

STRENGTH AND CONDITIONING

APK6176 ~ 3 CREDITS ~ FALL 2021

INSTRUCTOR:

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Method of Contact: email

OFFICE HOURS: Office Hours are by appointment either in my office or on zoom (<https://ufl.zoom.us/j/2229465950>). You can use an app called Calendly to schedule: calendly.com/bcharrison

MEETING TIME/LOCATION: CANVAS platform

COURSE DESCRIPTION: This course addresses the principles of designing training programs of varying duration aimed at improving muscular strength, power, speed, agility, endurance, balance, stability, and hypertrophy. Emphasis will be placed on creating and administering evidence-based periodized training programs and ensuring safe and productive technique of fundamental exercises in each modality.

PREREQUISITE KNOWLEDGE AND SKILLS: None

REQUIRED AND RECOMMENDED MATERIALS:

There are 2 required textbooks for this course:

Moir, G.L. *Strength and Conditioning A Biomechanical Approach*. Jones & Bartlett Learning. 2016. ISBN:9781284034844

French, D.N., and L.T. Ronda. *NSCA's Essentials of Sport Science*. Human Kinetics. 2022. ISBN: 97814925933355

Additional required reading materials (i.e. research articles) are provided to you within the eLearning course as needed.

COURSE FORMAT: Students access and complete course assignments through the APK6176 Canvas page. Course topics are organized into weekly learning modules. Each module includes ~4 practice activities corresponding with the module's learning materials (i.e. textbook reading, research articles, and associated lecture videos) as well as a graded module quiz and graded program design assignment. A midterm exam and final exam are included in addition to the module assignments. Students will have access to learning modules and accompanying assignments at least one week prior to their dates in the course schedule. Students may work at their own pace but must progress according to the course schedule of topics and assignment due dates.

COURSE LEARNING OBJECTIVES: By the end of this course students will be able to:

- Identify the biomechanical factors that influence resistance training performance
- Describe the basic physiology of the skeletal, neuromuscular, and cardiovascular systems as they pertain to an athlete engaged in a strength and conditioning program
- Predict the expected physiological adaptations of anaerobic and aerobic training programs.
- Conduct a needs analysis of a sport and an athlete within the sport
- Create a periodized annual strength and conditioning program integrating training modalities relevant to a chosen sport
- Administer 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, anaerobic capacity, hypertrophy, and flexibility
- Provide safe guidelines for athletes to return to training following a layoff
- Recommend evidence-based post-training recovery and sleep strategies to athletes.
- Sit for the NSCA CSCS exam if desired.

COURSE AND UNIVERSITY POLICIES:

ATTENDANCE POLICY:

Active participation in the course is mandatory. Students are permitted unlimited attempts on module practice assignments so that they may review any missed questions or prepare for quizzes and exams. Interaction with the course online Yellowdig discussion board is part of the final grade in the course.

PERSONAL CONDUCT POLICY:

Students are expected to review and adhere to the UF Netiquette guide for online courses

<http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

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/scr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions.

Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor or TA in this class.

EXAM MAKE-UP POLICY:

Exams may NOT be submitted late. Students will have access to exams for one week prior to the due date. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at:

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

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.

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> or directly in CANVAS. 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:

Health and 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 option 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 SCALE: All course assignments are administered and graded within the APK6176 Canvas course page, so students will have access to all grades as they submit assignments. Any assignment that requires the instructor to manually grade some aspect of it will be graded within one week of its due date, including the semester exams. Final Grades will be rounded up at .5 and above. The table below provides a reference. More detailed information regarding current UF grading policies can be found here: <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.

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A	92.5 - 100%	4.0
A-	89.5 - 92.49%	3.7
B+	86.5 - 89.49%	3.33
B	82.5 - 86.49%	3.0
B-	79.5 - 82.49	2.7
C+	76.5 - 79.49%	2.33
C	72.5 - 76.49%	2.0
C-	69.5-72.49	1.7
D+	66.5 - 69.49%	1.33
D	59.5 - 66.49%	1.0
D-	59.5-62.49	0.7
E	0-59.49%	0

Grading

Evaluation Components	Points Per Component	Weighted % of Total Grade
Module Quizzes	120 points	20%
Program Design Assignments	100 points	15%
Yellowdig Participation	100 points	10%
Article Synopsis (x4)	40 points	10%
Midterm Exam	50 points	20%
Final Exam	50 points	25%

Module Quizzes - Each learning module contains a graded quiz consisting of 10 objective questions related to all components of the module. Quiz questions will be randomly selected from a test bank. Quizzes are not timed; however, the Honorlock proctoring service is required to complete each quiz. Honorlock is included on the e-Learning platform and no additional downloads are required. All quizzes are available from the first day of classes, but each module has a due date corresponding to the end of the week of the module according to the course schedule. Specifically, quizzes are due by Monday at 2:59am EST (Sunday at 11:59pm PST) each week.

