopulmonary responses
 - Temperature regulation during work
 - Principles of exercise metabolism
 - Acid-base regulation
 - Mechanical and biomechanical properties of skeletal muscle fiber types
 - Regulation of skeletal muscle contraction
 - Limiting factors in submaximal and maximal work
2. Understand the physiological responses to chronic exercise—specifically regarding:
 - Systemic and cellular adaptations to aerobic exercise training
 - Systemic and cellular adaptations to anaerobic exercise training
 - Systemic and cellular adaptations to resistance exercise training
 - Principles of effective physical conditioning techniques

PREREQUISITE: Successful completion of APK 2105C (Applied Human Physiology w/ Lab) with a grade of C or better.

REQUIRED TEXTBOOK: S.K. Powers and E. T. Howley (2018). Exercise Physiology: Theory and Application to Fitness and Performance, McGraw-Hill, New York. 10th ed.

COURSE POLICIES:

ATTENDANCE POLICY: Attendance will not be taken during class; however, it is imperative that you attend lectures and take good notes. Students will be examined on their recall and ability to apply information covered in the required textbook reading as well as that presented in lectures (which may deviate or expand on the text). If you miss lecture, please get the notes from a friend who did attend that day. Once you have read the text and gotten notes from a friend...if you have questions about missed material, please visit the instructor in office hours.

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 (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, regardless of the severity, will be reported to the Dean of Students Office for University-level documentation and processing

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 instructors 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>.

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 exam requests through the DRC *in the first week of classes* to ensure that they are approved in a timely manner.

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.

GRADING POLICIES:

The following table outlines the point-accruing components of the course. The total points earned from each component will be summed and divided by the total points.

Evaluation Components (number of each)	Points Per Component	% of Total Grade
Exams (3)	50 pts each = 150 pts	$150/210 = \sim 71\%$
Pop quizzes (4)	10 pts each = 40 pts	$40/210 = \sim 19\%$
Engagement	20 pts = 20 pts	$20/210 = \sim 10\%$

Lecture Exams – Each exam will consist of 30-40 questions. Questions will be multiple choice and true/false. Students are not permitted access to any kind of materials or notes during these exams and are not allowed to collaborate with peers in any way. Exam questions are generated by the course instructor and the majority of focus should be given to the lecture notes when studying. Students will take exams in the same room where weekly meetings are held and will be allowed 45 minutes to complete the exam.

Pop quizzes – A total of six pop-quizzes will be given. The lowest two quiz grades will be dropped. No make-up quizzes will be given. Each quiz will consist of four questions from a chapter of the textbook covered up to that point in the semester. One 8.5x11 inch page (front and back) of hand-written notes will be permitted for each student to use on quizzes. It is recommended that for each assigned chapter of the textbook, students generate a one-page summary document (must be hand-written). That way, on days when quizzes are held, students will quickly be able to retrieve their summary page for that chapter. Students who do not bring a note page with them will have to take the quiz without assistance. Students are not permitted magnifying devices. ;-)

Engagement – Students can earn up to 20 points of their grade through various activities including, but not limited to, the following: APK research subject participation (5 pts max); answering questions in class (2 pts max); participating in a study session with your peers (10 pts max); attending live or virtual office hours (5 pts max). Other opportunities will be posted in CANVAS as they arise throughout the semester. At the end of the term, each student will upload a PDF document (example posted in CANVAS) to the gradebook verifying their engagement throughout the semester...so, students should keep good records and take pictures of group study (and the like). If you have a proposed mechanism for getting some engagement points, please submit your proposal via CANVAS email.

GRADING SCALE: Any discrepancies with points displayed in the gradebook should be pointed out to the instructor before the final exam. **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: 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. Should points need to be altered during the term (not likely, but things like hurricanes can really muck things up), these percentages will still be used to calculate grades (i.e., 90% = A).

