

**709:401 Advanced Nutrition II: Energy and Micronutrients**  
**MW 5:35-6:55 pm, Cook/Douglass Lecture Hall, Room 102**  
**Spring 2008 Syllabus**

| Day/Date    | Topic  | Professor | Reading                                    |
|-------------|--|-----------|--|
| 1/23 Wed    | Intro to Energy Metabolism   | Hoffman   | Chapter 21                                 |
| 1/28 Mon    | Human Energy Metabolism I  | Hoffman   | Chapter 21                                 |
| 1/30 Wed    | Human Energy Metabolism II   | Hoffman   | Chapter 21                                 |
| 2/4 Mon     | Energy Balance I   | Hoffman   | Chapter 22                                 |
| 2/6 Wed     | Energy Balance II  | Hoffman   | Chapter 23                                 |
| 2/11 Mon    | Energy Balance III   | Hoffman   | Chapter 23                                 |
| 2/13 Wed    | Nutrition and Growth   | Hoffman   | Handout                                    |
| 2/18 Mon    | <b>EXAM I</b>  |           |  |
| 2/20 Wed    | Dietary Reference Intakes  | Hoffman   | Chapter 3                                  |
| 2/25 Mon    | Nutrient Regulation of Gene Expression                                   | Brasaemle | Biochem text + pgs 1074-1079 and 1006-1017 |
| 2/27 Wed    | Vitamin A, part 1  | Brasaemle | Chapter 30                                 |
| 3/3 Mon     | Vitamin A, part 2  | Brasaemle | Chapter 30                                 |
| 3/5 Wed     | Vitamins D and K   | Brasaemle | Chapters 31 & 28                           |
| 3/10 Mon    | Calcium and Phosphorus   | Igal      | Chapter 32                                 |
| 3/12 Wed    | <b>EXAM II</b>   |           |  |
| 3/15 – 3/23 | <b>Spring Break!</b>   |           |  |
| 3/24 Mon    | Folate, Vitamins B6 and B12, part 1                                      | Brasaemle | Chapter 25                                 |
| 3/26 Wed    | Folate, Vitamins B6 and B12, part 2<br>Pantothenate, Biotin, and Choline | Brasaemle | Chapters 25 & 26                           |
| 3/31 Mon    | Niacin, Riboflavin, and Thiamin  | Brasaemle | Chapter 24                                 |
| 4/2 Wed     | Antioxidant mechanisms, Vitamin E, and Carotenoids,                      | Brasaemle | Chapter 29 & 39                            |
| 4/7 Mon     | Vitamin C  | Brasaemle | Chapter 27                                 |
| 4/9 Wed     | Selenium and Fluoride  | Igal      | Chapters 39 & 40                           |
| 4/14 Mon    | <b>EXAM III</b>  |           |  |
| 4/16 Wed    | Iodine   | Igal      | Chapters 38                                |
| 4/21 Mon    | Magnesium  | Igal      | Chapter 33                                 |
| 4/23 Wed    | Sodium, Chloride, and Potassium  | Igal      | Chapter 34                                 |
| 4/28 Mon    | Iron   | Igal      | Chapter 36                                 |
| 4/30 Wed    | Zinc, Copper, and Manganese  | Igal      | Chapter 37                                 |
| 5/5 Mon     | Trace Minerals   | Igal      | Chapter 41                                 |

**Professors and Teaching Assistant (office hours by appointment):**

Dr. Dawn L. Brasaemle, e-mail: [brasaemle@AESOP.Rutgers.edu](mailto:brasaemle@AESOP.Rutgers.edu) phone: 732-932-6524

Dr. Daniel J. Hoffman, e-mail: [dhoffman@aesop.rutgers.edu](mailto:dhoffman@aesop.rutgers.edu) phone: 732-932-6568

Dr. R. Ariel Igal, e-mail: [igal@aesop.rutgers.edu](mailto:igal@aesop.rutgers.edu) phone: 732-932-9717

Teaching Assistant: Tatiana Toro-Ramos e-mail : [tatiana7@eden.rutgers.edu](mailto:tatiana7@eden.rutgers.edu)

**Biochemical and Physiological Aspects of Human Nutrition**, By Martha H. Stipanuk, W. B. Saunders Publishers, 2<sup>nd</sup> edition.

