

HUN 4221
Nutrition & Metabolism
Spring 2015 – Section 2C05

Instructor:	Mitchell D. Knutson, PhD
Office:	Food Science and Human Nutrition, room 459
Phone:	352-392-8001
Email:	mknutson@ufl.edu www.knutsonlab.org
Office hours:	Thursday 1:00 PM to 3:00 PM *If you cannot make my regularly scheduled office hours, you may e-mail me to schedule an appointment.
Teaching assistants:	Rasha Mansouri (rasha76@ufl.edu) Min Hyun Kim (minhyunkim27@gmail.com)
Office hours:	Tuesday 11:30 AM to 1:00 PM
Location	Food Science and Human Nutrition, room 459
Class location and meeting times:	Tue: Period 4 (10:40 – 11:30 am), LIT, room 0109 Wednesday: Period 6 (12:50 – 1:40 pm), MAEA, room 303 Thurs: Period 4 (10:40 – 11:30 am), LIT, room 0109
Attendance:	Required
Credits:	3

Course Description and Prerequisites: The course content focuses on the metabolism, requirements, deficiencies and excesses of nutrients. Essential micronutrients will be covered with the greatest emphasis on vitamins and minerals. Nutrient utilization will be traced from the food source to digestion and absorption, transport, storage, and excretion. Each metabolic pathway dependent on specific nutrients will be evaluated with an emphasis on how the vitamin or mineral facilitates specific biochemical functions.

The basis of how nutrient deficiencies and excesses result in metabolic abnormalities with functional and potentially toxic consequences will be detailed. Amounts required in the diet to maintain normal metabolic pathways will be a focus of the course. Concepts related to reducing the risk for chronic diseases and birth defects will be highlighted. The validity of health claims for key nutrient supplements will be critiqued by evaluating the metabolic basis and current research. Prerequisites: BCH 3025 or BCH 4024; PET 2350C or PCB 4723C

Course Learning Objectives:

1. Students will understand the mechanisms of digestion and absorption for each nutrient.
2. Students will be able to identify the role of each nutrient in their respective metabolic pathway.
3. Students will be able to describe and recognize deficiency and toxicity symptoms associated with each nutrient.
4. Students will learn the recommended requirements for each nutrient.

Required Course Materials

1. Sakai course material: Lecture notes; discussion posts; grades for quizzes and exams.
<http://lss.at.ufl.edu>
 - How to access Sakai:
 - a. Access requires a Gatorlink account. If you need to establish a Gatorlink account, go to <http://www.gatorlink.ufl.edu/>.
 - b. Once you have created a Gatorlink account, access the Sakai homepage at <http://lss.at.ufl.edu>. Continue with the Sakai System entry and log in using your Gatorlink ID. HUN 4221 should be listed as one of your courses. If you are unfamiliar with Sakai, you can review the “Tutorials” located under services on the Sakai homepage.

Lecture Notes and Exams

Class lecture notes will be posted on Sakai by 7:00 PM the day before the lecture is to be presented so students can download the lectures and have them available for class.

Recommended Text: Advanced Nutrition and Human Metabolism, 6th Ed, Wadsworth Cengage Learning, 2012; Book has been customized to save you money and should be available at UF Bookstore.

Class Attendance and Demeanor: Students are expected to attend all classes, to arrive on time and to leave when dismissed by the instructor. Students are expected to show courtesy to their classmates and instructor by turning cell phones/pagers off before the class period begins and refraining from engaging in conversations during class unless directed to do so by the instructor. For questions regarding attendance policies, please see UF Attendance Policy: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Student Evaluation: Three exams and ten quizzes will be used to evaluate student performance. Each exam will be worth 100 points and will cover approximately one-third of the semester's course content. Exams must be taken when scheduled. Absence from an exam will result in a grade of "0" unless there are unavoidable extenuating circumstances (subject to our discretion) that can be documented to our satisfaction. Extenuating circumstances include unavoidable, unplanned situations such as illness (chart note from physician or clinic; vague notes such as "was seen" are not acceptable); family death (dated obituary); accident (police report); etc. Make up exams will **NOT** be given. An excused, documented absence from an exam will result in the grade for the missed exam being calculated as the average of the other two exams.

Ten 10 point quizzes will be given. Make up quizzes will **NOT** be given. The lowest quiz grade will be dropped and nine quiz grades will be counted towards the final grade. A missed quiz will count as the dropped quiz. Any other missed quizzes will result in a grade of "0" unless there are unavoidable extenuating circumstances as mentioned above or you have an interview at a professional school, which also will require documentation. An excused, documented absence from a quiz will result in the grade for the missed quiz being calculated as the average of the other quizzes.

Periodic bonus points may be given on unscheduled dates to check attendance. Bonus points will be added to total points at the end of the semester. ***There will be NO make-up bonus points even if the absence is excused.***

Performance Indicators	Points
EXAM 1	100
EXAM 2	100
EXAM 3 (includes cumulative component)	100
10 QUIZZES	100
Total	400

Grading scale: (Grades will **NOT** be curved.)

