



SYLLABUS

PALAZZI FLORENCE ASSOCIATION FOR INTERNATIONAL EDUCATION FLORENCE UNIVERSITY OF THE ARTS APICIUS - INTERNATIONAL SCHOOL OF HOSPITALITY

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:

- 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

3. REQUIREMENTS

There are no prerequisites for this course.

4. METHOD

This course consists of lectures, class discussions, and projects. Mediums for instruction used may include but are not limited to, interactive and hands-on activities which challenge thought processes, academic texts and studies, videos, slides, guided problem solving, and experiential and/or field learning activities where applicable.

5. TEXT BOOK – FURTHER READINGS – RESOURCES

TEXT BOOK

Essentials of Human Nutrition - Mann, Truswell - Oxford University Press - 5th ed. 2017

The Textbooks are pre-ordered and available at: Paperback Exchange in Via delle Oche 4r or laFeltrinelli Via dei Cerretani 40R.

Textbooks may also be available for purchase online or in e-book format.

The text book is mandatory for successful completion of the course.

Where applicable, additional materials, handouts and/or notes will be provided by the instructor.

FURTHER READINGS

(Books listed below are available in the FUA-AUF library)

The Dietitian's Guide to Vegetarian Diets - Mangels, V. Messina, M. Messina - Jones & Bartlett Learning - 3rd ed.

Karen E. Drummond and Lisa M. Brefere. Nutrition for Foodservice and culinary professionals.

Amy C. Brown, Understanding Food, Thomson Learning, 2008.

J. Davies and B. Hammond, Cooking explained, Longman, 1988.

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, The omnivore's dilemma: a natural history of four meals, Penguin Press, 2006.

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.

Jeremy Rifkin, Beyond beef: the rise and fall of the cattle culture, Plume, 1993.

Felicity Lawrence, Not On the Label: What Really Goes into the Food on Your Plate, Penguin Books, 2004.

Harvey Levenstein, Fear of food: a history of why we worry about what we eat, University of Chicago Press, 2012.

Harvey Levenstein, Paradox of Plenty: A Social History of Eating in Modern America, University of California Press, 2003.

Harvey Levenstein, Revolution at the Table: The Transformation of the American Diet, Oxford University Press, 1988.

AA.VV., Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease, Harvard University Press, 1980.

Massimo Livi Bacci, Population and nutrition: an essay on European demographic history (Cambridge Studies in Population, Economy and Society in Past Time), Cambridge University Press, 1991.

Peter Singer and Jim Mason, The Way We Eat: Why Our Food Choices Matter, Rodale Books, 2006.

Eric Schlosser, Fast Food Nation: The Dark Side of the All-American Meal, Penguin Books, 2002.

Paul Roberts, The end of food, Houghton Mifflin Harcourt, 2004.

Thomas Pawlick, The End of Food: How the Food Industry Is Destroying Our Food Supply--And What You Can Do about It, Greystone Books, 2006.

Jonathan Safran Foer, Eating Animals, Penguin Books, 2009.

LIBRARIES IN FLORENCE

The FUA-AUF library is located in Corso Tintori 21. Please consult the posted schedules for official opening times. Also note that the library is for consultation only and it is not possible to

borrow materials. The library is equipped with a scanner and internet access so that you may save or email a digital copy of the pages needed.

Students may also utilize additional libraries and research centers within the local community:

Biblioteca Palagio di Parte Guelfa

Located in Piazzetta di Parte Guelfa between Piazza della Repubblica and Ponte Vecchio.

Please consult the library website for hours of operation:

http://www.biblioteche.comune.fi.it/biblioteca_palagio_di_parte_guelfa/

Biblioteca delle Oblate

Located in via dell'Oriuolo 26. Please consult the library website for hours of operation:

www.bibliotecadelleoblate.it

The Harold Acton Library at the British Institute of Florence

Located in Lungarno Guicciardini 9. Please consult the library website for hours of operation.

This library requires a fee-based student membership. For information: www.britishinstitute.it/en

6. FIELD LEARNING

Please consult your Official Registration for any mandatory field learning dates. Field Learning Activities cited in Official Registrations are an integral part of the course and also include an assignment that counts towards your final grade, details will be provided on the first day of class.

7. COURSE MATERIALS

Students are expected to wear the lab apron provided by the department.

Should students wish to store materials or equipment, lockers are available with a deposit (given back after returning the key).

8. 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. The exact amount will be communicated by the instructor on the first day of class.

9. EVALUATION – GRADING SYSTEM

10% Attendance

30% Class Participation and Assignments

20% Midterm Exam, Field Learning project (if applicable), Special/Research Project (if applicable)

20% Final Exam

20% Paper/Project

A = 93-100 %, A- = 90-92%, B+ = 87-89%, B = 83-86%, B- = 80-82%, C+ = 77-79%, C = 73-76%, C- = 70-72%, D = 60-69%, F = 0-59%, W = Official Withdrawal, W/F = Failure to withdraw by the designated date.

10. ATTENDANCE – PARTICIPATION

Academic integrity and mutual respect between instructor and student are central to the FUA-AUF academic policy and reflected in the attendance regulations. Student presence is mandatory and counts toward the final grade.

On the **second absence** the attendance and participation grade will be impacted. Please note that missing certain field learning activities may count for more than one absence.

On the **third absence** the instructor may lower the final grade by one letter grade. (Example: Final grade average of 93% or A will become a B).