Yellowdig Participation - This course incorporates an application called Yellowdig that provides a social media-like discussion board providing opportunities for engagement and discussion between classmates and the instructor. Points are earned for each interaction a student has with the Yellowdig platform. Students have the ability to earn a maximum total of 1,950 points each week in Yellowdig and the app sums the weekly totals throughout the semester to create a cumulative final point total. Students earning totals of 12,000 points or higher in Yellowdig by Saturday, December 11th at 2:59am EST will earn a score of "100" for the Yellowdig Participation assignment on Canvas. The percentage of total points out of 12,000 will be used as the grade for the Yellowdig Participation Assignment on Canvas for students earning less than 12,000 total points. Yellowdig is included within e-Learning, no additional downloads are required.

Article Synopses - Students are expected to post a minimum of 4 research article synopses to the Yellowdig discussion board by Saturday, December 11th at 2:59am EST. Each article synopsis requires students to search a relevant database of research journals (i.e. Google Scholar, SportDiscus, PubMed) to find a peer-reviewed research article related to one of the course topics. Students should read the selected articles in their entirety and then post a brief synopsis of the article(s) to Yellowdig and to the corresponding assignment in e-Learning. The synopsis should be written and should include the following headers: 1. Reason for Selection 2. Research Problem 3. Methods 4. Results/Conclusions 5. Takeaways. Students should briefly summarize why they selected the article, what research problem was addressed in the article, how the experiment was conducted, the most important results and explanations for the results provided by the authors of the study, and what information from the article can be used by classmates in their strength and conditioning decision making processes. A pdf copy of the article should be uploaded to both the Yellowdig post and e-Learning assignment. The same written synopsis can be submitted to both Yellowdig and e-Learning.

Extra Credit - Each learning module contains an extra credit assignment. The assignment involves students creating up to 2 practice questions from the module's learning material for inclusion within the practice question banks in the course. Each new question created is worth 0.5 bonus points to be added to the next closest exam to the module (either the midterm or the final exam). Extra credit assignments are due at 11:59pm EST on Sundays at the end of the week the module is assigned in the course schedule.

Program Design Assignments – Ten learning module include a program design assignment asking students to apply knowledge, skills, or abilities gained in the learning module according to instructions provided on Canvas. Students are provided with an excel document containing tabs, where they will record the requested information. Instructions for what information to include on the spreadsheet is provided within each assignment's instructions on Canvas. Students will perform a Peer Review on the program submitted by one of their classmates for each assignment. A rubric for conducting the peer review is provided. Students receive a grade of "complete" for the weekly program design assignments when they have submitted their spreadsheet and completed the peer review. Spreadsheets are due each Monday by 2:59am EST (Sunday by 11:59pm PST) and all peer reviews are due Monday, December 13 by 2:59am (Sunday, Dec 12th by 11:59pm PST). You will be given a grade of "incomplete" on Canvas until the Peer Review is finished, at which point the grade will be changed to "complete". Peer Reviews should be completed within one week of being assigned out of courtesy to your classmate.

Midterm Exam – The midterm exam consists of 50 objective questions (multiple choice, matching, true/false) worth 1 point each. Questions will require the application of course material or knowledge of basic scientific principles covered within each of the first 6 learning modules. Exam questions are generated by the course instructor and are randomly selected from a test bank. Students should prepare for the exam by completing all weekly course readings, practice activities, and module quizzes prior to the exam. The exam is not timed; however, the Honorlock proctoring service is required to complete it. Honorlock is included on the e-Learning platform and no additional downloads are required. Two attempts are allowed on the exam and the AVERAGE score will count towards the final grade. Students will be unable to view their questions nor answers between attempts. The exam will be available for one week following Module 6 in the course schedule and is due Monday, October 18 at 2:59am EST (Sunday, October 17 at 11:59pm PST)

