Format revised 2025
Syllabus revised in 2025

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SCHOOL OF FOOD AND WINE STUDIES
DEPARTMENT OF DIETETICS AND NUTRITION
COURSE TITLE: INTRODUCTION TO NUTRITION
COURSE CODE: FWDNIN200
3 semester credits

1. DESCRIPTION

The continuous growth of nutritional awareness worldwide has brought nutrition to be one of the fundamental subjects in constant evolution during the last decades. This course provides students with basic nutrition concepts and focuses on the overview of the requirements and functions of protein, carbohydrates, lipids and the major vitamins and minerals that are determinants of health and diseases in human populations. Emphasis will be placed on the role of nutrition in growth and health through the life cycle and the role of diet in the development of chronic diseases and the maintenance of a good health status thanks to a balanced food consumption. The course offers an overview of food policies, food education and an analysis of nowadays eating habits. Students will also learn the guidelines for the balancing of a vegetarian diet and understand how to read a food pyramid.

2. OBJECTIVES

The aim of this course is to introduce students to the basic concepts of nutrition, the historical evolution of nutritional recommendations, and to the relationship between food and the most common chronic diseases related to food consumption, such as coronary heart disease, diabetes, and cancer.
Upon successful completion of this course, students will be able to:

- Explain the functions, food sources, and human requirements of major nutrients in the body
- Identify and describe the six major classes of nutrients (carbohydrates, proteins, fats, vitamins, minerals, and water)
- Critically evaluate the role of nutrition
- Understand the role of eating habits in the health status of individuals and society
- Know how food changes through industrial processing and how it affects our health
- Understand social actors implicated in prevention, promotion, and development of healthy eating habits
- Describe the processes of digestion, absorption, transport, and metabolism of nutrients
- Explain common digestive disorders and their nutritional implications (celiac disease, diabetes, lactose intolerance)
- Analyze food labels and apply this knowledge to make informed dietary choices
- Discuss the relationship between nutrition and chronic disease prevention

- Identify cultural, social, economic, and psychological factors that influence food choices and eating behaviors

3. REQUIREMENTS

There are no prerequisites for this course.

4. METHOD

This course consists of lectures, class discussions, projects, and interaction with the local community. Mediums for instruction used will include, but are not limited to, interactive and hands-on activities which challenge thought processes, integrate relevant academic sources, may include multimedia references, propose creative problem-solving, and other appropriate forms of delivery as deemed appropriate to the course's purpose.

5. TEXTBOOK – FURTHER READINGS – RESOURCES

TEXTBOOK (Copy available at the university library):

Essentials of Human Nutrition - Mann, Truswell, Hodson - Oxford University Press - 6th ed. 2023
The textbook is mandatory for course participation and completion. Where applicable additional materials may be provided by the instructor.

FURTHER READINGS

The Dietitian's Guide to Vegetarian Diets - Mangels, V.Messina, M. Messina - Jones&Bartlett Learning - 3rd ed.
Amy C. Brown, Understanding Food, Thomson Learning, 2008.
Marion Nestle, What to eat, North Point Press, 2006.
Marion Nestle, Food Politics, University of California Press, 2007.
Gary Taubes, Good Calories, Bad Calories: Fats, Carbs, and the Controversial Science of Diet and Health, Anchor, 2008.
Michael Moss, Salt Sugar Fat: How the food industry hooked us, Random House Trade Paperbacks, 2013.
Michael Pollan, In defense of food: An Eater's Manifesto, Penguin books, 2008.
Michael Pollan, Unhappy Meals by New York Times, January 28, 2007
http://www.nytimes.com/2007/01/28/magazine/28nutritionism.t.html?pagewanted=all
Marvin Harris, Good to eat: riddles of food and culture, Simon and Schuster, 1985.
Greg Critsler, Fat Land: How Americans Became the Fattest People in the World, Houghton Mifflin, 2003.
Felicity Lawrence, Not On the Label: What Really Goes into the Food on Your Plate, Penguin Books, 2004.
Harvey Levenstein, Paradox of Plenty: A Social History of Eating in Modern America, University of California Press, 2003.
AA.VV., Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease, Harvard University Press, 1980.
Peter Singer and Jim Mason, The Way We Eat: Why Our Food Choices Matter, Rodale Books, 2006.

