Course Syllabus

WEX-106 Nutrition for Exercise & Fitness

Basic Information about Course and Instructor

<table>
<thead>
<tr>
<th>Semester and year: All</th>
<th>Course and Section Number: Nutrition for Exercise &amp; Fitness WEX 106</th>
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</thead>
<tbody>
<tr>
<td>Meeting Times and Locations:</td>
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</table>

Instructor:
Office/Phone: Dept. Office/Phone: G-207, 201-447-7899
Email: Office Hours: TBD
Email Address:

Course Description

Nutrition for Exercise & Fitness is a course that explores concepts of nutrition as they apply to exercise and performance. Topics include bioenergetics, thermodynamics and the energy equation, ergogenic aids, supplements and computerized diet analysis. Required for Exercise Science Certificate and Degree.

Course Hours 3, Course Credits 3

Prerequisites: NONE

Student Learning Outcomes: As a result of meeting the requirements in this course, students will be able to:

1. To explore the elements pertaining to basic principles of nutrition, nutrition standards and guidelines.
2. To analyze the processes involved in metabolism and energy production for muscular work.
3. To investigate the factors that influence how the fuel for muscular work will be used.
4. To investigate the role of macronutrients and micronutrients in the exercise setting based on current scientific evidence.
5. To explore the timing of food consumption affects exercise performance.

Student Learning Outcomes and Means of Assessment

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Suggested Means of Assessment</th>
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<tbody>
<tr>
<td>1. To explore the elements pertaining to basic principles of nutrition, nutrition</td>
<td>Students shall categorize nutrient groups as to macronutrients and micronutrients, their</td>
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2. To analyze the processes involved in metabolism and energy production for muscular work.

   Students shall describe in writing, the three energy systems and their substitutes used for high intensity, moderate intensity and low intensity exercise.

3. To investigate the factors that influence how the fuel for muscular work will be used.

   Students shall demonstrate in writing the use of isocaloric, negative caloric, and positive caloric balances relative to the energy equation.

4. To investigate the role of ergogenic aids and macronutrients and micronutrients in the exercise setting based on current scientific evidence.

   Students shall list and briefly explain selected popular supplements, i.e. caffeine, creatine, ephedra and their affect as an ergogenic aid.

5. To explore the timing of food consumption affects exercise performance.

   Based on established equations, student will calculate their caloric needs for resting metabolism and exercise requirements.

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**Course Content**

A. **Nutrition - Basic Concepts**
   1. Macronutrients
   2. Micronutrients
   3. Calories in food - calorimetry
   4. Vitamins & minerals

B. **Energy Production via Metabolism**
   1. The physiology of digestion
   2. From food to energy – metabolism
   3. Factors determining fuel utilization - bioenergetics

C. **The Basic Diet and Modifications for Exercise**
   1. Nutritional requirements
   2. Food groups
   3. Dietary guidelines
   4. Modifications – carbohydrate loading, nitrogen balancing, etc.

D. **Ergogenic Aids**
   1. Nutritional aids – caffeine, etc.
   2. Supplements
   3. Anabolic steroids
   4. Pharmacological, physiological
   5. Placebo effect

E. **Weight Control – the energy equation**
   1. Losing weight
   2. Gaining weight
   3. Exercise -diet connection

F. **Fluid Requirements in Exercise**
   1. Hydration - Dehydration
   2. Electrolyte replacement
   3. When and what to drink
   4. Environmental factors

G. **Nutrition Planning**
   1. Aerobic
   2. Anaerobic
   3. Sport specific
   4. Timing of meals
**Special Features of the Course** (if any) [to be designated by the instructor]

Moodle
Powerpoint
WorldWide Web
Youtube

**Course Texts and/or Other Study Materials**

Required Textbook:

Muth, Natalie D. *Sports Nutrition for Health Professionals*. FA Davis, 2014

If you order the textbook through www.fadavis.com, you will receive 20% off your total purchase and free shipping and handling by entering the promo code: **JFTZMWPU**

**SUGGESTED READINGS** (these books do NOT need to be purchased for the course):

3. Marilyn & Keith Peterson, *Eat to compete*.

**Other College, Divisional, and/or Departmental Policy Statements**

Examples:

Statement on plagiarism and/or academic dishonesty.
ADA statement.
Sexual Harassment statement.
Statement on acceptable use of BCC technology.
Statement on the purpose and value of faculty office hours.

**Student and Faculty Support Services**

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<th>Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>The Distance Learning Office – for any problems you may have accessing your online courses</td>
<td>C-334</td>
<td>201-612-5581</td>
<td><a href="mailto:psimms@bergen.edu">psimms@bergen.edu</a></td>
<td><a href="http://www.bergen.edu/pages1/Pages/4787.aspx">http://www.bergen.edu/pages1/Pages/4787.aspx</a></td>
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<td>Overview of Carbohydrates</td>
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<td>Overview of Vitamins, Minerals, Water and Electrolytes</td>
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<td>Quiz</td>
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<td>Dietary Guidelines</td>
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<td>Fundamental of Exercise Physiology and Nutrition</td>
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<td>8</td>
<td>Nutritional Strategies for Optimal Athletic Performance</td>
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<td>Exercise, Thermoregulation and Fluid Balance</td>
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<td>Quiz</td>
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<td>15</td>
<td>Quiz</td>
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