College of Charleston
HEAL 333: Exercise and Sports Nutrition
Spring 2013

Instructor: Dr. Tim Scheett
Office: Silcox Rm 214
Phone: (843) 953-6538 (office)
Email: ScheettT@cofc.edu
Office hours: Open door policy
   OR email to schedule an individual appointment

Course meeting: T & TH 9:25 – 10:40 AM; Room 206 Johnson Center

Prerequisite courses: BIOL 201 Human Physiology,
   or permission of instructor

Course Description:
This course addresses the main aspects of nutrition as related to exercise and physical performance. Emphasis will be placed on the energy systems in exercise, components of nutrients, assessment of nutritional needs, and diet modification for physically active individuals.

Course Text and Materials:

or

Diet Analysis+ 8.0 or 9.0, Thompson-Wadsworth Nutrition/Dietary Analysis Software (Access is Required) (Available in the Silcox Computer lab as well as the Library computer labs.)

Student Learning Outcomes:
Upon successful completion of the course, the student will be able to:
1. Apply the principles of nutrition including the roles of fluids and electrolytes, vitamins, minerals, ergogenic aids, carbohydrates, proteins, fats, and dietary supplements, as they relate to the dietary and nutritional needs of athletes and others involved in physical activity.
2. Describe the relationship between dietary practices and the development of nutrition related diseases and conditions (ie: anemia, heart disease, cancer, diabetes, bone health, and gastrointestinal conditions).
3. Explain the importance of good nutrition in enhancing performance and preventing injury and illness.
4. Describe the principles of effective body heat loss and heat illness prevention as it related to
the role of proper fluid intake before, during, and after physical activity.
5. Evaluate the energy and nutritional demands of specific activities and the nutritional
demands placed on athletes and others involved in physical activity.
6. Explain the physiological processes and time factors involved in the digestion, absorption,
and assimilation of food, fluids, and nutritional supplements as they relate to the design and
planning of pre- and post-activity meals, considering menu contents, time scheduling, and
the effect of tension and anxiety before activity.
7. Discuss common nutritional fads and fallacies, popular weight loss diets, and strength and
weight-gain programs.
8. Describe the signs, symptoms, and physical consequences of disordered eating as
compared to those of eating disorders.
9. Describe the principles, advantages, disadvantages and signs and symptoms of overuse
and abuse of the nutritional ergogenic aids and dietary supplements used by athletes and
others involved in physical activity.
10. Utilize the principles of weight control, including body fat percentage, caloric requirements,
effects of exercise, and fluid loss to provide athletes and others involved in physical activity
safe and effective recommendations for weight control, weight loss, and weight gain.

Grade Distribution: 700 points total – Points earned in the assignments and exams will be
summed and divided by the total possible points. Points will be entered into OAKS as
assignments and exams are graded. Check OAKS for your current grade in class so you know
how you stand at all times.

There will be two exams during the semester plus a final exam worth 300 total points. Format
of these exams will be T/F, matching, and/or multiple choice. Exam dates will be discussed in
class at least 1 week prior to the exam. The final exam is scheduled for April 27th at 8am.

Assignments - All due dates will be announced and assignments are due at the beginning of
class. Late assignments will be docked 10% per day they are late.

Rules Assignment (25 points) – Students will complete the rules assignment that is posted on
OAKS. This assignment will provide all the information concerning guidelines for assignments
and how the instructor requires students to submit materials as well as other class related items.
Failure to follow these rules during the semester will result in points being deducted up to and
including receiving a zero on the assignment for not following the stated rules. (The intent of this
is to teach you to FOLLOW DIRECTIONS.)

Information Exploration (50 points) – students will be assigned to identify and evaluate
different sources of information for nutrition and nutritional supplements related to exercise and
sport that are available on the internet or as apps and report their findings to the class. Specific
details will be discussed in class and an assignment will be posted on OAKS including which
sources each student will evaluate. Due January 22nd.

Professional Conference OR Grocery Store Exploration (75 points) – students can choose
to either attend the Southeast American College of Sports Medicine (SEACSM) conference in
Greenville, SC, (Thursday, February 14th, Friday, February 15th, Saturday, February 16th) and
write 5 summary paragraphs on 5 presentations related to nutrition OR students can choose to
complete the grocery store exploration assignment that is posted on OAKS. Summaries or
assignments are due to the OAKS dropbox by Tuesday, February 19th.