Letter Grade	Points Needed to Earn Each Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A	198.00-220	90.00-100%	4.0
B+	191.40-197.99	87.00-89.99%	3.33

B	176.00-191.39	80.00-86.99%	3.0
C+	169.40-175.99	77.00-79.99%	2.33
C	154.00-169.39	70.00-76.99%	2.0
D+	147.40-153.99	67.00-69.99%	1.33
D	132.00-147.39	60.00-66.99%	1.0
E	0-131.99	0-59.99%	0

GETTING HELP:

For issues with technical difficulties for CANVAS, please contact the UF Help Desk at:

- helpdesk@ufl.edu
- (352) 392-HELP - select option 2
- <https://request.it.ufl.edu/>

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are also available for you:

- Disability resources
<https://www.dso.ufl.edu/drc/>
- Library Help Desk
<http://guides.uflib.ufl.edu/content.php?pid=86973&sid=686381>
- Counseling and Wellness
<http://www.counseling.ufl.edu/cwc/Self-Help-Library.aspx>

COURSE SCHEDULE:

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

Week	Dates	Lecture Topic	Required Reading
1	Aug 22-24	Introductions and syllabus/course policies review Common measurements in Exercise Physiology	Read syllabus and take syllabus quiz Ch. 1
2	Aug 27-31	Control of the Internal Environment Bioenergetics	Ch. 2 Ch. 3

3	Sep 3-7	<i>Mon, Sep 3 is a holiday...no class or labs</i> Exercise Metabolism	Ch. 4
4	Sep 10-14	Cell Signaling and Hormonal Responses to Exercise Nervous System: Structure and Control of Movement	Ch. 5 Ch. 7
5	Sep 17-21	Nervous System: Structure and Control of Movement Skeletal Muscle: Structure and Function	Ch. 7 Ch. 8
6	Sep 24-28	Pre Exam Review – Mon, Sep 24 – FLG 280 Exam 1 – Wed, Sep 26 – 3:10pm – FLG 280 Post Exam Review – Wed, Sep 26 – FLG 108 office hrs	
7	Oct 1-5	Circulatory Response to Exercise Respiration during Exercise	Ch. 9 Ch. 10
8	Oct 8-12	<i>Mon, Oct 8th – no class meeting – Video Lecture</i> Respiration during Exercise Acid-Base Balance during Exercise	Ch. 10 Ch. 11
9	Oct 15-19	Temperature Regulation The Physiology of Training: Effect on VO ₂ max, Performance, and Strength	Ch. 12 Ch. 13
10	Oct 22-26	The Physiology of Training: Effect on VO ₂ max, Performance, and Strength Pre Exam Review – Fri, Oct 26 – FLG 280	Ch. 13
11	Oct 29- Nov 2	Exam 2 – Mon, Oct 22 – 3:10pm – FLG 280 Post Exam Review – Wed, Oct 24 – FLG 208 office hrs <i>Fri, Nov 9 is homecoming...no class or labs</i>	
12	Nov 5-9	Preventing Chronic Disease Exercise Tests to Evaluate Cardiorespiratory Fitness Exercise Prescriptions for Health and Fitness	Ch. 14 Ch. 15 Ch. 16
13	Nov 12-16	<i>Mon, Nov 12 is a holiday...no class or labs</i> Exercise for Special Populations	Ch. 17
14	Nov 19-23	Obesity – Guest Lecturer <i>Wed-Fri, Nov 21-23 is a holiday...no class or labs</i>	No assigned reading
15	Nov 26-30	Factors Affecting Performance Training for Performance	Ch. 19 Ch. 20
16	Dec 3-7	Exercise and the Environment Pre Exam Review – Wed, Dec 5 – FLG 280 <i>Fri, Dec 7 is a reading day – no class or labs</i>	Ch. 24
Exam 3 – Mon, Dec 10th – 10am-12pm - FLG 280			

STUDY TIPS FOR DOC. A's CLASS:

- Read from the text BEFORE attending lecture. Generate a summary document during or once you are done reading so you will be prepared for pop quizzes.
- Snow-ball the 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 the exam.
- Generate summaries for graphs. There are a TON of graphical images in physiology. It is helpful to be able to verbally describe what graphs are communicating.

SUCCESS TIPS FOR DOC. A's CLASS:

- Do not fall behind. Avoid studying at the last minute. Complete your engagement points throughout the semester...do not procrastinate this part of the course.
- 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.
- Review the exams as soon as possible. Don't just focus on the right answers, though. Break down why wrong answers were incorrect and try to identify ways you can better prepare for upcoming exams.
- Check CANVAS announcements/emails daily...just pretend it is social media for school. Your course instructor will post important and helpful information (such as friendly reminders of due dates) as announcements.
- 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 (<http://www.counseling.ufl.edu/cwc/Self-Help-Library.aspx>). 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

