

**HBIO 202L – 4 units: Nutrition for Life  
Summer 2020**

**Instructor:** Bob Girandola, HBIO Department  
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Phone: (213) 740-6151  
Office hours T/W 12:00 PM – 1:00 PM

Lecture: M-Th 10:00 AM - 11:50 AM THH 114  
Labs: PED B16

**Lecture:** 8 hours/week

**Laboratory:** 2 +hour/week

**Course Description:**

This course will deal with the principles related to proper nutrition for optimal health . The medical problems associated with obesity and the relationship between diet, exercise and health will be explored. Class will focus on developing an understanding of Nutrition, especially as it pertains to good health and prevention of certain diseases. Laboratory experiences will help students gain knowledge of appropriate body stature and body composition and the role that exercise plays in maintaining caloric balance.

**Required Text:**

**Nutrition & You: Core Concepts for Good Health. Joan S. Blake, Pearson Education, Inc. 2013**

**I. Objectives:**

- A.** To understand the process by which the body digests and assimilates the micronutrients contained in food in order to support normal body functions.
- B.** To apply knowledge of energy intake and energy expenditure to make food choices that promote maximal health and exercise performance.
- C.** To give students opportunity with lab and lecture to be able to take measures of height, weight, BMI and body composition.
- D.** To give students the knowledge of Nutrition including Macro and Micronutrients.
- E.** To give students an understanding of the role of diet in health and longevity.

**II. Class Schedule:**

<b>Lectures</b>	<b>Topic</b>
1	Overweight and underweight concepts. Body composition vs BMI
2	Concepts of Caloric balance

- 3 Calorie equivalents of activity and foods. Fad diets. How to gain or lose weight? Eating disorders. Treatment of obesity using drugs and surgical procedures.
- 4 National and Global obesity statistics.
- 5 Obesity and diseases
- First Mid-term Exam**
- 6 Myths and realities in weight control, separating fact from fiction.
- 7 Hunger and satiety; How and why we eat as we do. Food addiction.
- 8 Digestion and absorption, anatomy and physiology of the GI Tract. Disorders of the GI tract including oral health, ulcers, gall bladder disease and other intestinal problems such as Celiac disease and Irritable bowel syndrome. How to maintain GUT health.
- 9 Caloric nutrients, CHO: Simple vs Complex The “Sugar” syndrome.
- 10 Caloric nutrients, cont. Glycemic Index
- Second Mid-term Exam**
11. Caloric nutrients, con. Fats, Saturated vs Unsaturated. Fats and Cholesterol, Animal vs non animal fats, Trans Fat!
11. Cardiovascular disease: Diet, lifestyle and genetics. Proteins.
- 12 Caloric nutrients, cont. Proteins. Functions, Amino acids, essential vs non-essential. Protein requirements.
- 13 Micronutrients: Vitamins and minerals. Fat and water soluble vitamins and their role in health. Macro and trace minerals and their role in health. Diseases related to vitamin/mineral deficiency.
- 14 Food safety, food borne illnesses. Nutrition through the life cycle, infancy to old age and special populations. Choosing the right diet using the Food Pyramid and My Plate
- 15 Learn to eat healthy!

## FINAL EXAM

### III. Grading, Grading Scale, and Make-up Policy:

25%	1 <sup>st</sup> Midterm
25%	2 <sup>nd</sup> Midterm
25%	Final Exam
25%	Laboratory grade

**Grading Scale:** Each exam will be curved and assigned a letter grade based upon the following criteria:

Average score = C
Average score + 1 Standard Deviation (SD) = B
Average score + 2 SD = A
Average score – 1 SD = D
Average score – 2 SD = F

**Make-up Policy:** IF a student has a legitimate excuse for missing the mid-term or final exam, a make-up exam in ESSAY format will be given at a mutual date determined by the instructor and student.

