GEORGE MASON UNIVERSITY
College of Education and Human Development
School of Recreation, Health, and Tourism
Division of Health and Human Performance

KINE 420-001: Sport and Exercise Nutrition (3)
Fall 2014

DAY/TIME:	Wed 4:30 pm	LOCATION:	Robinson Hall B105
PROFESSOR:	Deanna Busteed	EMAIL ADDRESS:	dbusteed@gmu.edu
OFFICE LOCATION:	Athletic Field House	PHONE NUMBER:	617 835 2351 (cell)
OFFICE HOURS:	By appointment only- Wednesdays or Fridays		

PREREQUISITES: HEAL 330, KINE 310

COURSE DESCRIPTION:
Explores the fundamental biochemical and physiological rationale for optimal nutrient intake for health, physical fitness, and athletic performance. Specific attention is focused upon the relationship nutrition has with exercise, physical fitness, health, and athletic performance.

COURSE OBJECTIVES:
This course is designed to enable students to:
1) Recognize the breadth of Nutritional Sciences.
2) Define common terms associated with Nutritional Sciences.
3) Explain basic nutrient digestion and absorption.
4) Describe energy systems, fuels, and nutrients supporting physical activity and how nutrition impacts human movement.
5) Differentiate and assess what to eat and appropriate nutrient timing to enhance human movement.
6) Explain the role of nutritional and sport ergogenic aids to enhance human movement.
7) Relate basic principles of bodyweight regulation and body composition.
8) Evaluate the influence of nutritional manipulations on immune function in physically active individuals.

COURSE OVERVIEW
The course will be conducted in lecture format and include both small and large group discussions as well as in-class assignments. The course is designed to be an active exploration of the fundamental biochemical and physiological rationale for optimal nutrient intake for exercise, health, physical fitness, and athletic performance.

Professionalism
Kinesiology students are expected to behave in a professional manner. Depending upon the setting professionalism may appear different, but typically consists of similar components. For undergraduate Kinesiology students in a classroom setting professionalism generally comprises the following components:
Attendance – Show up on time to class and pay attention. If you cannot attend a class for a legitimate reason please notify the instructor ahead of time. If you have to unexpectedly miss a class due to something out of your control, contact the instructor within 24 hours to notify them what happened and to see if there is anything you need to do to make up your absence.
Communication – When communicating with the instructor and classmates, either face-to-face or via the assigned George Mason University email address, students should address the other person appropriately, use appropriate language and maintain a pleasant demeanor.
Participation – Participate in class discussions and activities. Demonstrate that you have an interest

in the subject matter.

Responsibility/Accountability – Professionals take responsibility for their actions and are accountable. This can occur at multiple levels but generally consists of completing assignments on time, submitting work that is of the appropriate quality, honoring commitments and owning up to mistakes.

Honesty/Integrity – Students are expected to be honest with the instructor, classmates and themselves. Professionals keep their word when committing to something and act in an ethical manner.

Self-Improvement/Self-awareness – One should be aware of their strengths/weaknesses and constantly seek to improve. Professionals regularly seek out opportunities to increase their knowledge and improve their current skill set.

ACCREDITATION STANDARDS

This course meets the Commission on Accreditation of Allied Health Education Programs (CAAHEP) requirements and covers the following American College of Sports Medicine's Knowledge-Skills-Abilities (KSA's):

KSA	Description	Lecture, Lab, or both
	GENERAL POPULATION/CORE: NUTRITION AND WEIGHT MANAGEMENT	
1.8.3	Knowledge of the relationship between body composition and health.	Lecture
1.8.4	Knowledge of the effects of diet, exercise and behavior modification as methods for modifying body composition.	Lecture
1.8.5	Knowledge of the importance of an adequate daily energy intake for healthy weight management.	Lecture
1.8.7	Knowledge of the importance of maintaining normal hydration before, during, and after exercise.	Lecture
1.8.8	Knowledge of the USDA Food Pyramid and Dietary Guidelines for Americans.	Lecture
1.8.9	Knowledge of the importance of calcium and iron in women's health.	Lecture
1.8.10	Knowledge of the myths and consequences associated with inappropriate weight loss methods (e.g., fad diets, dietary supplements, over-exercising, starvation diets).	Lecture
1.8.12	Knowledge of the number of kilocalories equivalent to losing 1 pound of body fat and the ability to prescribe appropriate amount of exercise to achieve weight loss goals.	Lecture
1.8.13	Knowledge of the guidelines for caloric intake for an individual desiring to lose or gain weight.	Lecture
1.8.14	Knowledge of common nutritional ergogenic aids, the purported mechanism of action, and any risk and/or benefits (e.g., carbohydrates, protein/amino acids, vitamins, minerals, herbal products, creatine, steroids, caffeine).	Lecture
1.8.15	Knowledge of nutritional factors related to the female athlete triad syndrome (i.e., eating disorders, menstrual cycle abnormalities, and osteoporosis).	Lecture
1.8.16	Knowledge of the NIH Consensus statement regarding health risks of obesity, **Nutrition for Physical Fitness Position Paper of the American Dietetic Association, and the ACSM Position Stand on proper and improper weight loss programs.**	Lecture
1.8.17	Ability to describe the health implications of variation in body fat distribution patterns and the significance of the waist to hip ratio.	Lecture
1.8.18	Knowledge of the nutrition and exercise effects on blood glucose levels in diabetes.	Lecture

NATURE OF COURSE DELIVERY:
This course will include lectures, small cooperative learning groups, and large group discussions.

