HUN 6356 – Minerals in Nutrition
Course Syllabus (Spring 2017)

3 credits- Two 95 minute class periods per week: 1:00-2:35 p.m. on Tuesdays and Thursdays
Each class will include a 50 minute lecture followed by a class-wide discussion of a research paper
Location: MCCA 2196

Lead Instructor: Robert J. Cousins, Ph.D., Professor; FSHN Department
Office: FSHN Bldg., Room 201; Phone: 392-2133; Email: cousins@ufl.edu
Office Hours: Mondays from 2:40-4:00 p.m. or by appointment

Additional Instructor: James F. Collins, Ph.D., Associate Professor; FSHN Department
Office: FSHN Bldg., Room 441; Phone: 294-3749; Email: jfcollins@ufl.edu
Office Hours: Mondays from 10:00-11:30 a.m. or by appointment

Course Objectives: To provide an understanding of the roles of minerals in nutrition from biochemical, clinical, and physiological perspectives. Topic area will be covered for each mineral listed below, approximately in proportion to the literature base that is available. Topics included are: Methods of Analysis, Dietary Reference Intakes, Body Composition, Status Assessment, Dietary Sources, Deficiency, Absorption, Toxicity, Metabolism, Associated Diseases, Biochemical Functions and Health Benefits/Claims

Evaluation:

Examinations	Value
Exam 1	35% of grade
Exam 2	35% of grade
Class Presentation	20% of grade
Paper Quizzes	10% of grade

Exams (70% of course grade): Two in-class exams will be given on the indicated days. The instructors will provide some information as to how to prepare for the exams.

Student Presentations (20% of course grade): The instructors have selected 17 papers from the primary scientific literature related to aspects of mineral metabolism that complement the lecture topics. Each student will present a paper on a designated day. Students are encouraged to discuss their papers with the instructor during his office hours in the days prior to their presentation. The presentation should be 20-25 minutes in length, thus allowing for 10-15 minutes of discussion. The following aspects of each paper should be covered: 1) Central hypothesis and rationale; 2) Methodology; 3) Results; 4) Discussion and conclusions; 5) Strengths and weaknesses (i.e. your critique); 6) Possible future studies. Points earned will be based equally upon peer evaluation by fellow students and the instructors' evaluation of your presentation. Each student will receive feedback on their presentation (based upon anonymous student comments and the instructors' evaluation).

Paper Quizzes (10% of course grade): Prior to the discussion of each research paper, a 5 question multiple-choice quiz will be given to the class. You will have 5 minutes to complete each quiz.

Recommended References: 1) Erdman, Macdonald & Zeisel (Eds.), *Present Knowledge in Nutrition*, 10th Ed., 2012; **OR**
2) Ross, Caballero, Cousins, Tucker and Ziegler and Ziegler (Eds.), *Modern Nutrition in Health and Disease*, 11th Ed., 2013
Secondary References:
1) Food and Nutrition Board, Institute of Medicine, Dietary Reference Intakes for Calcium, Phosphorous, Magnesium, Vitamin D, and Fluoride, National Academy Press, 1997
2) Food and Nutrition Board, Institute of Medicine, Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc, National Academy Press 2001
3) Food and Nutrition Board Institute of Medicine, Dietary Reference Intakes for Calcium and Vitamin D, Natural Academy Press, 2010

Class Schedule:

DATE	SUBJECT	INSTRUCTOR
January 5th	Course Introduction	Dr. Cousins
January 10th	Methods	Dr. Cousins
January 12th	Methods/Geochemistry/Metallobiochemistry	Dr. Cousins
January 17th	Calcium	Dr. Cousins
January 19th	Calcium	Dr. Cousins
January 24th	Phosphorus	Dr. Cousins
January 26th	Phosphorus	Dr. Cousins
January 31st	Magnesium	Dr. Cousins
February 2nd	Magnesium/Fluoride	Dr. Cousins
February 7th	**EXAM 1**	Dr. Cousins
February 9th	Iron	Dr. Collins
February 14th	Iron	Dr. Collins
February 16th	Iron	Dr. Collins
February 21st	Copper	Dr. Collins
February 23rd	Chromium/Manganese	Dr. Collins
February 28th	Ultra-trace elements	Dr. Collins
March 2nd	Electrolytes	Dr. Collins
March 4th-11th	**SPRING BREAK**	N/A
March 14th	Zinc	Dr. Cousins
March 16th	Zinc	Dr. Cousins
March 21st	Zinc	Dr. Cousins
March 23rd	No class	
March 28th	Selenium	Dr. Cousins
March 30th	**EXAM 2**	Dr. Cousins