

SPORTS NUTRITION

APK3163 ~ 3 CREDITS ~ Fall 2020

INSTRUCTOR:

Blain Harrison, Ph.D, ATC, CSCS

Office: 106B FLG

Office Phone: 352-294-1704

Email: blaincharrison@ufl.edu

Preferred Method of Contact: email

OFFICE HOURS: Office Hours are Mon from 1-2pm or by appointment. Zoom link:
<https://ufl.zoom.us/j/2229465950>

MEETING TIME/LOCATION: CANVAS platform

COURSE DESCRIPTION: This course addresses the aspects of nutrition that are related to exercise performance. Emphasis will be placed on the bioenergetics systems, the components of nutrition, nutritional and body composition assessments, ergogenic aids and diet modifications for physically active individuals and athletes.

PREREQUISITE KNOWLEDGE AND SKILLS: HUN2201 and APK2105

REQUIRED AND RECOMMENDED MATERIALS:

All required course materials will be provided on the APK3163 Canvas page. These materials include weekly chapter modules written by the instructor and the following research articles (additional articles may be added to weekly modules at the discretion of the instructor):

1. Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance. *J Acad Nutr Diet.* 2016;116:501-528.
2. Campbell, B., et al. International Society of Sports Nutrition position stand: energy drinks. *J Int Soc Sport Nut.* 2013; 10:1

3. Devries, M.C., et al. Leucine, Not Total Protein, Content of a Supplement Is the Primary Determinant of Muscle Protein Anabolic Responses in Healthy Older Women. *J Nutr* 2018;148:1088-1095.
4. Ratamess, N.A., et al. ACSM Position Stand: Progression Models in Resistance Training for Healthy Adults. *Med Sci Sport Ex* 2009:687-708.
5. Bartlett, J.D., et al. Carbohydrate availability and exercise training adaptation: Too much of a good thing? *Eur J Sport Sci*. 2015; 15:1, 3-12.
6. Volek, J.S. Rethinking fat as a fuel for endurance exercise. *Eur J of Sport Sci* 2014;15(1):13-20.
7. Jager, R., et al. International Society of Sports Nutrition Position Stand: protein and exercise. *J. Int Soc Sport Nut* 2017; 14:20.
8. Whiting, S.J. and W.A. Barabash. Dietary Reference Intakes for the micronutrients: considerations for physical activity. *Appl Physiol Nut Met*. 2006; 31: 80-85.
9. Jeukendrup, A.E. Nutrition for endurance sports: Marathon, triathlon, and road cycling. *J Sport Sci* 2011;29:sup1, S91-S99.
10. Kerksick, C., et al. International Society of Sports Nutrition position stand: Nutrient timing. *J Int Soc Sport Nut* 2008;5:17.
11. Aragon, A.A., et al. International Society of Sports Nutrition position stand: diets and body composition. *J Int Soc Sport Nut* 2017; 14:16.
12. Buford, T.W., et al. International Society of Sports Nutrition position stand: creatine supplementation and exercise. *J Int Soc Sport Nut* 2007; 4:6.
13. Trexler, E.T., et al. International Society of Sports Nutrition position stand: Beta Alanine. *J Int Soc Sport Nut* 2015; 12:30.
14. Rosenbloom, C.A. and A. Dunaway. Nutrition Recommendations for Masters Athletes. *Clin Sports Med* 2007; 26:91-100.
15. Tipton, K. Nutritional Support for Exercise-Induced Injuries. *Sports Med*. 2015; 45: S93-S104
16. Jeukendrup, A.E. Periodized Nutrition for Athletes. *Sports Med* 2017; 47:sup1, S51-S63.

COURSE FORMAT: Course learning materials and course assignments are accessed and completed online through the APK3163 Canvas page. Each weekly module contains 5 assignments. All assignments are due by Sunday at 11:59pm of the week corresponding to where the module falls in the course schedule. The 5 assignments include reading questions from the chapter within the module, reading questions from the research article, participation in discussion board conversations, analysis of a weekly food journal, and a module quiz. You will have access to all assignments a minimum of one week prior to their due date. Each Monday, the following week's assignments will become available on Canvas for those students who wish to work ahead.

You may work at your own pace, but you must submit all assignments by their assigned due dates. Module quizzes will be available early along with the rest of the weekly assignments, but the correct answers to the questions are not provided until after their due date.

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

Summarize the steps associated with ventilation and pulmonary circulation

Differentiate the acute and chronic effects of endurance and resistance training on the cardiovascular system

Summarize the basic steps involving the flow of genetic information within a cell

Design an individual aerobic or anaerobic training session

Clarify effects of low carbohydrate diets on exercise performance

List the potential athletic benefits of manipulating fat content in our diet

Reflect on the effects of increasing protein intake

Summarize specific physiologic functions of micronutrients

Specify fluid intake recommendations before, during, and after exercise

Calculate macronutrient recommendations for endurance athletes as well as strength/power athletes

Provide macronutrient and micronutrient recommendations for youth, female, and master's athletes

Differentiate weight loss changes between very low carbohydrate diets and low fat diets Contrast the benefits and challenges of 4 unique body composition assessments

List the ergogenic benefits of creatine, caffeine, and beta alanine

Organize macronutrient recommendations within a periodized training program

Recommend nutrition strategies to aid in the recovery from musculoskeletal injury

COURSE AND UNIVERSITY POLICIES:

ATTENDANCE POLICY:

Active participation in the course is mandatory. Points assigned to the chapter questions, Research Article questions, Yellowdig Discussions, and Weekly Food Journals are all counted as participation points. The accumulation of participation points over the semester designates the participation grade. Late submissions of weekly participation assignments will not be accepted and a grade of 0 will be given for the assignment.