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Nutrition Recipe (100 points) – students will create and type up one recipe for an evening meal that will contribute to the macro and micronutrient needs of a physically active individual (i.e. a peanut butter and jelly sandwich is not suitable). These recipes will be distributed to people that attend the Student Health Fair. Recipes will fit on one single page, include ingredients and amounts, and step by step directions. On a second page (to be photocopied on the back of the recipe) a nutrient breakdown of the recipe will be provided. Students will make their recipe and bring it to classes to share with the class (20 servings total). Five students will be assigned a specific day to bring their recipe for 8 total class periods following spring break. Recipe is due March 19th.

Diet and Exercise Analysis Project (150 points) – students will work alone to analyze their current diet as well as choose two different-style diets to follow for seven days each. As well you will choose an exercise bout to perform on the seventh day of each diet (the exercise bout MUST be the SAME on each diet). To complete this project, you will take photos of or record a 3-day dietary intake for your typical diet as well as for each of the 2 diets you choose to follow (you will follow each diet for 7 days and will photograph or record the food you eat during the last 3 days of the diet). You will perform nutritional analyses on the 3 daily food records using the diet analysis software. You will also perform an exercise bout of your own choosing consisting of moderate intensity exercise during the last day of the first diet and then perform the same exercise session on the last day of each subsequent diet to determine if the diet had any perceived or measurable (HR and RPE) effects on the exercise bout. You will summarize the dietary analysis in either photo or text format by depicting or stating what foods and amounts of each you would need to consume to meet all RDIs for each macronutrient and the primary micronutrients listed on the printout. You will also summarize in graph or text format the HR and RPE results of your exercise bouts. This nutrition/exercise project will be geared towards allowing you to experience and subsequently understand first hand how variations in nutrient intake effect exercise performance. Guidelines for the nutrition/exercise project will be discussed in class and posted on OAKS. Due dates: diet 1 analysis and summary February 7th; diet 2 analysis and summary March 14th; diet 3 analysis and summary April 11th.

All assignments will be typed and follow NLM (United States National Library of Medicine) format. All assignments require a reference section. All information must be from peer-reviewed professional journals. Examples of journals available in our library are Physician and Sports Medicine, Journal of Sports Medicine, Research Quarterly, Athletic Training, Journal of Nutrition Education, and Nutrition Reviews. Additional journals are available at the MUSC library and my office. (Other journals that are appropriate: Journal of Strength and Conditioning Research, Medicine and Science in Sports and Exercise, Journal of Applied Physiology, European Journal of Applied Physiology, International Journal of Sport Nutrition and Exercise Metabolism, etc.)

No websites will be allowed to be used as references!!

No student will be allowed to use information gathered or created by another student for their own presentation (current or previous semester). Doing so will be deemed as a violation of the College of Charleston Honor Code.

Grade Scale:

Course letter grades will be determined on the basis of overall performance. Earned points will be divided by 600 total points and the following will be used to determine final grades:
Attendance:

While it is recognized that certain unforeseen events may prevent you from attending a certain class, due to the lecture and discussion nature of this class it is vital that you attend and participate. If you miss more than 25% of the class, you will be assigned a grade of WA. If extreme circumstances necessitate an absence, you will be held responsible for the class material covered during your absence. Excused absences will be considered for the following: serious illness, hospitalization, death of a family member or close friend, attendance at an event representing the College of Charleston. Appropriate documentation must be provided from the Undergraduate Dean’s Office for an absence to be considered excused. If a student has more than four unexcused absences that student may be removed from the class roster. In addition, promptness is required as being tardy will count as an unexcused absence.

Multi-media:

The use of any multi-media device during class is strictly prohibited!! It is recommended that you bring a standalone calculator to regular class meetings as well as exams. If your cell phone rings you will be asked to leave class. If you have a dire family emergency where you are expecting a call during class – you will be expected to take the seat next to the door and quietly exit the class if your phone vibrates. The possession of any multi-media device during examination will automatically result in a zero for that exam.

Final grades will not be given out but will be available on OAKS at the end of the semester. As well, you can wait until you can access your grades via MyCharleston or when the College sends out the official grade records.

