HBIO 202L – 4 units: Nutrition for Life

**Instructor:** Bob Girandola, HBIO Department  
Office: PED 109, email: girandol@usc.edu  
Phone: 213-740-6151  
Office hours: Tuesday/Wednesday, 11:00 AM – 12:00 PM

Lecture: MWF 10:00 AM - 10:50 AM, THH 119  
Labs: PED B16

**Lecture:** 3 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:**


**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:**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>Overweight and underweight concepts. Body composition vs BMI</td>
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<tr>
<td>2</td>
<td>Concepts of Caloric balance</td>
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National and Global obesity statistics.

Obesity and diseases

First Mid-term Exam

Myths and realities in weight control, separating fact from fiction.

Hunger and satiety: How and why we eat as we do. Food addiction.

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.

Caloric nutrients, CHO: Simple vs Complex The “Sugar” syndrome.

Caloric nutrients, cont. Glycemic Index

Second Mid-term Exam

Caloric nutrients, con. Fats, Saturated vs Unsaturated. Fats and Cholesterol, Animal vs non animal fats, Trans Fat!

Cardiovascular disease: Diet, lifestyle and genetics. Proteins.


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.

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

Learn to eat healthy!

FINAL EXAM

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

25% 1st Midterm
25% 2nd Midterm
25% Final Exam
25% Laboratory grade

*Optional extra credit – JEP assignment = 5%

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:
<table>
<thead>
<tr>
<th>Week of</th>
<th>Lecture Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td>1 Jan 9</td>
<td>Concepts of Overweight and Underweight: height-weight scales, body mass index, body composition, and methods of assessing body composition</td>
<td>Ch. 20</td>
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<tr>
<td>2 Jan 16</td>
<td>Concepts of Caloric Balance <em>(MLK Holiday on Monday)</em></td>
<td>Ch. 20,22</td>
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<tr>
<td>4 Jan 23</td>
<td>National and Global obesity, statistics</td>
<td>Data from CDC, WHO</td>
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<tr>
<td>5 Jan 30</td>
<td>Obesity and Diseases: Cancer, Diabetes, Gout, others. <strong>First Mid term exam</strong></td>
<td>Ch. 9,23, CDC, etc.</td>
</tr>
<tr>
<td>6 Feb 6</td>
<td>Myths and realities in Weight Control and healthy eating: Separating fact from fiction.</td>
<td>Ch.3,4</td>
</tr>
<tr>
<td>7 Feb 13</td>
<td>Hunger and Satiety: role of the hypothalamus, physiological cues, psychosocial cues, and fat-cell morphology and their role in hunger-satiety. Food addiction.</td>
<td>Ch. 1,2</td>
</tr>
<tr>
<td>8 Feb 20</td>
<td>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. <em>(Presidents Day Holiday on Monday)</em></td>
<td>Ch 6</td>
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<tr>
<td>9 Feb 27</td>
<td>The Caloric Nutrients, CHO: Simple vs. Complex. The “Sugar” syndrome. Are there good and “bad” carbs? Do carbs make us fat?</td>
<td>Ch. 7,8</td>
</tr>
<tr>
<td>10 March 6</td>
<td>The Caloric Nutrients, cont., CHO, Understanding the Glycemic Index and caloric balance. Fats. <strong>Second Mid term exam</strong></td>
<td>Ch. 8,10</td>
</tr>
<tr>
<td>11 March 20</td>
<td>The Caloric Nutrients, cont., Fats, Saturated vs. Unsaturated Fats, Cholesterol, Animal vs. non-Animal fats, Trans fat. Cardiovascular Disease: Diet, lifestyle and genetics.</td>
<td>Ch. 10,11,12</td>
</tr>
<tr>
<td>13 April 3 &amp; 10</td>
<td>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.</td>
<td>Ch. 16,17</td>
</tr>
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</table>
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:** Emi Embler, Ph.D.
Email: eembler@usc.edu

**Lab Instructor:** Bara Floyd, M.A.
Email: gbfloyd@usc.edu

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

### VI. Academic Accommodations:

Any student requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (the instructor) as early in the semester as possible. DSP is located in Student Union (STU) 301 and is open 8:30-5:00pm Monday – Friday. The phone number for DSP is 213) 740-0776.

### VII. Academic Integrity:

Students who violate University standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the University. Since dishonesty in any form harms the individual, other students and the University, academic integrity policies will be strictly enforced. I expect you will familiarize yourself with the Academic Integrity guidelines found in the current SCampus.

### VIII. Academic Integrity Violations:

- Academic dishonesty/misconduct (plagiarism, cheating, unauthorized collaboration, etc.) will not be tolerated. All academic integrity violations will result in a grade sanction and will be reported to the Office for Student Judicial Affairs. It is your responsibility to “reasonably” protect your own work from the plagiarism of others.
- If plagiarism is detected on a group project, all members of the group will be held responsible.
- You are expected to be familiar with the Academic Integrity guidelines found in the current SCampus (student guidebook). An electronic version is available at [http://usc.edu/scampus](http://usc.edu/scampus).

### IX. Disruptive and Threatening Student Behavior:

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students’ ability to
learn and an instructor’s ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office of Student Judicial Affairs for disciplinary action.