COURSE SYLLABUS

Course Code and Title: FNH474 – Sport Nutrition
Class meeting time(s) and location: Tuesday and Thursday 2:00 – 3:30pm, Zoom
Prerequisites: FNH350 and FNH 351
Instructor Name: Dr. Eric Williamson
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COURSE DESCRIPTION

This course focuses on sport nutrition guidelines and will cover the mechanisms of fuel use during exercise, nutritional strategies to support weight change, hydration, and ergogenic aids to meet the needs of the high performance (elite) athlete.

RATIONALE

Elite athletes and the highly active population subject their bodies to given workloads with the desired outcome of achieving improvements in an aspect of performance. Appropriate dietary advice and modification can support them in achieving their goals whilst minimizing risk of illness, injury, over reaching, underperforming or developing disordered eating behaviours. The sport nutrition and health industry is a very lucrative market and as a result unfortunately, there is a wealth of unregulated nutrition information available in the public domain.

AIMS AND OUTCOMES

Students taking this course will be confident in their understanding of the functions of fundamental macro and key micro nutrients in relation to health and sports performance, macronutrient manipulation in relation to training goals, approaches to assess the function and purpose of ergogenic aids in performance and practical approaches used by professionals working with individuals and teams. Students will also be introduced to various approaches to dietary counseling, nutritional considerations when exercising in specific environments, managing gastrointestinal distress and the role of nutrition in injury prevention and management.

Throughout this course, students will be tasked with converting scientific literature into useful, practical, comprehensible changes. It is important for all humans to have fundamental knowledge in the basics of nutrition for health in order to live a healthy life; this is useful for any occupation. In addition, specific education in the area of nutrition for sport is essential to a number of specific occupations including health promotion, sports nutrition or dietetics, the health and fitness industry, high performance sport, sport medicine and sports rehabilitation.

EDUCATIONAL OUTCOMES

- Understand the factors involved in energy expenditure and energy balance and appropriate macronutrient and whole food selections based on these factors
- Understand the process involved in evaluating ergogenic aids, assessing their safety and efficacy in health and performance
- Understand the sources, fates and functions of macro and micro-nutrients upon ingestion
- Understand why and how macronutrient manipulation is undertaken to achieve a desired performance outcome
- Understand the role of hydration in sports performance
- Provide an overview of dietary counseling, assessment and nutritional planning with individuals
- Develop skills required to work as part of a group

SPECIFIC LEARNING OBJECTIVES

Upon completion of this course students will be able to:

1. Outline the principle functions and appropriate manipulation of macronutrients, in relation to sports performance
2. Outline the principle functions of identified vitamins and minerals and consequences of deficiency or excess consumption for athletic performance
3. Outline the steps involved in estimating an athlete's energy and macronutrient needs for different sports and training goals e.g. strength, endurance, intermittent, weight category etc.
4. List the principle functions of water in the human body, factors related to fluid loss, consequences of extreme fluid loss strategies in weight category sports and the importance of optimal hydration in sports performance
5. Evaluate the efficacy and safety of selected ergogenic aids in high performance sport
6. Describe the prevalence of eating disorders in sport and associated risks
7. Describe the mechanisms by which nutrition may manipulate the immune system

CLASS FORMAT

The course will include web-based lectures, discussions, student presentations, and specific research studies. Lectures will include a combination of presentations by the instructor, guest speakers, videos, small group work and class discussions. Group presentations will also occur during the term. It is strongly encouraged that as part of group work, groups meet outside of class to complete necessary work in a timely manner with a shared workload. Please refer to the class schedule for important dates.

ATTENDANCE

Regular attendance is encouraged. You are responsible for all material covered in class and **any** information given whether in attendance or not. You are also responsible for getting your own notes from class as well as information pertaining to changes in the course outline, readings, assignments, and information relating to any tests or exams. Students who neglect their academic work and assignments may be excluded from final examinations. Students who are unavoidably absent because of illness or disability should report to their instructors on return to classes and will be required to present a medical note.