Honor System: Review the current Student Handbook: A Guide to Civil and Honorable Conduct, especially the section pertaining to the classroom code of conduct.

You are expected to do your own work in this course. If you are caught cheating or plagiarizing another individual’s work you will be reported to the appropriate University office and you will receive an “F” for a grade in the course. You need to do any and all writing on your own and in your own words. Simply re-arranging a paragraph or changing one or two words of another individual’s work is still considered plagiarism. The 1, 2, or 10 points you cheat for are not worth risking your ENTIRE academic career. DO NOT put me in a situation where I have to act accordingly.

General Notes:

- It is strongly recommended that you read “ahead” of the presentations in order to allow for a group discussion following the presentations. The pace of the lecture presentations is approximately 1 topic every week, however, some are quicker or longer than others. On a regular basis I will try to make you aware of where we are at in the course so that you can prepare accordingly. I strongly recommend that you read the text BEFORE and again after the lectures on that material.
The large volume of material presented in this class will necessitate frequent and consistent study. What you do the first week is as important as what you do the last week. Don’t put off studying for quizzes and exams until the last minute. Quite simply – **20 min of studying EVERYDAY** will prepare you to do well on the quizzes and thus the subsequent exams will not be as difficult to prepare for. **Exams and quizzes will be demanding and difficult; you must be thoroughly familiar with the information to the point of being able to interpret and apply it.** This is an upper level class and I fully expect each of you to think about the basic information you already know, interpret it and apply it to various situations.

If you miss a class when handouts are provided it is your responsibility to get a copy of the handouts from another student. You are also responsible for obtaining the missed notes from another student. **DO NOT COME TO THE PROFESSOR AND ASK FOR HANDOUTS AND/OR NOTES FOR THE LECTURE(S) YOU MISSED.**

*If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please feel free to come and discuss this with me during my office hours.*

- Any student eligible for and needing academic adjustments or accommodations because of a disability is requested to speak with the professor in a timely manner so that your needs can be addressed.
- The College will make reasonable accommodations for persons with documented disabilities. Students should apply for services at the Center for Disability Services located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations should notify their professors as quickly as possible.
- This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act that stipulates no student shall be denied access to an education “solely by reason of a handicap.” Disabilities covered by law include, but are not limited to, learning disabilities and hearing, sight or mobility impairments. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, please see an administrator at the Center of Disability Services, (843) 953-1431 or me so that such accommodation may be arranged.
### Tentative Class Schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Introduction</td>
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<tr>
<td>Week 2</td>
<td>Background &amp; Overview of Sports Nutrition</td>
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<td>Week 3</td>
<td>Review Information Exploration assignment Government Regulation (FDA, USDA, FTC)</td>
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<td>Week 4</td>
<td>Defining Terms in Nutrition Basic Metabolism</td>
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<td>Week 5</td>
<td>Steroid and Protein Hormones and Intermediates, Prohormones, Hormone</td>
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<td>*<em>EXAM 1</em> **</td>
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<td>Week 6</td>
<td>Macronutrients – Protein Sources and Nutrient Timing</td>
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<td>Week 7</td>
<td>Evaluating Protein Quality and Supplementation Safety Protein extra</td>
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<td>Week 8</td>
<td>Macronutrients – Carbohydrates Sources and Nutrient Timing</td>
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<td>Spring Break</td>
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<td>Week 9</td>
<td>Macronutrients – Lipids Sources and Nutrient Timing</td>
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<td>Week 10</td>
<td>Micronutrients – Vitamins and Minerals Sources and Nutrient Timing</td>
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<td>Week 11</td>
<td>*<em>EXAM 2</em> **</td>
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<td>Thermoregulation – Hydration, Hyperhydration and Rehydration</td>
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<td>Week 12</td>
<td>Nutrition for Strength-Power Athletes Nutrition for Aerobic Athletes</td>
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<tr>
<td>Week 13</td>
<td>Nutritional Supplements: Mass gainers, muscle builders, cell volumizers Nutritional Supplements: Stimulants, herbal boosters, vasodilators</td>
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<td>Week 14</td>
<td>Female class members’ choice of topics Male class members’ choice of topics</td>
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<tr>
<td>April 27th</td>
<td><strong>Final Exam</strong></td>
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* Tentative Date (subject to change)