

USC Dornsife  
College of Letters,  
Arts and Sciences

**HBIO360 – Nutrition and Disease (4 units)**

**Fall 2016**

**Lectures-Discussions:** Monday and Wednesday  
10:00-11:50

**Location:** WPH 205

**Instructor:** Gioia Polidori Francisco, PhD

**Office:** AHF 253

**Office Hours:** Tue/Thu 3:30-5:30 pm

**Contact Info**

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**Course Description**

Principles of diet therapy for the prevention and treatment of human disease.

*Prerequisite:* BISC 220L

**Learning Objectives**

- To acquire knowledge and skills for applying evidence-based medical nutrition for disease prevention and treatment using a cross-disciplinary approach that includes aspects of human nutrition, anatomy, physiology and pathology.
- To develop the ability to think critically, analyze, synthesize, and use information to solve case studies and develop student-driven projects.
- To place biological, nutritional and physiological knowledge into an applicable and ethical context, especially how biology, physiology and nutrition can contribute to the resolution of ethical, social and cultural issues.
- To provide sufficient depth of knowledge and skill for entry-level employment in a wide variety of fields or for graduate study in the health professions or other biology-related disciplines.

**I. Text Required**

Nutrition Therapy & Pathophysiology; Nelms M, Sucher KP, Lacey K, Roth SL (eds). Wadsworth Cengage Learning. 3<sup>rd</sup> Edition.

II. Optional Texts (could be useful for the project but are not required)

1. Community Nutrition, Planning Health Promotion and Disease Prevention. Second Edition. Author: Nweze Eunice Nnakwe. Jones and Bartlett Learning.
2. Public Health Nutrition. Edited by Gibney, Margetts, Kearney, and Arab. Blackwell publishing.

**II. Description and Assessment of Assignments**

- Class material will be evaluated via quizzes, exams, case studies and final project.
- **Quizzes** will be given during lectures and will be based on the material presented on the same day.
- **Case studies:** Nine case studies will be completed throughout the semester and will

focus on the nutritional requirements in different diseases. These case studies will allow students to integrate the evidence-based medical nutrition research discussed during lectures into the development of individualized diets that can contribute to disease prevention and treatment. Students will work on case studies in groups and each group will submit 1 diet therapy that fulfills the patient's nutritional requirements. Students will be expected to clearly explain the rationale behind specific diet choices.

- **Community Nutrition Project:** Students will assume the role of a Public Health Nutritionist. The aim of the project is twofold: 1. Students will evaluate and identify areas of concern in the nutrition within a local community. 2. Students will develop a strategy aimed at improving community nutrition and reducing the risk of chronic disease. The project will be presented in the form of a PowerPoint presentation to the class.

### III. Grading Breakdown

Assignment	Points	% of Grade
Midterm 1	250	25
Midterm 2	250	25
Final Exam	300	30
Final Project	50	5
Case Studies	100	10
Quizzes	50	5
<b>TOTAL</b>	<b>1000</b>	<b>100</b>
JEP (Extra Credit)	25	2.5

### IV. Additional Policies

- The grading scale is based on the traditional scale as follows:

	<b>A (≥93%)</b>	<b>A- (≥90%)</b>
<b>B+ (≥87%)</b>	<b>B (≥83%)</b>	<b>B- (≥80%)</b>
<b>C+ (≥77%)</b>	<b>C (≥73%)</b>	<b>C- (≥70%)</b>
<b>D+ (≥67%)</b>	<b>D (≥63%)</b>	<b>D- (≥60%)</b>
<b>F (≤59.9%)</b>		

- A midterm exam can be taken after the specified date **ONLY** if the student has a **documented** medical excuse.
- A request to take a make-up exam must be accompanied by evidence of necessity (ie: letter from a doctor, plane ticket to a game from an athlete) and must be made before the date of the scheduled exam. Make-up exams will be different from the scheduled exam and may be proctored by personnel who do not have extensive knowledge in the area being tested.
- Exams and presentations will not be given a letter grade. Only the final grade will be given a letter grade.
- Lecture slides will be posted on blackboard, however, please do not rely entirely on slides, these are meant as a starting point for note-taking. Class notes and textbook

information will form the basis of the material that will be on the exams. If you attend class regularly, you will be updated on the status of lecture notes and course material/announcements.

- Late Work Policy: No late work will be accepted unless the student receives written prior approval from the course instructor. Students should contact the course instructor via email with a request for late work.

## V. Tentative Lecture Schedule

Date	Lecture Topic	Nelms	Case Study
Aug 22	Nutrition Care Process	2	
Aug 24	Nutrition Assessment	3	
Aug 29	Nutrition Intervention	4	Dietary Assessment
Aug 31	Enteral & Parenteral Nutrition (CS)	5	
Sep 05	<b>Labor Day</b>	5	
Sep 07	Energy Balance	12	Obesity
Sep 12	Nutrition Therapy for Energy Balance (CS)	12	
Sep 14	Project Overview	12	Hypertension
Sep 19	Pathophysiology of the Cardiovascular System	13	
Sep 21	Nutrition Therapy for Cardiovascular Diseases (CS)	13	Review
<b>Sep 26</b>	<b>Midterm I</b>		Peptic Ulcer Disease
Sep 28	Pathophysiology of the Upper GI tract	14	
Oct 3	Nutrition Therapy for Diseases of the Upper GI tract (CS)	14	
Oct 5	Pathophysiology of the Lower GI tract	15	IBS
Oct 10	Nutrition Therapy for Diseases of the Lower GI tract (CS)	15	
Oct 12	Pathophysiology of the Liver and Gallbladder	16	Steatohepatitis
Oct 17	Nutrition Therapy for Diseases of the Liver and Gallbladder (CS)	16	
Oct 19	Diabetes	17	T1DM
Oct 24	Nutrition Therapy for Diabetes + Project MEET IN PED B16	17	
Oct 26	Nutrition Therapy for Diabetes (CS)		Review
<b>Oct 31</b>	<b>Midterm II</b>		Chronic Kidney Disease
Nov 2	Pathophysiology of the Renal System	18	
Nov 7	Nutrition Therapy for Kidney Disease (CS)	18	
Nov 9	Pathophysiology of the Hematological System	19	Anemia
Nov 14	Nutrition Therapy for diseases of the Hematological System (CS)	19	
Nov 16	Cancer	22	-
Nov 21	Nutrition Therapy for Cancer (CS) & Skeletal system	22+25	
Nov 23	Nutrition Therapy for diseases of the Skeletal System	25	-
Nov 28	Project Presentation		
Nov 30	Project Presentation		Review
Dec 3- 6	<b>Study Days</b>		
TBD	<b>Final Exam (see schedule of classes)</b>		

## **VI. 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/academicsupport/centerprograms/dsp/home\\_index.html](http://sait.usc.edu/academicsupport/centerprograms/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.

## **VII. 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/>.

## **VIII. Academic Integrity Violations**

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.

## **IX. Disruptive and Threatening Behavior**

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 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 [sarc@usc.edu](mailto:sarc@usc.edu) describes reporting options and other resources.