Additional readings will be available online.

**Class Notes and Study Questions:**

Weekly class notes and study questions will be available online; you must bring your own copies of the weekly class notes with you. There will be occasional additional handouts in class.

### Important Notes:

**Please note: Biochemistry (either Introductory Biochemistry or General Biochemistry) is a prerequisite for this class.** You will be expected to consult your biochemistry textbook to refresh your memory of specific topics as they arise in class. Please contact the instructors for help if you are having difficulty with the class material.

**Recitation:** There is an optional recitation associated with this class (Adv Nutr. II – Readings 709:403 taught by Tatiana Toro-Ramos [Monday, 2:15-3:35 pm, Thompson 201 OR Tuesday, 2:15-3:35, Food Science 109]). This class requires active participation in class discussions. Each week, study questions will be distributed, some or all of which will be due as homework the following week during recitation. **These study questions will also be posted on the web.** There will also be a weekly quiz. This readings class is intended to help you understand the material through active learning and to review the biochemistry involved.

**FINAL EXAM:** The final exam will be Friday, May 9, 4-7 pm, 102 Cook Douglass Lecture Hall.

### GRADING

Exam 1 – 120 points

Exam 2 – 100 points

Exam 3 – 100 points

Final Exam -- 160 points [100 points on the final lectures of class material + 60 points review]

TOTAL – 480

Exams include multiple-choice, fill-in, true-false, and short essay questions.

Sample exams will be posted on the web.

The study questions posted on the web serve as an important guide to the material that will be tested.

### A NOTE ABOUT MISSED EXAMS:

Make-up exams will be granted only under exceptional circumstances, such as **serious** illness, or death in the immediate family. **It is the student's responsibility to contact the instructor in person, by telephone, or by e-mail, prior to or within 24 hours of the missed exam.** In the case of a missed exam that is appropriately documented (see below), the student must be prepared to **write the make-up within 1 week** following the missed exam.

You must contact the instructor to arrange a date and time. Appropriate documentation is required prior to approval to take a make-up exam; failure to provide appropriate documentation will result in a grade of E on the missed exam. A conflict in another course during the time of the make-up is not an acceptable reason for missing the make-up (unless there is an examination in the other course at that time). **NOTE:** Only extremely unusual circumstances would warrant a second chance at a make-up exam.

**Appropriate documentation** verifying the circumstances for a missed exam must be provided to the instructor prior to the make up exam.

- Tests or examinations missed on the grounds of *medical circumstances* must be supported by a Physician's Statement.

NOTE: The Physician's Statement must include a legible name, and the telephone number and address of the physician's office; the physician's office may be contacted to verify that the forms were completed by the physician.

- Tests or examinations missed on grounds of *non-medical circumstances* must be supported by appropriate documentation, i.e., death certificates, obituary notice, automobile accident reports, airline/train/bus tickets/receipt for emergency travel, etc. Airline/train/bus ticket/receipts for emergency travel must indicate destination, departure, and return dates. Missing an exam for a vacation etc. is not an acceptable reason for a make-up exam. Having to work at the time of a test is not considered a valid excuse for missing the test.

If a make-up examination is granted, the student must be prepared to write within the week following the missed examination. The instructor will select the date and time of the make-up examination. It is the student's responsibility to check with the instructor as to the date/time of the make-up. Make-up exams will consist of the same number of points as the missed exam, but may not be the same exam or the same format as the original exam. Although the content to be examined will be the same, the format may or may not follow that of the original examination. For instance, instead of multiple choice, the make-up examination may consist of essay questions.