EMAIL

I have provided my email address for necessary communication but please be aware that most questions are best asked and explained in person. Questions through email may take up to 48hrs to receive a response. I do not check email on weekends. Please include your course name (i.e. FNH474) and your full name in the subject line.

OFFICE HOURS

Office hours are available on request with sufficient notice.

TECHNOLOGY IN THE CLASSROOM

Note taking on a laptop encourages verbatim transcription and students no longer process information in a way that is conducive to the give-and-take of a classroom discussion. Laptops also create the temptation to surf the web, check e-mail, or instant message creating a much less engaged classroom. Laptops will be allowed in the classroom. However, please make sure that you are focused on what is happening in the classroom and engaged in the discussion.

Cell phones, are not welcome in the classroom. Cell phones are not to be visible or used at any time, especially not during quizzes or exams. Phones should be turned off before entering the room and remain off for the duration of class. If there is an extenuating circumstance which requires the student to use the phone during class, kindly step out of the room. Students who use their phone during class time will be asked to put the phone away and may be asked to leave room.

CLASS NOTES

Class notes will be made available in PDF file format through the course website. Please keep in mind that these notes provide an overview of what will be covered and do not contain information related to discussions, in-class assignments, or detailed examples, which will be covered in class.

POLICIES AND EXPECTATIONS

UNIVERSITY POLICIES

It is your responsibility to become familiar with the University of British Columbia's Academic Honesty and Plagiarism Policies, as well as the Student Declaration and the consequences of violating these policies.

Academic Accommodation for Students with Disabilities

The University's goal is to ensure fair and consistent treatment of all students, including students with a disability, in accordance with their distinct needs and in a manner consistent with academic principles. Students with a disability who wish to have an academic accommodation should contact Access and Diversity without delay.

Academic Integrity
All UBC students are expected to behave as honest and responsible members of an academic community. Breach of those expectations or failure to follow the appropriate policies, principles, rules, and guidelines of the University with respect to academic honesty may result in disciplinary action. It is your responsibility to become familiar with the University of British Columbia's Academic Honesty and Plagiarism Policies, as well as the Student Declaration and the consequences of violating these policies.

READINGS AND RESOURCES
There are no required texts for the course but the following text will be used to support learning throughout the term:

- Jeukendrup A., Gleeson M, Sport Nutrition 3rd Edition. Human Kinetics, 2019

The following are recommended to further your knowledge

- Sharples AP., Morton JP., Wackerhage H. Molecular Exercise Physiology. Taylor & Francis, 2022
- Burke L., Deakin V. Clinical Sports Nutrition, 5th Revised edition. McGraw-Hill Education, 2015
- Frayn, K. Metabolic Regulation: A Human Perspective, 3rd Edition. Wiley-Blackwell, 2010
- Hargreaves M., Spriet L. Exercise Metabolism, Human Kinetics; 2 Edition, 2005
- Spano M., Kruskall L., Thomas D.T. *Nutrition for Sport, Exercise and Health*. Champaign, IL: Human Kinetics; 2018

TEXTS AND WEBSITES
Other required reading material (or links) will be posted on the Canvas course website.

EVALUATION

Assessment 1 (5%)	**Canadian Centre for ethics in sport (CCES) online training**
Format	Online quiz
Details	Submit certificate to confirm completion
Due Date	On or before Feb 9th
Learning Outcomes	Assess students' knowledge of anti-doping rules and regulations
Specific Learning Outcomes	5

