

University of Southern California – Human and Evolutionary Biology
HBIO 202L – Principles of Nutrition and Exercise (2 Units)
Spring 2016

Instructor: Bob Girandola, Ed.D.

Office Hours: Wed 8-9 and Thurs 11-12 in PED 109

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Lecture: M/W 10:00-10:50, ZHS 163

Laboratory: To be arranged (PED B15c)

Course Description:

This course will deal with the principles related to body composition and proper nutrition for optimal health and sports performance. The medical problems associated with obesity and the relationship between diet, exercise and health will be explored. Evaluation of individual caloric intake will be provided. Labs on body composition and resting metabolic rate will be performed.

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.

II. Class Schedule:

Week	Topic
1	Overweight and underweight concepts
2	Body composition vs. BMI
3	Concepts of caloric balance
4	Caloric equivalents
5	Caloric balance and weight control
6	Myths and realities in weight control
7	Hunger and satiety; treating obesity
8	MID-TERM EXAM
9	Cardiovascular disease
10	Digestion and absorption
11	Caloric nutrients
12	Caloric nutrients
13	Vitamins and minerals
14	Vitamins and minerals
15	Applied nutrition and food safety

FINAL EXAM

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

35% Midterm

35% Final

30% Lab/Dietary Analysis

*Optional extra credit – JEP assignment = 10%

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:

Week of	Lecture Topic	Reading
Jan 11	Concepts of Overweight and Underweight: height-weight scales, body mass index, body composition, obesity vs. overweight, and methods of assessing body composition	Ch. 20,21,22
Jan 18	Concepts of Overweight and Underweight: height-weight scales, body mass index, body composition, obesity vs. overweight, and methods of assessing body composition. Mon. Jan. 18 is holiday, MLK day.	Ch. 20,22
Jan 25	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	Ch. 20,22
Feb 1	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	Ch. 20,22
Feb 8	Caloric Balance and Weight Control: weight loss and gain methods, fluid balance, popular methodologies (fact or fiction?), prevalence of obesity in USA and internationally, and possible solutions and predictions	Ch. 20,22
Feb 15	Caloric Balance and Weight Control: weight loss and gain methods, fluid balance, popular methodologies (fact or fiction?), prevalence of obesity in USA and internationally, and possible solutions and predictions. Monday, Feb. 15 is University holiday.	Ch. 20-22,2,3
Feb 22	Hunger and Satiety: role of the hypothalamus, physiological cues, psycho-social cues, and fat-cell morphology and their role in hunger-satiety.	Ch. 20-22,1-3
Feb 29	MIDTERM EXAM will be this week.	

Mar 7	Cardiovascular Disease: definitions, causes of the disease, predisposing factors (and risk factors), and modification and lifestyle	Ch 12
Mar 7-21	Digestion and Absorption: anatomy of the gastrointestinal tract, digestion and absorption of CHO, fat, and protein, and common diseases related to the GI tract	Ch. 6
Mar 14	Spring Break March 14-18	
Mar 21	The Caloric Nutrients (CHO, Fat, Protein: carbohydrates, fats, and proteins	Ch. 7,8,10,11,13,14
Mar 28	The Caloric Nutrients (CHO, Fat, Protein: carbohydrates, fats, and proteins	Ch. 7,8,10,11,13,14
Apr 4	Vitamins and Minerals: water soluble vitamins, fat soluble vitamins, major minerals, and trace minerals	Ch. 16,17
Apr 11	Vitamins and Minerals: water soluble vitamins, fat soluble vitamins, major minerals, and trace minerals	Ch. 16,17
Apr 18 & Apr 25	Applied Nutrition: the food pyramid, older methods of food selections, the politics of nutrition, and food safety. Classes end May 1	Ch.1, 2
	FINAL EXAM on Monday, May 9 @ 8-10 AM	

*** 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

Lab Days/Times: to be arranged

Laboratories to be completed by individual appointment.

1. Hydrostatic weighing evaluation of body composition
2. Resting metabolic rate

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 Section 11, *Behavior Violating University Standards* <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety of the whole USC community. Another member of the university community - such as a friend, classmate, advisor, or faculty member - can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* <http://www.usc.edu/student-affairs/cwm> provides 24/7 confidential support, and the sexual assault resource center webpage <http://sarc.usc.edu/> describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academic-support/center-programs/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

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>.

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.