

GERO 411L PHYSIOLOGY, NUTRITION & AGING  
Summer 2021 (second term)  
June 30-August 10, 2021

**Instructors:**

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**Day/Time:** Tuesday & Thursday, 4:00-6:20 pm (Recorded for asynchronous viewing)

**Location:** Zoom

**Office Hours:** Tuesdays, 1:45-3:45 pm and by appointment

**Number of Units:** 2

**Required Text:** Nutrition Concepts and Controversies, 14th Edition.

Frances Sizer & Ellie Whitney. Wadsworth Cengage Learning, 2017  
ISBN: 978-1-305-62799-4

**Course Overview:**

This course explores human nutrient needs and the physiological, psychological, and sociological relationships with nutrition. The course is designed to provide gerontology and non-gerontology students with an overview of nutrient requirements and functions of macro (carbohydrates, proteins and fats) and micro (vitamins and minerals) nutrients. Students will gain an understanding of nutrient, digestion, absorption, effects of nutrient deficiencies, nutrient requirements, recognized dietary guidelines and nutrient needs across the lifespan. The course will explore research evidence and controversies specific to the role of diet in chronic diseases (heart disease, cancer, diabetes, obesity). Students will explore changes in nutrient needs that occur with increased age to promote quality of life and healthy aging.

No pre-requisites are required, but an understanding of human biology/physiology and chemistry is *strongly* recommended as this will help the student better understand the concepts and processes that the course content draws from. Students who lack this background may want to consider postponing this course until they have completed such course work. For the student who has a weak or dated exposure to this background material supplementary material is available (contact the instructor for further information, if needed) that can be used concurrently, as-needed, to assist in a fuller understanding.

**Format:** Informal lecture presentations, class discussion and group activities.

Emphasis on critical thinking and analysis using current research-based knowledge and participatory learning activities that serves as the 'laboratory' portion of the course.

**Objectives:** Through the use of lectures, readings, discussion, experiential activities

and internet resources the student will:

1. Understand the body's role in nutrition and nutrient metabolism.
2. Identify basic components of what comprises a healthy diet and apply this knowledge to themselves and others.
3. Describe nutrition as it related to chronic diseases such as diabetes, heart disease, stroke and cancer.
4. Recognize physiologic, psychological, social and cultural factors that influence dietary patterns of individuals and groups across the lifespan.
5. Understand the function and sources of primary nutrients (proteins, carbohydrates, lipids, vitamins, minerals, and water) in health and aging.
6. Understand energy balance, body composition, obesity and underweight.
7. Evaluate common food and nutritional misconceptions.
8. Be familiar with current national nutrition guidelines and policies, and be able to apply these to assessing the adequacy and risk of a diet.
9. Conduct a personal dietary analysis and understand and explain the results.

### Student Learning Goals

*Upon completion of the course, students will be able to:*

1. Evaluate nutrition fads, comparing with facts, by applying scientific evidence.
2. Describe the biological processes of digestion and absorption of nutrients (protein, carbohydrate, fat).
3. Explain the pathway involved in energy metabolism and the results of under-nutrition and over-nutrition or excessive consumption beyond energy needs.
4. Define dietary guidelines and the role of government in their development.
5. Evaluate a personal diet using federal food guidelines and Web-based resources to calculate nutrient intake.
6. Discuss physiologic, psychological, social and cultural factors that influence dietary patterns associated with weight control, causes of obesity and treatments for obesity.
7. Identify foods and food groups that are good sources of specific vitamins and minerals found to be at risk in individuals across the lifespan.