LIBRARY

Course participants may access the campus library. Please consult the library site for resources such as collections, borrowing, scanning and wifi connection, and research:

https://www.auf-florence.org/Library/the-library/

6. COURSE MATERIALS

Students are expected to wear the apron provided by the institution.
AA, BA, and Career students are required to bring the set of knives provided at the beginning of the program.
Should students wish to store materials or equipment, lockers are available with a deposit (given back after returning the key).

7. COURSE FEES

Course fees cover course-related field learning activities, visits, and support the instructor's teaching methodologies. Book costs are not included in the course fee. If this course requires a fee, the exact amount is communicated prior to enrollment.

8. GRADING AND EVALUATION & ATTENDANCE

10% Attendance
30% Class Participation and Assignments
20% Midterm Assessment, Field Learning project (if applicable), Special/Research Project (if applicable)
20% Final Exam
20% Paper/Project

The above grade breakdown percentages reflect the grading scale standards in the "Grading and Evaluation System" section of the catalog.

Attendance
Class participation is mandatory. Based on the hours defined in the Academic Catalog's attendance policy, students may miss up to 2 class encounters delivered as lecture hours. A third absence constitutes a course failure.

Please note that absence hours may vary according to the learning methodology, as per the academic catalog policy on credit hours:
https://catalog.auf-florence.org/standard_regulation

9. EXAMS / PROJECTS / ASSIGNMENTS

Midterm Assessment (11 weeks semester ONLY): accounts for 20% of the final course grade. Topic will be assigned on Lesson 5 and is due by Lesson 6. The Midterm assessment must be uploaded on the course portal.

Special/Research Project (Intensive sessions ONLY): accounts for 20% of the final course grade. The project details will be assigned the first day of class. Further details are provided in the course portal.

Final Exam: accounts for 20% of the final course grade.
The Final Exam is divided into three sections:

- Part I: 10 Multiple choice questions. Each correct answer is worth 2 points, for a total of 20 points.

- Part II: 10 short-answer questions. Each correct and complete answer (concise explanations, main ideas, key words, names, etc.) is worth 5 points, for a total 50 points.
- Part III: two essay questions; each correct and complete answer is worth 15 points (based on content, vocabulary, detail, etc.) for a total of 30 points.

The final exam is cumulative.

Final Project: accounts for 20% of the final course grade and is due by Lesson 9. The project details will be assigned the first day of class.

Assignments: This course requires at least 3 assignments as per the course outline in the syllabus.

Assignment #1: **Italian Seasonality Chart**. Students are asked to provide a survey of seasonal ingredients (vegetables, fruits, fish) throughout the whole year, highlighting those that can be considered local. Due by Lesson 4.

Assignment #2: **Nutrients search.** Students are asked to analyze the nutrient composition of ingredients and/or dishes assigned by the professor. Due by Lesson 7.

Assignment #3: **Dietary Habits Journal**. Students are asked to 1)Record their eating patterns for an entire week, keeping a daily log that specifies what they consumed, when, and in what context 2)Review and analyze their weekly diet, assessing whether and to what extent it aligns with the standards of completeness established by the International Nutrition Standards. Due by lesson 10.

Further details are provided in the course portal.

10. COURSE OUTLINE

Lesson 1	
Meet	In class
Lecture	**Introduction to the course** Introduction to the syllabus and materials to be used. Information on assignments and exams. **Food and nutrition basics - Essential Nutrients** Definition and history of feeding and nutrition, functional components of food. Nutritional requirements: basal metabolic rate, energy balance, caloric density of nutrients, glycemic index **Macro nutrients - Focus on Carbohydrates and Proteins** Definition, classification, digestion and sources
Objectives	Get familiar with the basic concepts of nutrition - Get confident with macro nutrients - Understand what carbohydrates and proteins are, where we usually find them and their role for human nutrition - Learn how carbohydrates are digested and the consequences on the human body
Readings/ Assignments	Essentials of Human Nutrition Ch. 1 pp. 3-13 / Ch.2. pp.14-30 / Ch.4 pp. 60-75 **Assignment #1: Italian Seasonality Chart.** Due by lesson 4.