REQUIRED READINGS:

- Jeukendrup A., & Gleeson, M. (2010). Sport Nutrition: An Introduction to Energy Production and Performance (2nd ed.). Human Kinetics: Champaign, IL.
- Sawka MN, Burke L, Eichner R, Maughan RJ, Montain SJ, Stachenfeld N. American College of Sports Medicine exercise and fluid replacement position stand. *Medicine and Science in Sports and Exercise.* 2007; 377-390. http://journals.lww.com/acsmmsse/Fulltext/2007/02000/Exercise_and_Fluid_Replacement.22.aspx
- Position of the American Dietetic Association, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and athletic performance. *J Am Diet Assoc.*2009; 109(3):509-527. http://www.eatright.org/About/Content.aspx?id=8365
- American College of Sports Medicine. Position Stand on the Female Athlete Triad. *Medicine and Science in Sports and Exercise.* 2007; 1867-1882. http://journals.lww.com/acsm-msse/Fulltext/2007/10000/The_Female_Athlete_Triad.26.aspx

EVALUATION:
This course will be graded on a point system, with a total of 475 possible points.

Exam 1 - Chapters	100 pts
Exam 2 -Chapters	100 pts
Participation	25 pts
Application/Experiential Assignments	100 pts
Research Project	100 pts
Presentation/Professionalism	50 pts
TOTAL	475 pts

(Divide points earned by 475 to calculate grade)

Grading Scale

A = 94-100 (442-475)	B+ = 88 – 89 (416-424)	C+ = 78 – 79 (369-376)	D = 60 – 69 (285-331)
A- = 90 – 93 (425-441)	B = 84 – 87 (397-415)	C = 74 – 77 (350-368)	F = 0 – 59 (0-282)
	B- = 80 – 83 (377-396)	C- = 70 – 73 (332-349)	

TENTATIVE COURSE SCHEDULE

TOPIC			**READINGS/ASSIGNMENT DUE**
Week 1	8/27	Nutrients & Recommended Intake	Chapters 1 & 2 (Jeukendrup & Gleeson) Assignment #1 Food Log & SWOT
Week 2	9/3	Fuel Sources for Muscle & Exercise Metabolism	Chapter 3 (J & G) **Assignment #1 due**
Week 3	9/10	Energy	Chapter 4 (J &G) Energy & Assignment #2
Week 4	9/17	Nutrient Digestion and Absorption	Chapter 5 (J & G) **Assignment #2 Due**
Week 5	9/24	Carbohydrate	Chapter 6 (J & G) & ADA Nutrition & Athletic Performance
Week 6	10/1	Fat & Protein and Amino Acids	Chapter 7 & 8 (J & G)
Week 7	10/8	Water and Fluid Balance & Exam Review	Chapter 9 & ACSM Position Stand on Fluid – Sweat Rate Assignment #3

Week 8	10/15	Exam #1	Chapters 1-9 Sweat Rate **Assignment #3 Due**
Week 9	10/22	Vitamins & Minerals	Chapter 10 (J & G)
Week 10	10/29	Nutrition Supplements/Ergogenic Aids(EA)	Chapter 11 (J & G) *Assignment #4 Evaluate supplement
Week 11	11/5	Nutrition and Training Adaptations	Chapter 12 (J & G) **Assignment #4 Due**
Week 12	11/12	Body Composition, Weight Management, Disordered Eating	Chapter 13, 14 & 15 (J & G) & ACSM Position Stand on Female Athlete Triad
Week 13	11/19	Nutrition and Immune Function	Chapter 16 (J & G) * Energy Equations Assignment #5
Week 14	11/26	Holiday Week – No Class	**Assignment #5 Due**
Week 15	12/3	Presentations Final Project Due	Small Group Presentations
Week 16	12/10	Exam #2 Final Exam	Chapters 10-16

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

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See http://oai.gmu.edu/honor-code/].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See http://ods.gmu.edu/].
- Students must follow the university policy for Responsible Use of Computing [See http://universitypolicy.gmu.edu/policies/responible-use-of-computing/].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

Campus Resources

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See http://caps.gmu.edu/].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See http://writingcenter.gmu.edu/].
- For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See http://rht.gmu.edu].

PROFESSIONAL BEHAVIOR: Students are expected to exhibit professional behaviors and dispositions at all times.

CORE VALUES COMMITMENT: The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles.