

## COURSE DESCRIPTION

Provide advanced study of nutrition's relation to physical activity, exercise, and sports. Material reviews biochemical, physiological and behavioral aspects of nutrition in promoting health, fitness and sports performance.

<b>DAY/TIME:</b>	T- 7:20 - 10 p.m.
<b>LOCATION:</b>	FX ST1 126
<b>INSTRUCTOR:</b>	Veronica Porterfield, MS, LN
<b>OFFICE HOURS:</b>	By Appointment
<b>EMAIL:</b>	vporterf@gmu.edu
<b>PREREQUISITES:</b>	Graduate standing or permission of Instructor

## COURSE OVERVIEW

This course will present nutrition principles regarding macronutrients, vitamin/minerals, and fluids in relation to sports and exercise. It will allow the student to translate theory into practice and to relate content to fitness and sports. Topics will include metabolism, weight management, eating disorders, and guidelines for proper nutrition. The material covered will give the student comprehensive knowledge of nutrition for use in complementary fields.

## COURSE OBJECTIVES

At the completion of this course students should be able to:

1. Define and describe the basic macronutrients and recommendations for an athlete's diet.
2. Determine nutrient needs for specific individuals and apply information to a case study.
3. Define and describe healthful nutrition practices for weight control and fitness/sports.
4. Research and debate current controversial topics in the field of nutrition and fitness.

## REQUIRED READINGS

McArdle, Katch and Katch. *Sports and Exercise Nutrition, Third Edition*. Baltimore, MD: Lippincott, Williams and Wilkins 2009.

## EVALUATION

Students are held to the standards of the George Mason University Honor Code. You are expected to attend all class sections, actively participate in group presentation, and fulfill all assignments. Assignments must be turned in at the beginning of class on the specified date or no credit will be given. Assignments have been scheduled in advance to provide you with sufficient time to plan and complete them. Please make note of the due dates for all key assignments. This course will be graded on a point system.

Requirements	Points	Grading Scale
Bibliographic Abstract	10 points	A+ = 95 - 100
Recipe Evaluation	10 points	A = 90 - 94
Nutrition Assessment Project	25 points	B+ = 87 - 89
Case Study	20 points	B = 84 - 86
Supplement Report	15 points	B- = 80 - 83
Group Project	20 points	C = 70 - 79
Attendance & Participation	5 points	F = 0 - 69
Final Exam	20 points	
<b>Total</b>	<b>125 points</b>	

Date	Chapter	Topic
January	19	7: p.195 - 206
	26	9
February	2	4: p. 124-137 6
	9	1: p. 2-18; 3: p.106-108; 4: p.137-142; 5: p. 154-160; 7: p.210-211
	16	1: p. 18-33; 3: p. 108-110; 4:p.143-149; 5: p. 161-163; 7: 210
	23	1: p. 33-42; 3: p.110; 4: p.149 - 151; 5: p.164; 7: p. 206-210
March	2	13
	9	
	16	14 & 15
	23	
	30	2: p. 81-85 10
April	6	
	13	2: 46-58; 7: 211-216
	20	2: 58 - 81
	27	11 & 12
May	4	
	11	

*Note: Faculty reserves the right to alter the schedule as necessary.*

**BIBLIOGRAPHIC ABSTRACT: 10 points**

Find a research article from a peer-reviewed journal on a relevant topic of your choice. Ideally, the article should have been published within the past 5 years. Entire research article needs to be included with abstract when turned into instructor. Copies of abstract will be provided to each class member. Please provide abstract in the format specified below.

**RECIPE EVALUATION: 10 points**

You will sign up for a class in which you will provide a healthy snack for the break. Please provide a one-page summary of the recipe to each class member using the format specified below.

**CASE STUDIES: 20 points \*\*Bring a calculator!!!!!!!!!!**

This will be an in-class activity that will mimic an exam. You will be provided a certain number of case studies, which will give examples of real people with nutritional concerns.

### **NUTRITION ASSESSMENT PROJECT: 25 points**

You will conduct a nutrition assessment on a client of your choice. It can be a friend, family member, or a stranger (you CANNOT be your own client!!). Use the form provided to gather all necessary information. You will obtain a health history, a weight history, and diet recall. You will analyze the diet recall using one of the websites listed below. This analysis will allow you to assess your client's caloric and nutrient intake. Based on your client's goals and their current nutrition and health status, you will provide recommendations which will enable your client to meet their goals. Provide these recommendations in summary form (may be bulleted points) in 2-3 pages.

You will submit to the instructor the nutrition assessment form, the diet recall, the results from the diet analysis (as detailed as possible), and the summary. Suggested online diet analysis sites (all are free):

- [www.mypyramid.gov](http://www.mypyramid.gov)
- [www.my-calorie-counter.com](http://www.my-calorie-counter.com) (45,000+ food database)
- [www.sparkpeople.com](http://www.sparkpeople.com)
- [www.livestrong.com](http://www.livestrong.com)
- [www.nutritiondata.com](http://www.nutritiondata.com)

### **GROUP PROJECT: 20 points**

Students will divide into groups of 3 or 4, and will conduct a project in two parts. First, each group will select a specific aspect of exercise nutrition that interests them; it may be a type of diet, a supplement or other ergogenic aid, a sports beverage, etc. The group will write a bibliographic abstract for that topic following the guidelines below. In addition, each group will design and conduct an original study to test for themselves the efficacy of that diet, supplement, beverage, etc. Details of the experiment, including hypothesis, design, procedure, results and conclusion will be presented orally in class and in writing to the instructor (3-5 pages). An outline of the hypothesis and study design are due March 2nd; the completed project is due April 20th.

### **SUPPLEMENT PROJECT: 15 points**

You will select a supplement, ergogenic aid, herb, or functional food to research. You will sign up for this topic on February 9th. You will research the following:

- The proposed action and/or benefit
- How the supplement relates to exercise performance
- Research done on this supplement
- Your opinion on ingestion of this supplement. Do you think it may be beneficial or harmful? Why or why not?

Keep your paper to a maximum of 5 pages. Please provide references in APA format.

On April 27th, each person will present his/her research in an informal format (round table discussion) and class discussion will be generated.

## BIBLIOGRAPHIC REFERENCE/ABSTRACT

Select an article from the Review or Specific Studies section at the end of a chapter (suggested journals are also acceptable). Type a brief summary, in your own words, and its relevance to this course. Please keep abstract 1-2 pages. Articles must be dated no earlier than 2005.

## FORMAT

- Title:
- Journal:
- Volume, Pgs.:
- Date of Publication (must be 2005 – present):
- Summary of research/study:
- Summary of research findings:
- Controversial aspects (if any):
- Further research needed (if any):

## RECIPE EVALUATION

Prepare/purchase a food item to share with the class that has the characteristics of a healthy training meal plan or a component thereof. Aim for a snack/salad/appetizer/meal that is high in carbohydrates, low in fat, moderate in protein, and high in fiber, if desired. Don't forget beverage.

- |  |                       |       |
|--|-----------------------|-------|
| Recipe Name:                           | Calories per Portion: |       |
| Portion Size:                          | Carbohydrate Grams:   | %CHO: |
| Yield:                                 | Fat Grams:            | %FAT: |
| Ingredients:                           | Protein Grams:        | %PRO: |
| Method of Preparation (if applicable): |                       |       |

## RECOMMENDED WEBSITES

American Dietetic Association	<a href="http://www.eatright.org">www.eatright.org</a>	Gatorade Sports Science Institute	<a href="http://www.gssiweb.org">www.gssiweb.org</a>
Nation Council for Reliable Health	<a href="http://www.ncrhi.org">www.ncrhi.org</a>	American Obesity Association	<a href="http://www.obesity.org/">www.obesity.org/</a>
Tufts University Nutrition Navigator	<a href="http://navigator.tufts.edu">navigator.tufts.edu</a>	National Center for Health Statistics	<a href="http://www.cdc.gov/nchs">www.cdc.gov/nchs</a>
Mayo Clinic	<a href="http://www.mayohealth.org">www.mayohealth.org</a>	Child Nutrition Programs	<a href="http://www.fns.usda.gov/fns">www.fns.usda.gov/fns</a>
Center for Science in the Public Interest	<a href="http://www.cspinet.org">www.cspinet.org</a>	American College of Sports Medicine	<a href="http://www.acsm.org">www.acsm.org</a>
American Diabetes Association	<a href="http://www.diabetes.org">www.diabetes.org</a>	American Heart Association	<a href="http://www.americanheart.org">www.americanheart.org</a>
Food and Drug Administration	<a href="http://www.fda.gov">www.fda.gov</a>	Kids Health	<a href="http://www.kidshealth.org">www.kidshealth.org</a>
National Institutes of Health, Office of Dietary Supplements	<a href="http://dietary-supplements.info.nih.gov">dietary-supplements.info.nih.gov</a>	National Center for Chronic Disease Prevention & Health Promotion	<a href="http://www.cdc.gov/nccdphp/dnpa">www.cdc.gov/nccdphp/dnpa</a>
World Health Organization	<a href="http://www.who.org">www.who.org</a>		

## SUGGESTED JOURNALS

- Medicine & Science in Exercise & Sport
- Journal of the American Dietetic Assoc.
- Journal of Nutrition
- Appetite
- J Strength and Conditioning Res
- International J of Sports Medicine
- Clinical Journal of Sports Med
- J Applied Physiology
- International Journal of Sports Nutrition and Exercise Metabolism
- International Journal of Sports Nutrition
- Am Journal of Clinical Nutrition