Lesson 2	
Meet	In class
Lecture	**Macro nutrients - Focus on Lipids** Definition, classification and sources - Naturally occurring dietary lipids - The elements of lipids: glycerides and fatty acids - Mono/polyunsaturated and saturated fatty acids - Digestion, absorption and transport **Cholesterol** Definition and purposes for the human body - Difference between blood and dietary cholesterol - LDL and HDL cholesterol
Objectives	Learn lipids sources and the mechanisms connected to lipids digestion and metabolism - Get confident with saturated and unsaturated fatty acids - Understand the purpose of cholesterol and the difference between blood and dietary cholesterol - Understand the concept of nutritional balance based on Italian standards
Lab	Nutritionally balanced dishes based on Italian national standards. Pasta with seasonal vegetables and Parmigiano Reggiano - Venere rice and seasonal vegetable salad with canned tuna, capers and olives
Readings/ Assignments	Essentials of Human Nutrition - Ch.3 pp. 40-57

Lesson 3	
Meet	In class
Lecture	**Organic and inorganic essential nutrients: water, vitamins and minerals** Sources, roles and deficiencies - The role of water and the acid-base balance - Electrolytes - Major and trace minerals - Definition and purpose of Vitamins - Phytochemicals - Antinutrients
Objectives	Learn the importance of micro nutrients and water for general health - Get confident with the role of minerals for the overall balance of the body functions - Learn where to find micro nutrients - Understand the physiological effects of phytochemicals - Become familiar with compounds that can interfere with the absorption of nutrients
Readings/ Assignments	Essentials of Human Nutrition - Ch.7 pp. / Ch.8 / Ch.9 / Ch.10 / Ch. 11 pp.191-200 / Ch.12 / Ch.13 / Ch.14 / Ch.15 **Assignment #2 topic assigned: Nutrients search.** Due by Lesson 7. **Assignment #3 topic assigned: Dietary Habits Journal.** Due by Lesson 10.

Lesson 4	
Meet	In class

Lecture	**Nutrition and health** Food as the first source of good health - How much of everything? Daily recommended intake - Human energy needs - Definition and background of a food pyramid - Morphometry - Balanced and unbalanced diets
Objectives	Understand the relationship between food and body health - Understand the concept of daily intake according to the variety of needs - Understand the characteristics of an unbalanced diet
Readings/ Assignments	Essentials of Human Nutrition - Mann, Truswell Ch.2.8 pp.30-38 / Ch.3.5 pp.57-59 / Ch.4.17 pp.75-80 / Ch. 5 pp.82-97 **Assignment #1 DUE** **FINAL PROJECT OVERVIEW**

Lesson 5	
Meet	In class
Lecture	**Food Groups** Survey of food groups: vegetables, legumes, meats, dairy, eggs, seafood, nuts and seeds - Composition of food groups - The importance of seasonality for a healthy nutrition - Analysis of fresh and local produce market Comparison among italian gastronomy in North, Central and Southern Italy
Objectives	Learn common food nutrient composition - Understand the quality of nutrients contained in food - Get confident with common sources of carbohydrates, proteins, lipids - Learn the advantages of seasonal vegetable consumption - Learn the importance of fresh produce consumption VS processed food - Get confident with the differences in Italian nutrition style from north to south
Readings/ Assignments	Essentials of Human Nutrition - Ch.17 pp.273-297 **MIDTERM ASSESSMENT ASSIGNED**, due prior to next class meet (Semester course only)

Lesson 6	
Meet	In class
Lecture	**Food industry & food production** Food systems: Fresh food availability - The logic of food industry Food processing & Fortified food: effects of processing on food nutrients content - Food fortification: is it really necessary? - Integrators and supplements: implications for health - How to avoid integrators by using food - What to eat for a proper nutrient intake Functional foods and health claims: foods that provide health benefits beyond basic nutrition - Nutraceutics

Objectives	Understand what food systems are and their influence on eating habits - Learn the importance of fresh food availability for a healthy diet - Understand how food industry works, what the interests behind the industrial production of food are - Understand what the consequences of the food industry are on population's health - Learn the characteristics of nutrients after processing - Understand the importance of using food as a source of health - Understand which ingredients can be a valid alternative to integrators and fortified food
Lab	Superfoods application in daily diet Chia seeds, greek yoghurt and chocolate pudding with fresh seasonal fruits - Mixed salad with lettuce, cherry tomato, walnuts, feta cheese and goji berries - Turmeric scented celery and apple soup
Readings/ Assignments	Essentials of Human Nutrition - Ch.17 pp.298-304 / Ch.18 pp.306-314 / Ch.38 pp. 604-614 **MIDTERM ASSESSMENT DUE (Semester course only)**