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/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 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 be permitted to access the exams early upon receipt of evidence of a viable explanation for the need for such an accommodation. 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/>

Privacy:

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

GRADING:

Evaluation Components (number of each)	Points Per Component	Weighted % of Total Grade
Midterm Exam	50 points	25%
Weekly Participation Assignments	300 points	15%
Weekly Module Quizzes (15)	10 points each = 150points	20%
Applied Sports Nutrition Project	50 points	10%
Final Exam (cumulative)	100 pts	30%

Midterm Exam – The midterm exam consists of 50 objective questions (multiple choice, matching, true/false, etc.). Questions may emphasize the application of course material to provided cases. Students will complete the exam using the Honorlock proctoring tool. This tool requires the use of the Google Chrome browser. Exam questions are generated by the course instructor and students should prepare for exams by completing all weekly course readings and assignments. The midterm exam is available for 24 hours on Friday, October 16. The exam is not timed, but must be completed by 11:59pm on October 16.

Weekly Participation Assignments – Each weekly module contains 4 participation assignments. Chapter Reading Question and Research Article Question assignments each contain between 5 - 10 objective questions. Students have as many attempts as necessary to answer all questions correctly. The instructor posts daily discussion prompts to the Yellowdig platform and students should respond to as many prompts as necessary to earn a minimum of 1200 weekly Yellowdig points. Earning a minimum of 10,000 points within Yellowdig by the end of the semester equates to a score of "100%" for this assignment in Canvas. Students earn different amounts of points for different types of interactions on Yellowdig. Finally, students will record total food and fluid intake for a minimum of 1 day each week using the Cronometer website or mobile app. A weekly prompt within the food journal assignment will guide the student to comment on a particular component of the Cronometer nutrient analysis. Each participation assignment is worth 5 points and will be available one week prior to the due date at a minimum. All participation assignments are due Sunday by 11:59pm of the week according to the course schedule.

Weekly Module Quizzes – A quiz pertaining to each week's module is due, along with the participation assignments outlined above, Sunday by 11:59pm of the week according to the course schedule. Each 10-12 question quiz consists of objective questions involving the application of course material and is not timed; however, the Honorlock proctoring tool must be used to complete it.

Applied Sports Nutrition Project – Students will submit a food journal using the Cronometer app or website each week and include a brief discussion of the analysis as it pertains to that week's course topic. At the end of the semester, students will compile the data they have entered to calculate their average macronutrient, micronutrient,

and fluid intakes to answer questions related to meeting nutrient recommendations discussed throughout the course. A written document will be submitted to Canvas for grading and a rubric will be provided within the assignment instructions.

Comprehensive Final – The final exam will consist of 100 multiple-choice questions (6-7 from each of the 15 course modules), each worth 1 point. The exam is not timed, but students will complete it using the Honorlock proctoring app. The exam will be available for 24-hours on the assigned exam day according to UF's academic calendar.

GRADING SCALE: All course assignments are administered and graded within the APK3163 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. Final Grades will be rounded up at __.5 and above. The table below outlines the percentage cutoff to earn a given grade. For example, a student with a final grade of 92.49 will receive an "A-", this score is not rounded up twice (to 92.5 and then again to 93 to earn an A) 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+	86.50-89.49%	3.33
B	79.50-86.49%	3.0
C+	76.50-79.49%	2.33
C	69.50-76.49%	2.0
D+	66.50-69.49%	1.33
D	59.50-66.49%	1.0
E	0-59.49%	0

WEEKLY COURSE SCHEDULE:

Week	Dates	Topic
1	(8/31 - 9/6)	Muscle Physiology and Bioenergetics
2	(9/8- 9/13)	Cardiovascular and Pulmonary Responses to Exercise
3	(9/14 - 9/20)	Molecular Biology Considerations in Exercise and Nutrition
4	(9/21 - 9/27)	Training to Improve Exercise Performance
5	(9/28 - 10/4)	Carbohydrates
6	(10/5 - 10/11)	Fat
7	(10/12 - 10/18)	Protein Midterm Exam - Available 10/18
8	(10/19 - 10/25)	Micronutrients
9	(10/26 - 11/1)	Nutrition Considerations for Endurance Athletes
10	(11/2 - 11/8)	Nutrition Considerations for Strength/Power Athletes
11	(11/9 - 11/15)	Contemporary Diet Strategies
12	(11/16 - 11/22)	Nutrition Ergogenic Aids
13	(11/23 - 11/29)	Nutrition for Special Populations
14	(11/30 - 12/6)	Recovery Nutrition
15	(12/7 - 12/9)	Nutrition Periodization Applied Sports Nutrition Project due 12/9 by 11:59PM

Final Exam Available for 24-hours beginning 12AM December 14, 2020.

SUCCESS AND STUDY TIPS:

- Complete all assignments. It may seem like there are too many assignments, but each one is designed to take 15-30min or less and is meant to engage you on a daily basis with the material.
- Read module chapters and research articles carefully
- There are lots of participation points that collectively account for a large percentage of your grade. Performing well on exams is not enough to earn an A in this course, you must participate in the course by completing all assignments.