### **COURSE EVALUATION & GRADING (450 pts)**

Diet Record & Nutrient Analysis	75
Nutrition Documentary Review	40
Older Adult Interview & Nutrition Screening	75
Current Event (1)	60
Discussion Questions (4)	80
Final Exam	100
<b>TOTAL</b>	<b>420</b>

Final grade is based on standard percentage scores of cumulative points:

A > 94%	A- = 90-93.9%		
B+ = 87 - 89.9%	B = 84-86.9%	B- = 80-83.9%	
C+ = 77 - 79.9%	C = 74-76.9%	C- = 70-73.9%	
D+ = 67-69.9%	D = 64-66.9%	D- = 60-63.9%	< 60% = FAIL

### **Assignments & Activities**

Coupled with classroom lectures, discussion, and course readings are a number of brief activities providing students the opportunity to apply course concepts and information. These activities are required for continued enrollment in the course and must be turned-in *on time* for credit. Additional written instructions for assignments will be given.

***ASSIGNMENTS ARE DUE AT 11:59 pm ON THE DATE DUE UNLESS OTHERWISE NOTED AND CAN BE SUBMITTED ELECTRONICALLY -BLACKBOARD (in WORD, no PDF) LATE WORK IS NOT ACCEPTED.***

### **Diet Record & Nutrient Analysis**

Each student will keep a complete food and activity diary for at least one day of all food, snacks and liquids consumed. This should be an honest and complete inventory, with as accurate and complete as possible description of both *what* is consumed and the *amount*, including all meals and snacks for one full 24 hour period. Each student will use the EaTracker.ca developed by Dietitians of Canada for their own diet analysis. Students will discuss their findings and recommendations for diet changes. An outline and rubric will be distributed and discussed in class. **DUE DATE: 7/8/21, 11:59 pm Blackboard**

### **Older Adult Interview & Nutrition Screening**

To understand the multiple factors (physical, mental, psychosocial, disease burden) that can affect the health and quality of life in the elderly population; and, the influence or impact of nutrition. Students will select an older adult 65+ years old to interview and explore their nutrition and overall health. Sample interview questions and rubric will be distributed and discussed in class. **DUE DATE: 7/29/21, 11:59 pm Blackboard**

### **Current Events (complete 1 during the semester)**

Each student will be asked to sign-up to research and present a current event related to course content. A review of at least two recent (2009-present) peer-reviewed articles must be incorporated into each written summary. Articles must research **human** nutrition only. The 1-2 page paper should provide evidence that supports or contradicts the popular media claim as cited in the current event. An outline and rubric will be distributed and discussed in class. **DUE DATE: 8/3/21, 11:59 pm Blackboard**

### **Discussion Questions (complete 4 during the semester)**

Students will work alone or with a partner and will respond to discussion questions requiring reflection on course reading and class content. Groups will write down their response and turn-in as a group for credit through Blackboard. **THROUGHOUT THE SEMESTER**

### **Nutrition Documentary Reflection**

Students will be given a list of documentaries and will select one to review. A list of prompts to guide student's written reflection will be given. **DUE DATE: 7/22/21.** Written

1-2 page response (uploaded into Blackboard).

**Final Exam (online) 8/5/21, 4:30p to 6:30p (24 hour available for completion).** The exam will include content covered in class over the entire semester including lectures and readings.