Lesson 7	
Meet	In class
Lecture	**Food policies and food education** Food habits: social and cultural influences on food choices - Nutritional recommendations for the general population: MyPlate - Communicating food for health - Environment-nutrition relationship: food's production impact - Role of governments, nutritionists, educators - Public health approaches for a better nutrition: nutrition education and advertising - Food education as a promising instrument to promote healthy eating among children: avoiding junk food
Objectives	Understand how cultural background and society can influence the way people eat and what they commonly eat - Understand MyPlate concept - Understand the importance of an effective nutrition education and communication for the diffusion of nutritional recommendations - Learn to be aware of what we eat every day
Readings/ Assignments	Essentials of Human Nutrition - Ch.34 pp. 556-570 / Ch.35 pp. 572-585 / Ch.36 pp.587-594 / Ch.39 pp. 616-630 http://www.foodedu.it/en/p https://www.sciencedirect.com/science/article/pii/S0016328716301446 http://www.fao.org/nutrition/education/en/ **Assignment #2 DUE**

Lesson 8	
Meet	In class

Lecture	**The need to feed** Mechanisms of appetite and satiety: food as reward and gratification - Appetite and hunger - Mood, food and eating disorders: food addiction - Anorexic and orexigenic drugs and other strategies to control weight **Nutrition-related disorders** Chronic diseases of western countries: epidemiology - Contribution of diet and lifestyle to health and disease prevention - Unbalanced diets, obesity, eating disorders, hypertension, cardiovascular diseases, diabetes - Focus on anorexia and bulimia
Objectives	Understand why we need to eat and the mechanisms of our brain that are responsible of appetite and satiety - Understand the difference between appetite and hunger - Get confident with the idea that eating is the result of neurostimulations - Become familiar with food addictions and the use of drugs to control weight Understand what an eating disorder is - Understand the consequences of an inadequate or poor diet on general health - Understand the reasons at the base of eating disorders - Learn the possible solutions to disorders
Readings/ Assignments	Essentials of Human Nutrition - Mann, Truswell Ch.20 / 21/ 23 / 24 - Ch.26 pp. 441-450 http://www.who.int/dietphysicalactivity/publications/trs916/summary/en/ https://www.sciencedirect.com/science/article/pii/S0896627302009698 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4150387/ **Special Project DUE (Intensive Sessions ONLY)**

Lesson 9	
Meet	In class
Lecture	**Food labels as effective means of health prevention** Food analysis and food composition tables - Comparison between FDA and EFSA regulations - Health Claims and Marketing Language - Ingredient Lists and Allergen Information - Methods at the base of label compilation - How to read a label and what to know to evaluate it Case studies of actual food labels
Objectives	Understand how companies write nutritional information - Learn to analyze and evaluate labels - Understand how food labels can help disease prevention - Critically analyze of how different regulatory approaches impact consumer understanding and food choices
Field assignment	Field analysis of Italian grocery stores and supermarkets (group work) • Collect nutrition labels from 3 different food products, analyze key components, compare similar products across different brands, and record findings • Compare findings through small group discussions • Back to class for critical analysis: identify marketing methods, health claims vs. reality, ingredient quality, evaluate Italian/EU regulations

Readings/ Assignments	Essentials of Human Nutrition - Ch. 27 pp.454-465 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5206777/ **FINAL PROJECT DUE**

Lesson 10	
Meet	In class
Lecture	**Dietary regimens: plant-based diets** Definition and classification of plant-based diets - Implications of vegetarian diet on health - Balancing a vegetarian diet: lacto-ovo vegetarians - Focus on iron, calcium and B vitamins intake - Protein sources Final course review
Objectives	Learn the variety of plant-based diets - Understand how vegetarian diets can impact health, pros and cons - Get confident with balancing a vegetarian diet - Learn how to guarantee certain nutrients intake thanks to informed choices
Lab	Lentil and mushroom orzo soup - Seasonal fruit salad with dried apricots, dried figs, toasted almonds and yoghurt - Hummus with vegetables and parsley oil
Readings/ Assignments	The Dietitian's Guide to Vegetarian Diets - Mangels, V. Messina, M. Messina - Jones&Bartlett Learning - 3rd ed. Ch. 1 & 2 **Assignment #3 DUE**

Lesson 11 Final Exam	
Meet	
Lecture	FINAL EXAM