UF College of Health & Human Performance
Department of Applied Physiology and Kinesiology
UNIVERSITY of FLORIDA

# SPORTS NUTRITION

APK3163 ~ 3 CREDITS ~ Spring 2021

**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 Mondays from 12:30 – 1:30PM EST or by appointment
(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 or instructor permission

**REQUIRED AND RECOMMENDED MATERIALS:**

Fink, H.H. and A.E. Mikesky. **Practical Applications in Sports Nutrition 6th Edition**. Jones & Bartlett Learning. 2020.
The following research articles are provided within Canvas

1. Grout, A., et al. Basic Principles of Sports Nutrition. Curr Nutr Rep (2016) 5:213-222
2. La Bounty, P.M., et al. International Society of Sports Nutrition position stand: meal frequency. J Int Soc Sport Nut. 2011; 8:4.
3. Burke, L.M., et al. Carbohydrates for training and competition. J of Sport Sci, 29:sup1, S17-S27.

4. Da Boit, M., et al. Fit with good fat? The role of n3 polyunsaturated fatty acids on exercise performance. Metabolism; 66(2017): 45-54.

5. Jager, R., et al. International Society of Sports Nutrition Position Stand: protein and exercise. J. Int Soc Sport Nut 2017; 14:20.

6. Owens, D.J., et al. Vitamin D and the athlete – emerging insights. Eur J Sport Sci. 15:1, 73-84

7. Heffernan, M.S., et al. The Role of Minerals and Trace Element Supplementation in Exercise and Athletic Performance: A Systematic Review. Nutrients; 11:3.

8. Casa, D., et al. National Athletic Trainers' Association Position Statement: Fluid Replacement for Athletes. J Ath Train 2000;35(2):212-224

9. Kerksick, C.M., et al. ISSN exercise & sports nutrition review update: research & recommendations. J Int Soc Sport Nut. 2018; 15:38.

10. Capling, L., et al. Validity of Dietary Assessment in Athletes: A Systematic Review. Nutrients. 2017; 9, 1313.

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. Tiller, N.B., et al. International Society of Sports Nutrition Position Stand: nutritional considerations for single-stage ultra-marathon training and racing. J Int Soc Sport Nut. 2019; 16:50.

13. Mota, et al. Nutritional Periodization: Applications for the Strength Athlete. Str Cond J. 2019, 41:5, 69:78.

14. Kerksick,C., et al. International Society of Sports Nutrition position stand: Nutrient timing. J Int Soc Sport Nut 2017; 14:33.

15. Jager, R., et al. International Society of Sports Nutrition Position Stand: Probiotics. J Int Soc Sport Nut. 2019; 16:62.

**COURSE FORMAT:** Students access and complete course assignments through the APK3163 Canvas page. Course topics are organized into weekly learning modules. Each module includes 3 assignments corresponding with the module's learning materials (i.e. textbook reading, research article readings, and associated lecture videos). A midterm exam and final exam are included in addition to the module assignments. Students will have access to an individual module's assignments a minimum of one week prior to the week the module is included in the course schedule. Each Monday, the following week's assignments will become available on Canvas. Students may work at their own pace, and all module assignments are due by 11:59pm on Sunday, April 25, 2021.

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

Describe the digestion of macronutrients and micronutrients

Clarify effects of high and low carbohydrate diets on exercise performance

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

Reflect on increasing protein intake to promote exercise adaptations

Summarize specific physiologic functions of micronutrients

Specify fluid intake recommendations before, during, and after exercise

Calculate macronutrient recommendations for endurance athletes, strength/power athletes, and team sport athletes

Provide sports nutrition recommendations for special populations of athletes

Recommend nutrition strategies related to weight management goals

Contrast the benefits and challenges of unique body composition assessments

Organize macronutrient recommendations within a periodized training program

List the ergogenic benefits of popular dietary supplements

## COURSE AND UNIVERSITY POLICIES:

### ATTENDANCE POLICY:

Active participation in the course is mandatory. Points assigned to the chapter questions, Research Article questions, Weekly research article synopses, Food journal analyses, and Yellowdig posts 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 opti on 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:

| Evaluation Components (number of each) | Points Per Component | Weighted % of Total Grade |
|---|---|---|
| Textbook Reading Questions | 150 points | 10% |
| Research Article Questions | 150 points | 10% |
| Yellowdig Participation | 100 points | 10% |
| Cronometer Project | 200 points | 15% |
| Midterm Exam | 50 points | 25% |
| Comprehensive Final Exam | 100 points | 30% |
| Total Points | 750 points | |

