



**Grading:** There are 2 exams (20% each) and 1 final exam (40%), plus critical thinking case reports. Dates are noted in the syllabus on Sakai.

- GRADING

- Exam in class 1                    1<sup>st</sup> 1/3 of semester                    20%
- Exam in class 2                    2<sup>nd</sup> 1/3 of semester                    20%
- Final exam part 1                3<sup>rd</sup> 1/3 of semester                    20%
- Final exam part 2                Full semester                            20%
- Critical Thinking Cases/Class participation                    20%

These are *rough* guidelines for determining your letter grade from your numerical average. This scale assumes a final class average of ~84%. The scale may shift depending on the final average for your cohort (BSPH / MS/MPH / PhD). In previous years, the vast majority of students received A, B, H, or P. When the final grades are calculated, all fractional points are rounded to the nearest integer grade (from two decimal points). For example: 82.46 rounds to 82 (a B-). 92.51 rounds to 93 (an A).

YOUR FINAL AVERAGE (%)	LETTER GRADE	YOUR FINAL AVERAGE (%)	LETTER GRADE	YOUR FINAL AVERAGE (%)	LETTER GRADE
93-100	A / H	83-85	B / P	70-74	C / L
89-92	A- / H	79-82	B- / P	66-69	C- / F
86-88	B+ / P	75-78	C+ / L	60-65	D / F

**Accommodations:** We want to ensure an optimal environment for students with physical or other disabilities. Students with a disability should contact the UNC Learning Center: <http://www.unc.edu/asp/index.html>. Any learning disability or special accommodations must be **PRE-arranged** with Accessibility Resources and Service (<http://accessibility.unc.edu/>). For additional help, please also see Office of Student Affairs ([http://www.sph.unc.edu/student\\_affairs/office\\_of\\_student\\_affairs\\_936\\_8719.html](http://www.sph.unc.edu/student_affairs/office_of_student_affairs_936_8719.html)) or student health [http://campushealth.unc.edu/index.php?option=com\\_content&task=blogcategory&id=33&Itemid=56](http://campushealth.unc.edu/index.php?option=com_content&task=blogcategory&id=33&Itemid=56).

**Expectations:** Cell phones must be off in class. No Facebook, Kayak, Amazon, or other distractions to yourself and neighbors. Plagiarism will result in a zero. It is expected that all exams will be taken without the assistance of books, notes, other people, or looking at exams of fellow classmates. If you must be absent, complete assignment BEFORE leaving- no make ups. Homework critical thinking assignments are NOT collaborative. They are for you to learn. If you are sick, you need a letter from Student health or a physician in order to receive additional time. There are no make-up exams without Dr. Makowski's permission obtained prior to the scheduled exam. Unless you are told otherwise, you are responsible for and may be tested on all material discussed in class and posted on Sakai.

**Laptop Policy:** We are pleased to have students take notes via laptops. However, we expect that students who bring their laptops to class will use them for academic purposes and not for surfing the internet or other extracurricular activities not related to the class discussion. Please remember that engaging in such activities during class time is disruptive to fellow students who can see your screen. It is also unacceptable for any of our esteemed visiting guest lecturers to see such non-academic activities during class time. Full engagement in class activities is part of the class participation component of the grade.

**Honor Code at the University of North Carolina.** Your participation in this course comes with the expectation that your work will be completed in full observance of the UNC Honor Code. The principles of academic honesty, integrity, and responsible citizenship govern the performance of all academic work and student conduct at the University as they have during the long life of this institution. Your acceptance of enrollment in the University presupposes a commitment to the principles embodied in the Code of Student Conduct and a respect for this most significant Carolina tradition. Your reward is in the practice of these principles. Full details and definitions at <http://honor.unc.edu/>.

**Department of Nutrition    NUTR 620 Human Metabolism: Micronutrients    Spring 2014**

Academic dishonesty in any form is unacceptable because any breach in academic integrity, however small, strikes destructively at the University's life and work. You sign a pledge on each exam that indicates "On my honor, I have neither given nor received unauthorized aid on this assignment". If you have any questions about your responsibility or the responsibility of faculty members under the Honor Code, please consult with someone in the either the Office of the Student Attorney General (966-4084) or the Office of the Dean of Students (966-4041).

**\*\*Critical Thinking Case Studies** are posted on Sakai 1 week before or presented in class. First 3 are to be prepared before class with a 1 page answer turned into TA prior to start of class. Last 3 will be live in class discussion.

