

HEA 241, Nutrition and Exercise
Spring 2009
University of Maine Farmington
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Prerequisite: HEA 141, Introductory Nutrition or equivalent, or permission of the instructor.

Required Text: Sports & Exercise Nutrition 3rd Edition. McArdle, W.D., Katch, F.I. and Katch, V.L. Lippincott Williams and Wilkins Publishers ISBN. 78177037-8.

The Health Professional's Guide to Dietary Supplements. Talbot, S.M, and Hughes, K. Lippincott Williams and Wilkins Publishers ISBN 978078174672

Note: Equal education opportunity is offered to students with special needs due to disability. Please notify me if reasonable accommodations will be needed to meet course requirements.

Course Description: This course will examine the different physiological relationships between nutrition and exercise. Emphasis is placed on the body's metabolic response to a wide range of stresses that occur in different sports and activities, at different intensities, and within different environments. Macro and micronutrients and their respective roles in energy production and the development of improved athletic performance are discussed in detail. In addition, this course will study those methods of assessing an athlete's nutritional needs and status.

Overview: Students participating in this class will be introduced to concepts in sports nutrition and energy as key to physical activity and health. Students will explore the delicate bio-mathematical relationships of energy balance, storage and depletion as it pertains to human performance. Proteins, fats, carbohydrates, vitamins, minerals and water will be explored in detail to study the implications of each for physically active populations and their not so physically active peers. Students are expected to have an introductory level knowledge of basic nutrition for humans. As a "200" level course, comprehension, application and analyses by students will be expected and demonstrated. You are going to love it :)

Course Objectives: By successfully completing the requirements of this course, students will provide evidence of having:

- Reviewed the basic functions of the foods we eat.

- Restated the essential nutrients obtained from food.
- Calculated dietary intake.
- Questioned nutrition quackery.
- Translated nutrition research.
- Estimated nutritional needs for the athlete (and others).
- Applied knowledge of the human energy systems.
- Criticized BMI.
- Explained BMR.
- Appraised carbohydrate loading, protein need and fat intake.
- Predicted diet and performance efficiency.
- Debated the merits of fat as a nutrient for athletes.
- Deduced protein needs for athletes.
- Examined vitamin and mineral needs.
- Interpreted the RDA recommendations.
- Debated supplement use.
- Classified nutrients.
- Concluded the relevance of water.
- Described and differentiate trace nutrients from others.
- Associated temperature regulation and water intake.
- Contrasted electrolyte fluids and water.
- Used multiple techniques in body comp. estimates.
- Determined ideal body weight.
- Diagramed an individual nutrition plan, activity specific.

Course Requirements and Grading:

- 10 quizzes = 200points
- Personal Food log and exercise plans = 100 points
- There will be a “case study” exams = 100points
- Final exam = 100 paper, 100 presentation = 200points
- Class participation up to 100 points
- Chance for credit up to 25 extra points

Total 650 points

> 630 points	A
565 – 630	B
510 – 564	C
460 – 509	D
<460	Game over, try again

Food/exercise log and analysis plans: This activity will be completed over time and graded in stages; 1) pre intervention food analysis, 2) needs assessment and, 3) post intervention analysis. You will create your own “Fitday account and provide evidence of proficiency with it.

Quizzes: About once a week there will be a little 10-25 item (Cognitive Domain) quiz. The purpose of this is two fold 1) to help you keep up with the reading and check your own understanding as we move quickly through the material, and 2) to help me identify what specific areas I will need to revisit with you in greater detail in class.

Exams: There will be a “mid-term” (Comprehension/Application Domain) exam. The exam is in “case study” format and will provide an opportunity to reflect your learning in terms of the course objectives.

Final Exam: The final exam will be in two parts. The first section is in the form of a scholarly paper based on a ‘self selected’ subject in terms of the course objectives. The second part of the final is designed to share individual research. This part will be participatory and will include - at minimum - a 15 minute “Power Point” presentation designed to educate your peers in matters you feel need further or more in depth coverage. The last four class meetings (including finals day) will be required. Not attending the any “final” classes will negatively impact your final grade by 25% for each missed class. I urge you plan now to be engaged for the duration.

Class Participation: You will start out with 100 pts. Your attendance at each class is worth at least 2 pts.

Extra Credit: Sharing food or exercise....
(More details will be provided)

Things to keep in mind:

- 1) Attendance is of course required.
- 2) Assignments are of course due on the date on the date displayed on the syllabus.
- 3) Everything of course must be typed.
- 4) Of course spelling and grammar count.
- 5) Class participation is important... of course.
- 6) Cell phones and other electronic gadgets really bug me, I recommend you keep ‘em off :)
- 7) AND every thing is subject to change if it improves your learning and experience.
- 8) One hour and 5 minutes is a short class. So, I will do the “attendance dance” promptly at the beginning of class, and will not feel obligated revisit that task later. Please be courteous, on time, and plan to stay the whole class period. Period.