

University of Florida
Department of Applied Physiology and Kinesiology
APK 3113 Principles of Strength and Conditioning
Spring 2018
Section 2225 Lecture: MWF 8:30 - 9:20, FLG 230

Instructor: Dr. Blain Harrison
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Office hours: M-F: 9:30-11:30, or by appointment

Course Syllabus

Course Description

This course addresses the selection and implementation of strength, power, speed, agility, endurance, and hypertrophy training methods, focusing primarily on periodization programs. Components include discussions of physiological principles and strength assessment as they relate to resistance training.

Course Objectives

At the conclusion of the course students will be able to:

- Describe the basic physiology of the skeletal, neuromuscular, and cardiovascular systems as they pertain to an athlete engaged in a strength and conditioning program
- Identify the biomechanical factors that influence resistance training performance
- Analyze a sport with regards to the primary energy system involved in its execution
- Explain how anabolic and catabolic hormones influence the adaptation to a strength and conditioning program.
- Compare the expected physiological adaptations of anaerobic and aerobic training programs.
- Recommend appropriate assessments of athletic performance and interpret test results.
- Prescribe exercise training sessions with the intention of improving athletic performance in the areas of strength, power, speed, agility, aerobic capacity, hypertrophy, and flexibility
- Create a periodized annual strength and conditioning program incorporating all of the variables described above.
- Modify the parameters of a strength and conditioning program for young athletes, master's athletes, and female athletes.
- Manipulate a strength and conditioning program to meet the needs of a rehabilitating athlete.
- Plan the layout of a strength and conditioning facility according to safety and efficiency guidelines.
- Sit for the NSCA CSCS exam in your senior year, or upon graduation, if desired.

Required Textbooks

Haff, G. and T. Triplett. Essentials of Strength Training and Conditioning - 4th Edition. Human Kinetics, 2016.

Grading

| <u>Assessment</u> | <u>Points</u> | <u>Weight</u> |
|--|--------------------------|--------------------|
| Exam 1 | 50 points | 15% |
| Exam 2 | 50 points | 15% |
| Exam 3 | 50 points | 15% |
| Final Exam | 150 points | 20% |
| Applied S&C Assignments (5 x 20 points) | 100 points | 15% |
| Program Design Project | 50 points | 15% |
| TopHat Questions/In-Class Assignments | | 5% |
| Total | <u>450 points</u> | <u>100%</u> |

94.0% - 100% = A

90.0% - 93.99% = A-

87.0% - 89.99% = B+

80.0% - 86.99% = B

77.0% - 79.99% = C+

70.0% - 76.99% = C

67.0% - 69.99% = D+

60.0% - 66.99% = D

<60 = E

Information on current UF grading policies for assigning grade points:

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

Quizzes and Exams

There are three semester exams, and a final exam. The three semester exams will be not be comprehensive; however, the final exam WILL be comprehensive. Lecture Exams and Assignments will be administered through Canvas. All exams will be taken during the scheduled class time and in the classroom and will be closed-book and closed-notes. All exams will be taken on **Canvas ONLY**. It is the students' responsibility to ensure that their computers will connect successfully to UF wifi prior to all exams. If a student forgets to bring a computer on days of an exam, he/she will have the opportunity to retrieve their computers and attempt to finish the quiz or exam in the remaining time available. **HARD COPIES OF QUIZZES AND EXAMS WILL NOT BE AVAILABLE.**

Please see your instructor at least 72 hours prior to your exam if circumstances arise that will prevent you from taking the exam. If you have a schedule conflict for an exam you must take the exam early and not after the scheduled exam. Missed Exams will be scored a zero with no make-up exams permitted. There are no acceptable excuses for missing the final examination at the date and time scheduled for this class other than final examination conflicts causing a re-assignment by the Registrar.

Applied Strength and Conditioning Assignments

A total of 10 applied strength and conditioning assignments will be completed over the course of the semester. Weeks in which a homework assignment is due are denoted by an (*) on the Class Schedule below. Homework assignments are due by **11:59PM SUNDAY** of the week they are assigned. These homework assignments will include questions that require students to apply lecture content to hypothetical cases or videos of athletic activities.

Applied Program Design Project

Students will be asked to create a periodized strength and conditioning program for a hypothetical athlete with parameters provided by the instructor. The project will consist of 5 distinct components (10 points each) and will be due by **Sunday, December 3rd, 2017**. Students will work individually to complete the project, but may seek guidance from classmates or the instructor as applicable. This project involves combining the components of the individual assignments given throughout the semester into one overall periodized annual strength and conditioning program.