Assessment 2 (25%)	**Midterm**
Format	Short and long answer questions
Details	Students will be required to answer questions based on the prescribed readings, textbooks and lectures
Due Date	Week 6
Learning Outcomes	To demonstrate an understanding of the material covered in weeks 1 – 5
Specific Learning Outcomes	1, 2, 3, 4
Assessment 3 (20%)	***Group Presentations***
Format	a) A 10 min pre-recorded presentation followed by a 5min question period (worth 8%). b) Groups will submit a 1 page information sheet designed for distribution to the lay population (5%) and a technical document (5%) c) Professionalism Grade: Group members will assign marks to each other based on contributions to the groups submissions (worth 2%).
Details	Groups of 4 – 5 students will select topics from a list of options provided by the instructor. Evaluation process for the presentation will be discussed at a later date with the grading rubric posted on Canvas.
Due Date	1 page information sheet, summary **and** presentation needs to be emailed to me by **12:00pm the day PRIOR to your group presentation** Group presentation dates will be assigned by Feb 2nd
Learning Outcomes	To demonstrate understanding and the ability to convey information in both presentation and written format
Specific Learning Outcomes	1 - 7
Assessment 4 (50%)	**Final Exam**
Format	Short and long answer questions
Details	Students will be required to answer theory questions based on the prescribed readings, textbooks and lectures as well as apply critical thinking skills
Due Date	TBD
Learning Outcomes	To demonstrate understanding of the nutritional approaches taken to optimize health and elite sport performance
Specific Learning Outcomes	1 - 7

GRADING

- **Class tests** will not be rescheduled for any reason. If a valid reason (i.e. emergency medical or family emergency, travel for university athletics) is given for missing the test **>24 hours prior**, marks will be added to the final exam. Otherwise, failure to complete the test will result in a mark of zero being awarded.
- Assignments are provided far in advance of the due date. As a result, extensions **will not** be provided for any reason. In case of valid reason (see above) an appropriate medical certificate must be submitted. Late submission penalties will apply and will be clearly outlined the assignment.
- Final: Students absent from final examinations held in the official examination period must request academic concession from their specific advising office.
- Students should retain a copy of all submitted assignments (in case of loss) and should also retain all their marked assignments in case they wish to apply for a Review of Assigned Standing.
- Students have the right to view their marked examinations with their instructors, providing they apply to do so within a month of receiving their final grades. This review is for pedagogic purposes. The examination remains the property of the university.

POLICY ON TEXT-MATCHING SOFTWARE

UBC subscribes to Turnitin, an online system that compares written material with the Web and with other material submitted to its database. Faculty, staff and students can upload submissions and check for duplication of material in other sources and possible plagiarism.

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TENTATIVE COURSE SCHEDULE

The topics and assigned readings for each class are listed below, although this may be subject to change. Where possible, reasonable notice will be given.

	Topic	*Learning Objective*	*Assessment*
Week 1 **Jan 10th & 12th**	Introduction to Sports Nutrition and the Physiology of Exercise	1-3	
	Energy balance and availability		
Week 2 **Jan 17th & 19th**	Fueling with carbohydrate	1-3	
Week 3 **Jan 24th & 26th**	Fueling with fat	1-3	
Week 4 **Jan 31st & Feb 2nd**	Protein and adaptation	1-3	
Week 5 **Feb 7th & 9th**	Fluids and hydration	4	CCES online training due by Feb 9th (5%)
	Midterm Feb 9th (25%)	1-3	
Week 6 **Feb 14th & 16th**	Vitamins, mineral and antioxidants	2,7	
Feb 21st & 23rd	Reading Week		
Week 7 **Feb 28th & Mar 2nd**	Supplements	5	
Week 8 **Mar 7th & 9th**	Nutritional considerations for endurance and aerobic performance	1 – 7	
Week 9 **Mar 14th & 16th**	Nutritional considerations for strength and anaerobic performance	1 - 7	
Week 10 **Mar 21st & 23rd**	Body weight manipulation Disordered eating and RED-S	6	
Week 11 **Mar 28th & 30th**	Group presentation + paper due	6	
	Group presentation + paper due		
Week 12 **Apr 4th & 6th**	Group presentation + paper due		
	Course Wrap Up and Review	1-7	
TBD	Exam (50%)	1-7	