Old Dominion University, Norfolk Campus

Allied Health School

Course Title and Number: Nutrition Gen-303

Curriculum level: undergraduate level, didactic

Course Credit Hours: 3 hours

Class Location: Allied Health building, Room 101

Class Day and Time: Tuesdays, 9:00 am to 10:00 am (EST)

Semester, Year: Fall 2026

COURSE INFORMATION

1. Course Description and Purpose

This course examines foundational and applied principles of human nutrition in health promotion and disease management. Emphasis is placed on macronutrients, micronutrients, phytochemicals, food regulation, socio-cultural determinants of diet, and evidence-based nutrition interventions. Students will integrate biochemical, physiological, and clinical perspectives to analyze dietary patterns and formulate nutrition strategies for disease prevention and chronic condition management. This course surveys fundamental and applied principles of nutrition science. It provides foundational knowledge necessary for students pursuing careers in health sciences, dental hygiene, nursing, and allied health professions. Emphasis is placed on integrating biochemical mechanisms with clinical application

Course Prerequisites

Prerequisites: Minimum grade of C of (Bio 101,Math 101 and Eng 101)

Instructor: Ketul Dave, RDH, BSDH

Office Location: ODU Norfolk campus, Allied Health Building, Room 404

Office Hours: Tuesdays after class from 10:30 am to 12:30 am. Feel free to stop by and discuss any questions or concerns you may have if you see me available in the office, 'Walks-ins" is always welcome. I want everyone to be successful in this course, so please make me aware of any issues or concerns you have.

You can also reach out to me through email kdave007@odu.edu which is my preferred method of communication. I check my email frequently; however please allow up to 24 hours to reply

Office Phone Number: 901-323-3355

Methods of Delivery: This 16-week didactic course will be taught face-to-face on campus and will use lectures, textbooks, PowerPoint, audio-visual aids, and group activities. The course integrates active and student-centered learning strategies including:

- Interactive mini lectures
- Think–Pair–Share exercises
- Case-based learning
- Concept mapping
- Structured debates (e.g., food regulation policies)
- Guided dietary analysis workshops
- Problem-based learning scenarios
- Small-group presentations
- Peer instruction polling

→ **Course Website**: Canvas: Students are responsible for reviewing announcements, assignments, and course materials posted in Canvas Learning Management System

→ **Required Textbook:** Carcache de Blanco EJ, Mirtallo JM, editors. ***Nutrition: An approach to good health and disease management.*** Sharjah (UAE): Bentham Science Publishers; 2016. ISBN: 978-1-68108-317-9. This required textbook can be found for purchase or rent at the campus book store

→ **Supplemental readings:** All supplemental readings and articles are posted under the course content tab in canvas.

→ **Recommended text:** APA format will be used for all the written assignments. Students may utilize library resources for APA formatting guidelines

→ **Methods of Evaluation:** Students will be evaluated throughout the semester using a variety of methods, including exams, quizzes (graded and non-graded), presentations and written assignments

Assessment	Percentage
Exam 1 (Units 1–3)	20%
Exam 2 (Units 4–6)	20%
Final Exam (Comprehensive)	25%
Presentation Project	15%
Dietary Analysis Assignment	10%
Participation & Interactive Activities	10%
Total	**100%**

Grading Scale

A = 90–100

B = 80–89

C = 70–79

D = 60–69

F = Below 60

→ **Exams:** Exams will include multiple-choice, short-answer, true or false, and case-based analysis.

→ **Participation and Interactive Activities:** PICO questions: (Problem, interventions, Comparison and Observation), surprise quizzes

→ **Dietary Analysis Assignment:** Derive a chart of your calorie intake in a day and analyze three strengths and weaknesses of your diet and write a short summary (300 words)

→ **Final Exam:** The Final Exam is comprehensive and mandatory.

→ **Presentation:** Students will choose the topics of the presentation from a raffle basket; a 10-minute power-point presentation will have to be conducted in person. By the end of the semester, detailed information will be given from my end regarding the topics.

→ **Testing Protocol:** Exams will include material from PowerPoints presentations and the textbook. Exams will be administered in person during the class. During exams, students may be required to place all study materials and electronic devices in their lockers.

→ **Attendance Policy:** Students are expected to attend all lectures on time and remain for the entire class period. It is highly important that you are respectful to fellow learners. When you arrive late, you disrupt the learning process of others. Excessive absences (more than two) may negatively impact the course grade. Only documented emergencies will qualify for make-up examinations. Students must notify the instructor within 24 hours of a missed exam through email. Late entry during the session will not be permitted except for any emergency.