## COURSE SCHEDULE

DATE	TOPIC	READING & ASSIGNMENTS
Week 1 <u>July 1</u>	<ul style="list-style-type: none"> <li>• Introduction - Course Objectives &amp; Overview</li> <li>• Terms &amp; Definitions</li> <li>• Food Choices and Health</li> <li>• Nutrient Recommendations</li> <li>• Portion Sizes &amp; Food Labels</li> </ul> Activity: Food Labels	S&W Ch. 1 & 2
Week 2 <u>July 6</u>	<ul style="list-style-type: none"> <li>• Diet Recommendations &amp; Digestion</li> <li>• Physiology of Food Intake</li> <li>• Energy Balance &amp; Healthy Body Weight</li> <li>• Body Composition</li> <li>• Weight &amp; BMI</li> </ul> Activity: BMI	S&W Ch. 3 & 9, pgs. 344-357
Week 2 <u>July 8</u>	<ul style="list-style-type: none"> <li>• Carbohydrates; sources, metabolism, function</li> <li>• Finding carbohydrates in food</li> </ul>	S&W Ch.4, pgs. 114-139; 147-152; 154-159,  <b>Quiz #1</b>
Week 3 <u>July 13</u>	<ul style="list-style-type: none"> <li>• Lipids/Fats; sources, metabolism, function</li> </ul> Activity: Personal Diet reflections	S&W Ch. 5 <b>DUE: Personal Diet Record &amp; Nutrient Analysis</b>
Week 3 <u>July 15</u>	<ul style="list-style-type: none"> <li>• Proteins; sources, metabolism, function</li> <li>• Vegetarian diets</li> </ul> Activity: Current events	S&W Ch. 6 <b>Quiz #2</b>
Week 4 <u>July 20</u>	<ul style="list-style-type: none"> <li>• Vitamins &amp; Minerals; sources, metabolism, function</li> <li>• Supplements, risk and benefits</li> </ul> Activity: Group discussion	S&W Ch. 7
Week 4 <u>July 22</u>	<ul style="list-style-type: none"> <li>• Liquids – Minerals</li> <li>• Nutrition throughout the life span</li> <li>• Nutrient – Drug Interactions</li> </ul> Activity: Current events	S&W Ch. 8 & 14  <b>Quiz #3</b>
Week 5 <u>July 27</u>	<ul style="list-style-type: none"> <li>• Diet and Disease</li> <li>• Immunity</li> <li>• Cardiovascular disease &amp; HTN</li> </ul> Activity: Group discussion	S&W Ch. 11 Only pgs. 428-448; 459-462  <b>DUE: Documentary Review</b>

Week 5 <u>July 29</u>	<ul style="list-style-type: none"> <li>• Diabetes</li> </ul> Activity: Current Events	S&W Ch. 4, pgs. 141-146 <b>Quiz #4</b>
Week 6 <u>August 3</u>	<ul style="list-style-type: none"> <li>• Obesity</li> <li>• Fad Diets</li> <li>• Behavior modification</li> <li>• Eating Disorders</li> </ul> Activity: Group discussion Older Adult	S&W Ch. 9, pgs. 358-388 <b>DUE: Older Adult Interview and Nutrition Screening</b>
Week 6 <u>August 5</u>	<ul style="list-style-type: none"> <li>• Cancer</li> <li>• Complementary &amp; alternative medicine (CAM)</li> <li>• Genomics</li> </ul> Activity: Current Event Presentation & Discussion	S&W Ch. 11, pgs. 449-458; 464-469 <b>DUE: Current Event</b>
Week 7 <u>August 10</u>	Online Final Exam Blackboard	<b>Final Exam – 2 hours to complete, between 12:01 am-11:59 pm</b>

## USC 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.

#### STATEMENT FOR STUDENTS WITH DISABILITIES

Any student requesting academic accommodations based on a disability is 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 (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.– 5:00 p.m., Monday through Friday. Website for DSP and contact information: (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX) [ability@usc.edu](mailto:ability@usc.edu).

#### STATEMENT ON ACADEMIC INTEGRITY:

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. USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by the instructor. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the University Student Conduct Code (see University Governance, Section 11.00), while the recommended sanctions are located in Appendix A. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" <https://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, <http://policy.usc.edu/scientific-misconduct>

## STATEMENT OF DIVERSITY & INCLUSION

The USC Leonard Davis School of Gerontology is committed to creating an inclusive classroom environment that values the diversity of all its members. The School is committed to providing a purposefully inclusive community where all members and visitors are free from all intolerant behavior (including but not limited to harassment, verbal or written abuse, threats, ridicule, or intimidation). We encourage all members within our community to embrace and learn from the diversity within our classroom, school, and university.

Diversity at USC: Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. [diversity.usc.edu](http://diversity.usc.edu)

## EMERGENCY PREPAREDNESS/COURSE CONTINUITY IN A CRISIS

In case of a declared emergency if travel to campus is not feasible, USC executive leadership will announce an electronic way for instructors to teach students in their residence halls or homes using a combination of Blackboard, teleconferencing, and other technologies. See the university's site on Campus Safety and Emergency Preparedness.