A = 370-400 A- = 358-369 B+ = 346-357 B = 330-345 B- = 318-329 C+ = 306-317
C = 290-305 C- = 278-289 D+ = 266-277 D = 250-265 D- = 238-249 E = <238

Current UF Grading Policies

Please see the following link for information on grade point equivalencies: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Training Programs
Community Provider Database
- Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

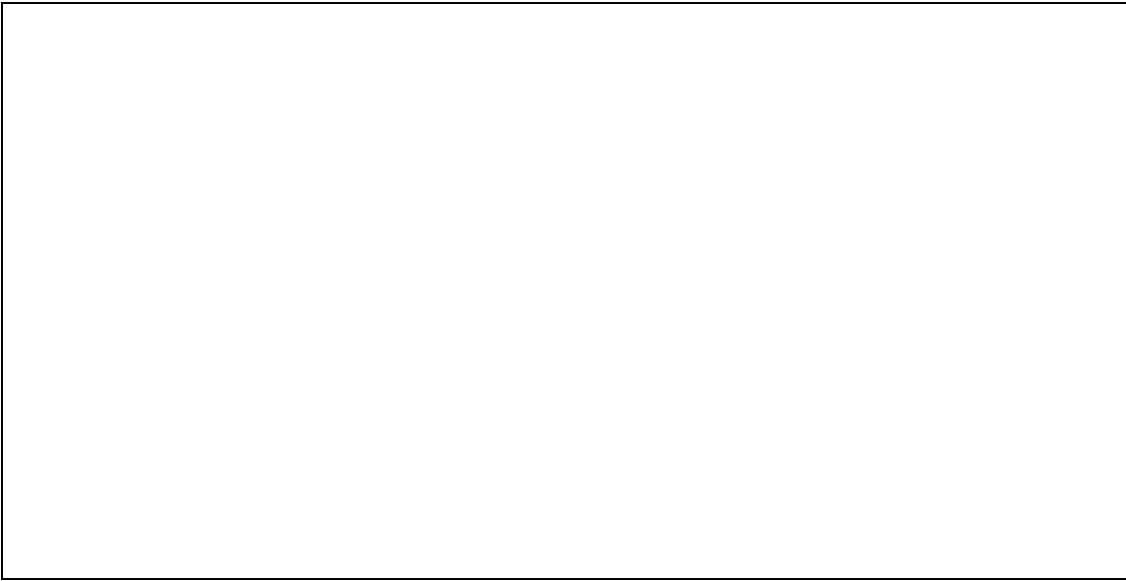
Other Information: Lecture materials and other information are the property of the University of Florida and the course instructor and may not be used for any commercial purpose. Students found in violation may be subject to disciplinary action under the University's Student Conduct Code. Only students formally registered for the course are permitted to attend lectures and take exams.

We the members of the University of Florida community pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

Class Schedule (Subject to change)
 Section 2C05, T R, period 4 LIT 0109
 W, period 6, MEAE 303

Date	Topic	
January	6 Tue	Course Introduction
	7 Wed	Folate
	8 Thur	Folate
Week 2		
	13 Tue	Vitamin B12 Quiz 1- Folate
	14 Wed	Vitamin B12
	15 Thur	Vitamin B6
Week 3		
	20 Tue	Thiamin (Vitamin B1) Quiz 2- B12 & B6
	21 Wed	Riboflavin (Vitamin B2)
	22 Thur	Niacin (Vitamin B3)
Week 4		
	27 Tue	Biotin Quiz 3- B1, B2, B3
	28 Wed	Ascorbate (Vitamin C)
	29 Thur	Metabolic Integration
Week 5		
February	3 Tue	Exam Review
	4 Wed	Exam 1 (Covers 11 lectures)
	5 Thur	Vitamin A
Week 6		
	10 Tue	Vitamin A
	11 Wed	Vitamin K
	12 Thur	Vitamin D Quiz 4- Vit. C, A, K
Week 7		
	17 Tue	Vitamin D
	18 Wed	Vitamin D
	19 Thur	Vitamin E
Week 8		
	24 Tue	Antioxidants
	25 Wed	Metabolic Integration Quiz 5- Vit. D, E, Antioxidants
March	26 Thur	Calcium
Week 9		
	3 Tue	Spring Break
	4 Wed	Spring Break
	5 Thur	Spring Break
Week 10		
	10 Tue	Phosphorus/Magnesium
	11 Wed	Exam Review Quiz 6- Ca, P, Mg
	12 Thur	Exam 2 (Covers 11 lectures)
Week 11		
	17 Tue	Iron
	18 Wed	Iron
	19 Thur	Copper (Collins)
Week 12		
	24 Tue	Zinc Quiz 7- Fe & Cu
	25 Wed	Zinc
	26 Thur	Metabolic Integration, incl. Cr
Week 13		
	31 Tue	Selenium
April	1 Wed	Iodine
	2 Thur	Electrolytes (Collins) Quiz 8- Zn, Se, I
Week 14		
	7 Tue	Carbohydrates (Collins)
	8 Wed	Carbohydrates (Collins)
	9 Thur	Proteins
Week 15		
	14 Tue	Proteins/Lipids Quiz 9- Electrolytes & CHO
	15 Wed	Lipids
	16 Thur	Metabolic Integration: CHO, PRO, LIPIDS
Week 16		
	21 Tue	Exam Review Quiz 10- PRO, LIPIDS
	22 Wed	Exam 3 (Covers 15 lectures & cumulative)

Student Information Sheet*



Please attach a picture of yourself to this box. You will not get your picture back so make sure it's a copy.

Name:

Major:

Career Goals:

Hometown:

Hobbies:

Grade you expect to get in course:

***This information sheet is worth 1 bonus point if you hand it in during class and 3 bonus points if you hand it in during office hours by January 31, 2015.**