Class Attendance Policy

Students are expected to attend all classes and to have completed assigned reading prior to class as scheduled by the instructor. Questions related to assigned readings will be available on Canvas. Students maintaining $\geq 90\%$ average on these questions throughout the semester will earn 1% extra credit towards their final grade at the end of the semester (for example, an 89% final grade will become a 90% moving the student from a B+ to an A-).

Top Hat

We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. Questions administered in class count towards your final grade. Each lecture will include approximately 5 questions worth 1 point each (as participation points). In-class TopHat questions will amount to 2.5% of your final grade.

You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system.

An email invitation will be sent to you by email, but if don't receive this email, you can register by simply visiting our course website: <https://app.tophat.com/e/765914>

Note: our Course Join Code is 765914

Top Hat will require a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing.

Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491.

Grading

Notification of final grades will be made by the Registrar or you may check your grade by using ISIS. Final grades will not be posted.

You must earn your grade! Grades will not be rounded! The extra credit opportunities are designed to help any individual with a borderline grade by demonstrating their commitment to the course.

Two extra credit opportunities are offered in this course. 1. Students maintaining a 90% average or greater on all assigned weekly reading homework will earn 1% towards their final grade. 2. Students maintaining a 90% average or greater on all weekly anatomy quizzes will earn 1% towards their final grade.

Cell Phone Policy

Students in this course are expected to behave professionally, politely, and considerately. Cell phone use with regard to phone conversations, text messaging, and social media use during lectures, labs, and exams is banned in this class. Smartphone or tablet devices may be used to participate in discussions and answer questions administered through TopHat.

Academic Honesty

Cheating will not be tolerated in this course. All students are required to abide by the Academic Honesty Guidelines and Honor Code, which have been accepted by the University. Cheating is defined as the improper taking or tendering of any information or material, which shall be used to determine academic credit. Violations of the Honor Code will be handled according to the guidelines set by Student Judicial Affairs. 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-honor-code/>) 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 me.

Accommodations for students with disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester

Online course evaluation process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations 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. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

The University of Florida has enacted a policy of allowing NO food or drink of any kind in any campus classroom. This policy will be enforced during the meeting times of this course.

APK3220C - Class Schedule

Please note that the instructor reserves the right to alter the syllabus or schedule if it is determined that such a change will benefit the course and the students.

| Week | Dates | Topic | Chapter |
|------|-------|-------|---------|
|------|-------|-------|---------|

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|----|--------------|--|----------|
| 1 | (1/8-1/12) | Introduction, Review of Syllabus Structure and Function of Body Systems Biomechanics of Resistance Exercise | 1 2 |
| 2 | (1/15-1/19) | Bioenergetics of Exercise and Training Endocrine Responses to Resistance Exercise NO CLASS MONDAY 1/15 - MLK Day | 3 4 |
| 3 | (1/22-1/26)* | Adaptations to Anaerobic Training Programs Adaptations to Aerobic Training Programs | 5 6 |
| 4 | (1/29-2/2) | Principles of Test Selection and Administration Exam 1 - Wednesday | 12 |
| 5 | (2/5-2/9) | Administration, Scoring, and Interpreting of Tests Wed - S&C assessment lab | 13 |
| 6 | (2/12-2/16)* | Warm-Up and Flexibility Training Wed - Movement Prep/Flexibility Lab | 14 |
| 7 | (2/19-2/23) | Exercise Technique for Free Weight and Machine Exercise Technique for Alternative Methods Wed - Basic Barbell Exercise Technique | 15 16 |
| 8 | (2/26-3/2) | Program Design for Aerobic Endurance Training Exam 2 - Wednesday | 20 |
| 9 | (3/12-3/16)* | Program Design for Resistance Training Wed - Core Stability Lab | 17 |
| 10 | (3/19-3/23) | Program Design and Technique for Plyometric Training Wed - Plyometric Technique Lab | 18 |
| 11 | (3/26-3/30)* | Program Design and Technique for Speed and Agility Wed - Speed/Agility Technique Lab | 19 |
| 12 | (4/2-4/6) | Periodization Exam 3 - Wednesday | 21 |
| 13 | (4/9-4/13)* | Age and Sex-Related Differences and Their Implications for Resistance Exercise | 7 |
| 14 | (4/16-4/20) | Facility Design, Layout, and Organization | 23 |
| 15 | (4/23-4/25) | Rehabilitation and Reconditioning Wed - Corrective Exercise Lab | 22 |
| 16 | (12/4-12/6) | Facility Policies, Procedures, and Legal Issues | 24 |

Final Exam

Thursday May 3, 2018 5:30-7:30PM