***Textbook Reading Questions -*** An assignment consisting of 10 objective questions pertaining to the corresponding textbook chapter is included when a chapter is assigned within a module. Students have unlimited attempts on these assignments and the due date of the final attempt is Sunday, April 25th. The highest score from any of the attempts will be factored into the final grade. Students may use the textbook while completing the questions, Honorlock is NOT required, and there is no time limit on any of the attempts. These are effectively participation assignments.

***Research Article Questions*** - Each of the 15 learning modules includes one peer-reviewed research article for students to read. An assignment consisting of 5-10 objective questions pertaining to the research article is included within the learning module. Students have unlimited attempts on these assignments and the due date of the final attempt is Sunday, April 25th. The highest score from any of the attempts will be factored into the final grade. Students may use the research articles while completing the questions, Honorlock is NOT required, and there is no time limit on any of the attempts. These are effectively participation assignments.

***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 1,200 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 Sunday, April 25 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.

***Cronometer Project*** – Students will use a free online nutrient tracking application called Cronometer to record a minimum of 1 day's food and fluid intake each week throughout the semester. Data provided in a nutrient analysis by the app will be input to a spreadsheet provided by the instructor. The spreadsheet will keep a running average of nutrient intakes. At the end of the semester, students will submit the completed spreadsheet with comments pertaining to how their eating habits throughout the semester aligned with recommendations discussed throughout the course.

***Midterm Exam*** – The midterm exam will consist 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 8 learning modules. Exam questions are generated by the course instructor and students should prepare for the exam by completing all weekly course readings and assignments prior to the exam. Students will take the exam online and will be required to utilize the Honorlock proctoring service when completing the exam. Students will complete the exam within the 24 hours of the date designated on the course schedule.

***Cumulative Final Exam*** - The cumulative final exam will consist of 100 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 15 learning modules. Exam questions are generated by the course instructor and students should prepare for the exam by completing all weekly course readings and assignments prior to the exam. Students will take the

exam online and will be required to utilize the Honorlock proctoring service when completing the exam. Students will complete the exam within the 24 hours of the date designated on the course schedule.

**GRADING SCALE:** All course assignments are administered and graded within the APK6167 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 and final project. 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- | 89.50 – 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 |

**Activities** - One to three optional activities are included in each course learning module. These activities are intended to provide students with additional opportunities to prepare for exams. Performance on module activities does not impact a student's final grade.

## WEEKLY COURSE SCHEDULE:

| Week | Dates | Topic |
|---|---|---|
| 1 | 1/11 - 1/15 | Introduction to Sports Nutrition |
| 2 | 1/18 – 1/22 | Nutrients: Ingestion to Energy Metabolism |
| 3 | 1/25 – 1/29 | Carbohydrates |
| 4 | 2/1 – 2/5 | Fats |
| 5 | 2/8 – 2/12 | Proteins |
| 6 | 2/15 – 2/19 | Vitamins |
| 7 | 2/22 – 2/26 | Minerals |
| 8 | 3/1 – 3/5 | Water<br>**Midterm Exam 3/5** |
| 9 | 3/8 – 3/12 | Nutritional Ergogenics |
| 10 | 3/15 – 3/19 | Nutritional Counseling |
| 11 | 3/22 – 3/26 | Weight Management |
| 12 | 3/29 – 4/2 | Endurance/Ultra-endurance Events |
| 13 | 4/5 – 4/9 | Strength/Power Athletes |
| 14 | 4/12 – 4/16 | Team Sport Athletes |
| 15 | 4/19 – 4/21 | Special Considerations in Sports Nutrition<br>**Cronometer Project Due 4/25** |

Final Exam Available for 24-hours beginning 12AM April 26, 2021.

## SUCCESS AND STUDY TIPS:

- Complete all assignments. It may seem like there are too many assignments, but each one is designed to take 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.