→ **Exam policy:** No makeup exam will be permitted except in documented emergencies. The format of the makeup exam may differ from the original exam. Students must arrive on time on the day of exams. Exam will be held during the class time.

→ **Assignment Policy:** Assignments must be submitted via Canvas by the designated deadline. All the written assignments are due at 8:59 am right before the class starts on Tuesday. Late submissions will not be considered. Late submissions each day will lead to deduction in 5% of points. All submissions are to be uploaded in the APA 7th edition format.

→ **Student Expectations:** Students are expected to study 2 hours outside of class every week to enhance their understanding and knowledge about the basic concepts mentioned in the book. Students are expected to attend class regularly, complete all assignments on time, participate in group activities, be respectful to fellow classmates and faculty, and demonstrate professionalism.

→ **Computer and Cell phone use:** As a student of this course, it will fall under your responsibility to be respectful to your fellow classmates. Please make sure all your electronic devices are in silent mode or turned off during class. For using a cell phone in case of emergency, you need to let me know in advance before the class begins.

→ **General computer and technical requirements:** Scientific calculator, Laptop or tablet for interactive activities, Access to canvas learning management system

Academic and Integrity Policy:

→ Plagiarism: Coping the work of another person is considered plagiarism, so make sure your work is original and not copied from anywhere. If cheating or plagiarism occurs, faculty has the discretion to determine the most appropriate sanction. (See Student Handbook) Plagiarism, cheating, facilitation, and fabrication are strictly prohibited. Violations may result in an F in the course or other disciplinary action according to University's Code of Conduct policies. Please follow the link https://www.odu.edu/student-conduct-academic-integrity/student-conduct

→ Code of Student Conduct: Please follow the link below for the important mandates https://www.odu.edu/sites/default/files/documents/BOV1530.pdf

→ Honor code: Please follow the link below for the important mandates https://www.odu.edu/student-conduct-academic-integrity/resolution-process

→ Accommodation: In accordance with the Americans with Disabilities Act, the college is committed to providing an accessible learning environment. Students requiring accommodation should contact Disability Support Services. (See student handbook)

→ Disclaimer - The information, materials, and content provided in this course are intended for educational purposes only. Course content, schedules, and requirements are subject to change without prior notice at the discretion of the faculty or administration. Students are responsible for meeting all academic and institutional requirements as outlined in official college policies.

COURSE OBJECTIVES

General Course Objectives (Chapter-Based)

Upon completion of this course, students will be able to:

1. Analyze the role of nutrition in health promotion and disease prevention.
2. Evaluate food regulations and public policy affecting nutritional quality and safety.
3. Differentiate macronutrient metabolism and physiological functions.
4. Apply dietary reference standards to nutritional planning.
5. Assess micronutrient function, deficiency, and toxicity.
6. Interpret dietary and laboratory data for nutritional status assessment.
7. Examine the role of phytochemicals in chronic disease prevention.
8. Evaluate socio-economic and cultural influences on dietary patterns.
9. Analyze risk factors contributing to nutrition-related diseases.
10. Formulate evidence-based nutrition interventions for disease management.

Major Topics/Objectives:

I. Nutrition in Health and Disease
II. Food Regulations in the United States
III. Macronutrients
IV. Macronutrients Nutritional Requirement Application
V. Micronutrients
VI. Micronutrients Nutritional Requirement Application
VII. Phytochemicals in Nutrition and Health
VIII. Influence of Socio economic Status and Culture in Diet and Nutrition
IX. Factors Contributing to Health and Disease
X. The Role of Disease in Nutrition Management

Specific Unit Objectives (Measurable – Bloom's Taxonomy)

Unit 1: Nutrition in Health and Disease

By the end of this unit, students will be able to:

- Define essential nutrition terminology.
- Describe determinants of nutritional status.

- Compare undernutrition and overnutrition.
- Explain energy balance physiology.
- Value the importance of epidemiological trends in nutrition-related diseases.

Unit 2: Food Regulations

By the end of this unit, students will be able to:

- Identify major U.S. food regulatory agencies.
- Explain food labeling requirements.
- Analyze dietary guidelines.
- Evaluate regulatory impact on public health.
- Value the importance of ethical decision making in food policy.