#### **IV. Tentative Lecture Schedule:**

<b>Week of</b>	<b>Lecture Topic</b>	<b>Reading</b>
May 20-21	Concepts of Overweight and Underweight: height-weight scales, body mass index, body composition, and methods of assessing body composition	Ch. 20
May 23	Concepts of Caloric Balance	Ch. 20,22
May 23,24	Concepts of Caloric Balance: caloric expenditure at rest (RMR), caloric equivalents of activity, caloric equivalents of foods and beverages, and methods of measuring energy expenditure. Fad diets. Eating disorders. Treatment of obesity using drugs and surgery. <b>Memorial Day, May 26</b>	Ch. 20,21,22
	National and Global obesity, statistics	Data from CDC, WHO
May 26	Obesity and Diseases: Cancer, Diabetes, Gout, others.	Ch. 9,23, CDC, etc.
May 27	Myths and realities in Weight Control and healthy eating: Separating fact from fiction.	Ch.3,4
May 28- June 2	Hunger and Satiety: role of the hypothalamus, physiological cues, psychosocial cues, and fat-cell morphology and their role in hunger-satiety. Food addiction.	Ch. 1,2
	<b>First Exam Wed June 3</b>	
June 8	Digestion and Absorption, anatomy and physiology of the GI Tract. Disorders of the GI tract including oral health, ulcers, gall bladder disease and other intestinal diseases such as Celiac disease and Irritable bowel syndrome. How to maintain GUT health.	Ch 6
June 9	The Caloric Nutrients, CHO: Simple vs. Complex. The “Sugar” syndrome. Are there good and “bad” carbs? Do carbs make us fat?	Ch. 7,8
June 10	The Caloric Nutrients, cont., CHO, Understanding the Glycemic Index and caloric balance. Fats,	Ch. 8,10
June 11-16	The Caloric Nutrients, cont., Fats, Saturated vs. Unsaturated Fats, Cholesterol, Animal vs. non-Animal fats, Trans fat. Cardiovascular Disease: Diet, lifestyle and genetics.	Ch. 10,11,12
June 17	The Caloric Nutrients, cont., Proteins, Functions, Amino acid list. Complete and incomplete proteins. RDA values. Nitrogen balance. Animal vs. non-animal protein. <b>Second Mid Term Exam June 17</b>	Ch. 13,14,15
June 18-24	Micronutrients: Vitamins and Minerals: Fat and water-soluble vitamins and their role in health. Macro and trace minerals and their role in health. Diseases related to vitamin/mineral deficiency.	Ch. 16,17
June 25-29	Food safety, food borne illnesses. Nutrition through the life cycle, infancy to old age and special populations (athletes). Choosing the right diet using the Food Pyramid and My Plate. Learning to eat healthy.	Ch.1, 2,25,27, 29

<b>FINAL EXAM</b> Tuesday June 30 Also last day of classes
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\*\*\* Students will NOT be allowed to take an exam if they arrive more than 20 minutes past the hour!  
First and second midterm exam dates are approximate.

## **V. Laboratory Component**

### **Lab Director:**

Anh-Khoi Nguyen, Ph.D. ([agnguyen@usc.edu](mailto:agnguyen@usc.edu))

### **Lab Instructors:**

Gudrun Bara Floyd, M.S. ([gbfloyd@usc.edu](mailto:gbfloyd@usc.edu))

Alexis Camacho, M.S. ([ascamach@usc.edu](mailto:ascamach@usc.edu))

**Laboratories will be one 2-hour/week for the semester.**

## **Statement on Academic Conduct and Support Systems**

### **Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, [policy.usc.edu/scientific-misconduct](http://policy.usc.edu/scientific-misconduct).

### **Support Systems:**

*Student Health Counseling Services - (213) 740-7711 – 24/7 on call*

[engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call*

[suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 – 24/7 on call*

[engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

*Office of Equity and Diversity (OED) | Title IX - (213) 740-5086*

[equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

*Bias Assessment Response and Support - (213) 740-2421*

[studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

*The Office of Disability Services and Programs - (213) 740-0776*

[dsp.usc.edu](http://dsp.usc.edu)

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

*USC Support and Advocacy - (213) 821-4710*

[studentaffairs.usc.edu/ssa](http://studentaffairs.usc.edu/ssa)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*Diversity at USC - (213) 740-2101*

[diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.