**Example Exam Questions-** some are long answer, short answer, or multiple choice. Answer with short and accurate scientific language. i.e. something doesn't "change," it will increase or decrease.

1) (2 points) Keshan disease is a deficiency of what micronutrient? What subset of the population was particularly susceptible and why?

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2) (10 points) How does the SECIS (**SE**leno**C**ysteine **I**nsertion **S**equen**S**) function in the synthesis of selenoproteins? Be detailed in your answer. Name 2 selenoproteins and their function. (half a page with drawings, cartoons, etc.)

3) (2 points) What protein acts as a Zn buffer and may regulate intracellular distribution of Zn \_\_\_\_\_

4) (2 points) Which is the most reactive radical? \_\_\_\_\_

- A)  $O_2^{\bullet}$
- B)  $O_2^{\bullet-}$
- C)  $H_2O_2$
- D)  $HO^{\bullet}$

**Department of Nutrition NUTR 620 Human Metabolism: Micronutrients Spring 2014**

**Makowski 2014 NUTR 620: Human Metabolism: Micronutrients**

Sakai notes/materials will be posted prior to the lecture. PN: Present Knowledge in Nutrition, 9<sup>th</sup> or 10<sup>th</sup> edition.

\*\* Turn in 1 page homework

**Subject to change- watch for course emails**

DATE	TOPIC	INSTRUCTOR	MATERIALS
1/9	Introduction, Vitamin A and carotenoids	Makowski	PN & Sakai
1/14	Vitamin A and carotenoids	Makowski	PN & Sakai
1/16	Vitamin D, Ca <sup>2+</sup> , P	Anderson/Sheridan	PN & Sakai
1/21	Vitamin D, Ca <sup>2+</sup> , P	Makowski	
1/23	Critical Thinking: Osteoporosis	Mah/Sheridan	Sakai/In class discussion**
1/28	Vitamin K	Makowski	PN & Sakai
1/30	Vitamin C	Makowski	PN & Sakai
2/4	<b>EXAM 1: 1<sup>st</sup> third</b>	<b>Makowski/Sheridan/Mah</b>	
2/6	Na <sup>+</sup> , Cl <sup>-</sup> , and Renal Function	Makowski	PN & Sakai
2/11	Critical Thinking: Renal Disease	Mah/Makowski	Sakai/In class discussion**
2/13	Iron	Sheridan	PN & Sakai
2/18	Critical Thinking: Anemia	Mah/Sheridan	Sakai/In class discussion**
2/20	Thiamine (Vit B1)/riboflavin (B2)/niacin (B3)	Johnson/Sheridan	PN & Sakai
2/25	Vitamin B <sub>6</sub> /biotin (B7)/pantothenic acid (B5)/Vit B12- Studies in Africa	Johnson/Sheridan/Flax	PN & Sakai
2/27	Folate (B9) & epigenetics	Sheridan	PN & Sakai
3/4	Choline & Cancer	Zeisel	Sakai
3/6	<b>3/6 EXAM 2: 2<sup>nd</sup> third</b>	<b>Mah/Makowski/Sheridan</b>	
3/11 and 3/13	<b>SPRING BREAK 3/7-3/16</b>		
3/18	Selenium, Copper, Zinc part 1	Sheridan	PN & Sakai
3/20	Selenium, Copper, Zinc part 2	Sheridan	PN & Sakai
3/25	Critical Thinking: Fat Sick and Nearly Dead	Mah/Makowski	Sakai/In class discussion
3/27	Oxidative Stress and Antioxidants	Makowski	PN & Sakai
4/1	Oxidative Stress and Antioxidants	Makowski	PN & Sakai
4/3	Critical Thinking: Oxidative stress	Mah	Sakai/In class discussion
4/8	Microbiome	Spencer	Sakai
4/10	Chromium, Fluoride, Manganese, Iodine	Sheridan	PN & Sakai
4/15	Critical Thinking: Iodine	Makowski/Mah	In class/In class discussion
4/17	Hypertension and Congestive Heart Failure	Makowski	PN & Sakai
4/22	Alcohol	Makowski/Hines	PN & Sakai
4/24	REVIEW SESSION FOR FINAL EXAM (ASN 26-30 <sup>th</sup> )	Mah/Makowski/Sheridan	
Tuesday, April 29 (12:00 to 3:00 pm)	FINAL EXAM: Covering 3 <sup>rd</sup> third and CUMULATIVE for first three sections	Mah/Makowski/Sheridan	room to be announced