The fourth absence constitutes automatic failure of the course. Students with excessive absences will be asked to withdraw with a W (if before the deadline) or leave the course with a WF.

Late Arrival and Early Departure

Arriving late or departing early from class is not acceptable. Two late arrivals or early departures or a combination will result in an unexcused absence. Travel is not an exceptional circumstance.

Travel (or delays due to travel) is NEVER an excuse for absence from class.

It is always the student's responsibility to know how many absences he or she has in a course. If in doubt, speak with your instructor!

Participation: Satisfactory participation will be the result of contributing to class discussions by putting forth insightful and constructive questions, comments and observations. Overall effort, cooperation during group work and in-class activities, responsible behavior, and completion of assignments will be assessed. All of the above criteria also apply to Field Learning and site visits if applicable.

11. EXAMS – PAPERS – PROJECTS

Assignments

Students will be asked to keep a **weekly food journal**, documenting what they eat, where, when, with whom, and in what context.

During the Market visit on lesson 5 students are asked to collect information about seasonal ingredients available in the Florence market.

On lessons 14 each student will present the result of his/her weekly menu to the class and analyze it according to most recent nutritional recommendations and local seasonality.

This presentation must be uploaded on the course website by lesson 13.

Students will also analyze the social implications of their own eating habits from a nutritional, historical, social, anthropological, and economical perspective by submitting a 1000 words reflection.

This paper is due by lesson 11.

Class participation and assignments account for 30% of the final course grade.

The final **Paper** accounts for 20% of the course grade.

- **1800-word paper - Topic to be communicated by lesson 5 - Due by lesson 13**
- Guidelines and topics samples will be available on the course website
- Material for research will be available in the FUA-AUF Library in Corso Tintori 21

The **Midterm** and **Final** exam each account for 20% of the final course grade. For exam time and date refer to course website.

The time and date of the exam cannot be changed for any reason.

The exams will consist of short answer and essay questions.

The Final Exam is cumulative.

12. LESSONS

Lesson 1	
Topic	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 - Mann, Truswell Ch. 1 pp. 3-13 / Ch.2. pp.14-30 / Ch.4 pp. 60-75

Lesson 2	
Topic	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 - Mann, Truswell - Ch.3 pp. 40-57

Lesson 3	
Topic	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 - Mann, Truswell - Ch.7 pp. / Ch.8 / Ch.9 / Ch.10 / Ch. 11 pp.191-200 / Ch.12 / Ch.13 / Ch.14 / Ch.15

Lesson 4	
Topic	Nutrition and health Food as the first source of good health: nutraceuticals - 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
Additional readings	Nutrition for Foodservice and culinary professionals - Ch. 11 Food Politics - Appendix: Issues in nutrition and nutrition research

Lesson 5	
Topic	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
Field learning activity	Visit to Sant'Ambrogio Market Students are asked to collect information about seasonal ingredients available in Florence market. This information will be included in the Special Project due by lesson 14.
Readings/ Assignments	Essentials of Human Nutrition - Mann, Truswell Ch.17 pp.273-297
Additional readings	Carole Counihan, around the Tuscan table, chapter 4.

Lesson 6	
Topic	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 - Nutraceuticals
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
Note	Mid-term review - A study guide will be available on the course website
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 - Mann, Truswell Ch.17 pp.298-304 / Ch.18 pp.306-314 / Ch.38 pp. 604-614

Lesson 7	
Topic	MID-TERM EXAM

Lesson 8	
Topic	MID-TERM BREAK

Lesson 9	
Topic	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 - Mann, Truswell 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/
Additional readings	Harvey Levenstein, Fear of food: a history of why we worry about what we eat, University of Chicago Press, 2012, Ch. 10 Marion Nestle - What to eat - Ch. 24

Lesson 10	
Topic	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 what an eating disorder is - Understand the consequences of an inadequate or poor diet on general health - Get confident with anorexia and bulimia - Understand the reasons at the base of eating disorders - Learn the possible solutions
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/

Lesson 11	
Topic	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
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
Readings/ Assignments	https://www.sciencedirect.com/science/article/pii/S0896627302009698 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4150387/

Lesson 12	
Topic	Food labels as effective means of health prevention Food analysis and food composition tables - Methods at the base of label compilation - How to read a label and what to know to evaluate it
Objectives	Learn how to read a nutritional label - Understand how companies write nutritional information - Learn to analyze and evaluate labels - Understand how food labels can help disease prevention

Field learning activity	Visit and exercise at the supermarket: reading the labels, nutritional value and ingredients, healthy recipes Students will be asked to select the healthiest option of different processed foods and will be assessed by teacher in the reading and interpretation of the nutrition facts labels and ingredients
Readings/ Assignments	Essentials of Human Nutrition - Mann, Truswell Ch. 27 pp.454-465 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5206777/

Lesson 13	
Topic	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
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 farro 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

Lesson 14	
Topic	Special Project presentation & Final Course review Presentation of the assignment. Class discussion. Each student will expose the result of his weekly menu to the class and analyze it according to most recent nutritional recommendations and to the food pyramid. General review of the basic concepts developed during the course and resolution of doubts and answers of the students before the final exam.
Objectives	Be able to discuss about the course subject - Demonstrate an understanding of nutrition basics - Demonstrate the ability to analyze and comment their own eating habits

Lesson 15	
Topic	FINAL EXAM