



## Course Unit: **935023 - Human nutrition and feed**

Year 2 Semester 4 ISCED Code: 721 ECTS: 5,0

**Type of Course Unit:** Compulsory **Delivery Mode:** Face-to-face **Language of Instruction:** Portuguese

**COURSE COORDINATOR:** Olga Maria Reis Pacheco de Amaral

### HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
125		60							65

Prerequisites (if applicable): Not applicable

### LEARNING OUTCOMES (knowledge, skills and competence)

Through this course is intended that each student is capable of:

- Understand the feeding in its complexity and constant evolution.
- Understand the determining factors of food choices.
- Understand the concepts of food and nutrient.
- Identify and characterize the different groups of nutrients.
- Understand and characterize the different dietary guidelines.
- Know the main errors and conceptualize healthy diet.
- Understand the effects of food technology and cooking on the nutritional value of foods.
- Know the nutritional needs throughout the lifecycle.
- Understand and identify the main eating disorders.
- Know the most common situations of influence of food on health: food allergy, food intolerance, inflammatory bowel disease, functional foods and fortified foods.

### CONTENTS

1. History and evolution of the human diet.
2. Introduction to the study of human nutrition.
3. Energetic nutrients: carbohydrates, lipids, proteins and ethyl alcohol.
4. Substances that support metabolism: dietary minerals, vitamins, fibers and water.
5. Use of nutrients: the digestive process.
6. The effects of food technology and culinary preparation of foods on their nutritional value.
7. Bioenergetics: energy food, energy expenditures, the regulation of energy balance and energy reserves.
8. Nutritional status assessment: Anthropometric evaluation, assessment of dietary intake.
9. Healthy dietary pattern. Guides to healthy diet.
10. Nutrition in the life cycle: pregnancy and lactation, childhood and adolescence, and old sportsman.

11. Eating disorders.

12. Nutrition and health: food allergy, food intolerance, inflammatory bowel disease, functional foods and fortified foods.

### **DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES**

This course aims to make students understand feeding in their complexity and constant evolution. For such are dealt topics related to the evolution of feeding over time. Particular focus is given to the Mediterranean Diet and the current food situation is characterized and analyzed its evolution. In this UC it is also intended that students have the concepts of food and nutrient and be able to identify and characterize the different nutrients relating them with food. We analyze various food guides as tools for food education highlighting the differences and constraints of each. It is also intended with this UC that students know prepare balanced diets and identify the main mistakes and finding healthier solutions. In this UC are also dealt issues related to the regulation of energy balance and methods of assessing nutritional status.

### **TEACHING METHODOLOGIES**

Presentation with digital support of theoretical concepts.

Individual research on topics that follows the creation of discussion groups.

Discussion of scientific papers.

Presentation and resolution of case studies.

### **DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES**

In this UC, and according to different subjects, there will be lectures, class discussion of topics previously prepared by students, analysis of scientific papers and analysis of case studies. Some situations are also presented for resolution. The written work produced by the students can be based on a literature or on results of applied surveys.

### **EVALUATION METHODS**

Preparation and presentation of written work on predefined theme based in literature and / or fieldwork.

Theoretical tests during the semester and / or at the end of the semester. The minimum score on each test is 9.5.

The final assessment will be weighted taking into account participation in classroom activities, tests and practical work done.

### **MAIN BIBLIOGRAPHY**

Almeida, M. D. V., Afonso, C. I. P. N., 1997, Princípios Básicos de Alimentação e Nutrição, Universidade Aberta, Lisboa

Teixeira, P., Sardinha, L. B., Barata, J. L. T., 2008, Nutrição, Exercício e Saúde, Ed. Lidel

INSA (CSAN), 2006, Tabela da Composição de Alimentos, INSA, Lisboa.

Mahan, Escott-Stump, 2005, Krause - Alimentos, Nutrição e Dietoterapia, 11ª Ed., Ed Roca Ltda.

João Breda, 2003, Fundamentos de Alimentação, Nutrição e Dietética, Ed. Mar da Palavra

Gonçalves Ferreira, F. A., 1994, Nutrição Humana, 2ª Edição, Fundação Calouste Gulbenkian, Lisboa

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