

Fall Semester 2009 – FDNS 6400 Advanced Macronutrients
Tues/Thurs 8am to 9:30am in Room 208 Barrow Hall
Instructor – Arthur Grider, Ph.D.
Contact Information – Email: agrider1@uga.edu
Office: 171 Dawson Hall
Office hours by appointment only

Course Description

This class will review basic aspects of macronutrient metabolism, starting with an overview of the major biochemical pathways involved. We will discuss physiological, environmental and genetic factors that influence metabolism and nutritional status. The course syllabus is a general plan for the course; deviations announced in class by the instructor may be necessary.

Prerequisites – BCMB (BIOL)(CHEM) 3100 and VPHY 3100

Course Goals

In this course we will review basic aspects of cell function and the metabolism of dietary macronutrients. An emphasis will be placed on the integration of regulatory mechanisms that is required to maintain homeostasis in different nutritional and physiological conditions.

Textbooks

Metabolism at a Glance, JG Salway, Blackwell Science, 3rd Edition, 0-632-05839-0

Biochemical, Physiological, Molecular Aspects of Human Nutrition, 2nd edition, M.A. Stipanuk, W.B. Saunders Co., 2006, ISBN-13: 978-1-4160-0209-3; ISBN-10: 1-4160-0209-X

Class will start at 8.00 a.m. and there will be a five minute break part-way through the class. Every student is expected to participate in discussion and presentations, to ask questions about the material that is presented and to evaluate the relevance of the information to human nutrition.

All academic work must meet the standards contained in "**A Culture of Honesty**". Each student is responsible to inform him- or herself about these standards before performing any academic work. UGA's Student Honor Code: "**I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others.**"

If you prefer to not have your name called in class or your name posted, such as for class presentations, then please inform Dr Grider by email through eLearning Commons (www.elc.uga.edu) within five days of the first class period.

Students are required to attend all class periods. In some cases absences can be excused. Excuses for anticipated absences must be cleared with the instructor before the absence (send an email to Dr Grider explaining the situation). Excused absences include, but are not limited to, court appearances, religious holidays, university business, verifiable illness, and certain family emergencies. Students with 3 unexcused absences will be dropped from this class.

All phones and beepers must be turned off when you enter class. If you have to have a phone on for family reasons and receive a call during class you must leave the room to answer it and you will not be allowed to return to the classroom that day. All phones have to be turned off during exams with no exceptions. If your phone is found on during an exam, your phone may be confiscated and you may be charged with academic dishonesty.

Grades FDNS 6400 Fall 2009

The final grade will be out of 100 points. There will be four exams during the course. **The second, third and fourth exams will each contribute 25 points and the first exam will contribute 20 points towards the final grade.** If a student misses an exam due to a family crisis or for health reasons they will be given a make-up exam that consists of one or more essay questions. Vacations or assignments for other classes are not acceptable as valid reasons for missing an exam. Each exam will consist of a combination of multiple choice questions and of long-answer questions. Points will be lost for multiple choice questions that are answered incorrectly.

Students will earn up to **5 points for their participation** in class discussion and activities.

Plus/Minus Grading

A = 91-100%

A- = 90%

B+ = 85- 89%

B = 81-84 %

B- = 80%

C+ = 75 – 79%

C = 71-74%

C- = 70 %

D = 60- 69.9%

F = below 60%

- C- will not satisfy the requirement of “a C or better”
- A- will not satisfy the standard of “a grade of A”

Class Schedule

Date	Topic
August 18	Introduction to course, basic concepts
August 20	Protein synthesis
August 25	Membrane transport
August 27	Energy production
September 1	Water balance
September 3	Acid base balance
September 8	Acid-base balance , Kidney Disease
September 10	Carbohydrate Metabolism, Glucose transporters
September 15	1st Exam
September 17	Carbohydrate Metabolism
September 22	The role of the liver in glucose metabolism
September 24	Diabetes
September 29	Diabetes
October 1	Alcohol metabolism
October 6	Alcohol metabolism
October 8	2nd Exam
October 13	Protein metabolism
October 15	Protein metabolism
October 20	Fat metabolism
October 22	Fat metabolism
October 27	Fat Metabolism
October 29	Integration of metabolism
November 3	Integration of metabolism
November 5	Energy Expenditure, Calorimetry
November 10	3rd Exam
November 12	Uncoupling proteins
November 17	Diet Induced Thermogenesis
November 19	Control of food intake
November 24	Thanksgiving
November 26	Thanksgiving
December 1	Control of food intake
December 3	Control of food intake
December 8	No Class: Friday schedule
December 11th	4th Exam 8.00 – 11.00 a.m.