### Other Areas of Importance

#### **Technological Proficiency and Hardware/Software Required**

**Review Blackboard announcements and check USC email frequently.** This course will be taught entirely online and accordingly, students are expected to make themselves aware of all announcements made on Blackboard, as **Blackboard announcements** will serve as the primary form of communication with students. Similarly, students are also expected to **check their USC email frequently, as all Blackboard announcements will also be sent by e-mail** (correspondence from professors will be sent to student USC email accounts). If not familiar with Blackboard, students are expected to go through the tutorials provided online at <http://studentblackboardhelp.usc.edu/> Full understanding of the system will be necessary for participation in this course. **Students will also need to understand how to successfully submit assignments through the turnitin.com link on Blackboard. If not familiar with turnitin, students should go through the tutorials provided online at <http://studentblackboardhelp.usc.edu/coursework/submitted-work-turnitin/>**

**IT Help:** For assistance with Blackboard, you can contact the USC Blackboard Help Line at (213) 740-5555, select Option 2. They are available 24 hours a day to assist you. You can also find USC's Blackboard Help for Students materials at <https://studentblackboardhelp.usc.edu/>.

**GRADE APPEALS AND DISPUTED GRADES**

As stated in the Academic Policies section of the University Catalogue, — A grade once reported to the Office of Academic Records and Registrar may not be changed except by request of the faculty member to the Committee on Academic Policies and Procedures (CAPP) on a Faculty Request for a Correction of Grade form. Changes should be requested only on the basis of an actual error in assigning the original grade, not on the basis of a request by the student or special consideration for an individual student. Students are not permitted to complete course work after the semester has ended.

**Incompletes**

In the case of a documented emergency that occurs after the withdrawal date and/or during the final exam period, students should consult the instructor about receiving a grade of Incomplete (IN) for the semester.

The Registrar's recommended definition of emergency "An unforeseeable situation or event beyond the student's control that prevents her from taking the final examination or final summative experience." Based on this definition, a student may not request an IN before the withdrawal deadline. The rationale is that the student has the option to drop the course until the withdrawal date. The grade of IN exists so there is a remedy for illness or emergency which occurs after the deadline to withdraw.

**Student Course Evaluations**

Gerontology conducts mid-semester evaluations during the fall and spring semester. These are very helpful to us and we appreciate your participation. You should also feel free to e-mail us at any time with your feedback regarding the course.

Learning Experience Evaluations will be conducted at the end of the semester. This will be your opportunity to provide feedback about your learning experience in the class. This feedback helps the instructor determine whether students are having the intended learning experiences for the class. It is important to remember that the learning process is collaborative and requires significant effort from the instructor, individual students, and the class as a whole. Students should provide a thoughtful assessment of their experience, as well as of their own effort, with comments focused on specific aspects of instruction or the course. For this feedback to be as comprehensive as possible, all students should complete the evaluation.

**Excused Absences**

We believe that attendance, participation, and timely completion of assignments are an important part of the learning experience. However, students may experience illness, travel due to participation in university activities (athletics, band, competitions, etc.), or may need to miss class due to religious observances or personal emergencies. Please communicate with us when this happens. If you are experiencing a serious illness or are dealing with a complex issue, you can contact USC's Campus Support & Intervention office for assistance - Tutor Campus Center, TCC Suite 421, telephone: [213-740-0411](tel:213-740-0411), email: [uscsupport@usc.edu](mailto:uscsupport@usc.edu).



**Religious Accommodations**

University of Southern California policy permits students to be excused from class for the observance of religious holy days. This policy also covers scheduled final examinations which conflict with students' observance of a holy day. Students must make arrangements in advance to complete class work which will be missed, or to reschedule an examination, due to holy days observance. For more information, please visit the Office of Religious Life for the full policy:

<https://orsl.usc.edu/life/calendar/absences/>