Cumulative Final Exam - The cumulative final exam will consist of 100 objective questions (multiple choice, matching, true/false) worth 0.5 point each. Questions will require the application of course material or knowledge of basic scientific principles covered within each of the 12 learning modules. Exam questions are generated by the course instructor and are randomly selected from a test bank. Students should prepare for the exam by completing all weekly course readings, practice activities, and module quizzes prior to the exam. The exam is not timed; however, the Honorlock proctoring service is required to complete it. Honorlock is included on the e-Learning platform and no additional downloads are required. Two attempts are allowed on the exam and the AVERAGE score will count towards the final grade. Students will be unable to view their questions nor answers between attempts. The exam will be available for one week following Module 12 in the course schedule and is due Saturday, December 18 at 2:59am EST (Friday, December 17 at 11:59pm PST)

Module Activities - Approximately four ungraded practice assignments are available in each of the 12 learning modules. Links to the practice assignments are under the "Practice" header on the module learning page. The practice assignments correspond to the learning material in the module. They may be completed an unlimited number of times, Honorlock is not required, and questions and answers are viewable between attempts. All practice assignments are available from the first day of the course and there are no due dates. These are optional assignments designed to help students gauge their comprehension and application of course learning material.

WEEKLY COURSE SCHEDULE:

*Week	Dates	Topic	Chapter
1	8/23 – 8/27	<i>No Assigned Module</i> <i>Add/Drop Week</i> <i>Take Practice Final Exam</i>	
2	8/30 – 9/3	Structure/Function of Muscle/Tendon Key Performance Indicators Lab: NSCA Assessments Part 1	Moir 3 French 5
3	9/6 – 9/10	Bioenergetics Profiling and Benchmarking Lab: NSCA Assessments Part 2	Moir 4 French 6
4	9/13 – 9/17	Muscular Strength and Power Training Load Model Lab: Traditional RT patterns	Moir 5 French 2
5	9/20 – 9/24	Periodization for Individual Sports Lab: Organizing an Annual Plan	French 3 #Stone
6	9/27 – 10/1	Periodization for Team Sports Lab: Training Modality Integration	French 4 #Cormier
7	10/4 – 10/8	Warm Up Methods Flexibility (Lab: PNF)	Moir 7,8
8	10/11 – 10/15	<i>No Assigned Module</i> Midterm Exam	
9	10/18 – 10/22	Kinematics Lab: Conditioning Modalities	Moir 1
10	10/25 – 10/29	Kinetics Lab: Olympic Weightlifting	Moir 2
11	11/1 – 11/5	Training Strength and Power Muscle Hypertrophy Lab: Plyometrics	Moir 6 #Howe
12	11/8 – 11/12	Speed, Agility, Quickness Velocity Based Training Lab: Linear Speed Drills	Moir 13 #Mann
13	11/15 – 11/19	Recovery and Sleep Fueling and Nutrition Lab: Agility Drills	French 23 French 24
14	11/22 – 11/26	<i>No Assigned Module</i> <i>Thanksgiving</i>	
15	11/29 – 12/3	Sport Science of Injury Environmental Stress Lab: Core Stability	French 29 French 25
16	12/6 – 12/8	<i>No Assigned Module</i> <i>Study for Final Exam</i>	

*NOTE: There are no assigned readings nor graded assignments during the following weeks:

- Week 1 (8/23 - 8/27) - Add/Drop week, Take Practice Final Exam
- Week 14 (11/22 - 11/26) - Thanksgiving holiday
- Week 16 (12/6 - 12/8) - Last week of classes, good time to start studying for the final

#: Indicates an assigned research article rather than a chapter out of one of the textbooks

Final Exam: Available from Saturday, December 11 at 12:00am EST through Saturday, December 18 at 2:59am EST (Friday, December 17 at 11:59pm PST)

SUCCESS AND STUDY TIPS:

- Utilize the module practice assignments as study tools. You may complete them as many times as you like. Complete the assignments while you are working through the module and then again when you are reviewing for the exams.
- Read textbook chapters, canvas readings, and research articles carefully.
- Twenty percent of the final grade comes from participation activities including posting comments to the Yellowdig board and submitting the research article synopses. Take advantage of these assignments to bring up any quiz or exam grades in which you are disappointed.