Unit 3: Macronutrients

By the end of this unit, students will be able to:

- Differentiate carbohydrate classifications.
- Describe lipid metabolism pathways.
- Explain protein digestion and absorption.
- Compare energy yield among macronutrients.
- Value the importance of balanced macronutrient intake for health.

Unit 4: Macronutrient Applications

By the end of this unit, students will be able to:

- Apply Dietary Reference Intakes (DRIs).
- Conduct dietary intake analysis.
- Develop balanced meal plans.
- Assess nutritional adequacy.
- Value the importance of proper macronutrient intake in managing health and disease.

Unit 5: Micronutrients

By the end of this unit, students will be able to:

- Classify vitamins (fat vs water soluble).
- Identify mineral functions.
- Recognize deficiency syndromes.

- Analyze toxicity risks.
- Value the importance of micronutrients in maintaining overall health.

Unit 6: Micronutrient Applications

By the end of this unit, students will be able to:

- Apply to micronutrient standards.
- Develop supplementation strategies.
- Interpret patient case deficiencies.
- Evaluate fortification policies.
- Value the importance of proper micronutrient use in patient care.

Unit 7: Phytochemicals

By the end of this unit, students will be able to:

- Define major phytochemical classes.
- Explain antioxidant mechanisms.
- Analyze research findings.
- Evaluate claims in functional foods.
- Value the role of phytochemicals in promoting health.

Unit 8: Socio-cultural Influences

By the end of this unit, students will be able to:

- Analyze cultural dietary patterns.
- Evaluate socioeconomic determinants.
- Assess food insecurity impacts.
- Compare global nutrition disparities.
- Value the impact of cultural and social factors on dietary choices.

Unit 9: Chronic Disease and care planning

By the end of this unit, students will be able to:

- Identify the pathophysiology of chronic diseases.
- Analyze diet-disease correlations.
- Interpret clinical case data.
- Develop nutrition care plans.

- Value the importance of evidence-based nutrition care in managing chronic diseases.

Unit 10: The Role of Disease in in Nutrition Management

By the end of this unit, students will be able to:

- Define the role of disease in nutrition management.
- Analyze nutrition interventions.
- Discuss how nutrition can help manage diseases.
- Discuss dietary modifications
- Value the importance of proper nutrition in managing disease.

Tentative Course Schedule

The schedule is tentative and subject to change due to unforeseen circumstances.

Week	Class Meetings Every Tuesday 9:00 am to 10:00 am	Chapters	Readings and Assignments must be completed before class
Week 1	8/25	Review Syllabus and Chapter 1 Activity: Think-Pair Share on diet myths	Read Pp 3-20
Week 2	9/1	Chapter 2 Activity: Concept Mapping	Read Pp 21-60
Week 3	9/8	Chapter 3 Guest Speaker	Read Pp 61-100
Week 4	9/15	Exam 1	Chapter (1-3)
Week 5	9/22	Chapter 4 Video Case Based Glycemic Comparison	Read Pp 101-119
Week 6	9/29	Chapter 5 Structured Debate	Read Pp 121-180
Week 7	10/6	Chapter 6 Video Interactive mini lectures	Read Pp 181-200

Week 8 **Fall Break**	10/13 No classes **Fall Break**	No classes **Fall Break**	No classes **Fall Break**
Week 9	10/20	Exam 2	Chapter (4-6)
Week 10	10/27	Chapter 7 Video Interactive Mini lectures	Read Pp 201-243
Week 11	11/3	Chapter 8 Guided Dietary Analysis Workshops	Read Pp 245-268
Week 12	11/10	Chapter 9 Case Based Learning	Pp 269-290 Dietary Analysis Assignment Due
Week 13	11/17	Chapter 10 Video PICO questions	Read Pp 291-341
Week 14	11/24 (Thanksgiving Break)	Enjoy the break	Enjoy the Break
Week 15	12/1	Presentations	Study for finals
Week 16	12/8	Final exam	Good luck!

Course Activity Sheet

WEEKS	Teacher Lecture	Video Media	Group Work	Partner Work	Individual Work	Guest Speaker	Student Oral Presentation	Quiz / Test / Exam
1				x				
2			x					Surprise quiz 1
3						x		
4	x							Exam 1
5		x			x			
6			x					Surprise Quiz 2
7		x						
8 Fall Break								
9	x							Exam 2
10		x						
11			x					Surprise Quiz 3
12					Dietary Analysis Assignment Due			
13		x			x			

14 Thanksgiving Break								
15	x						Presentations	
16	x							Final Exam
Total	10	4	3	1	3	1	1	6