

29208 - Human Nutrition

Información del Plan Docente

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| Academic Year | 2016/17 |
| Academic center | 229 - Facultad de Ciencias de la Salud y del Deporte |
| Degree | 441 - Degree in Human Nutrition and Dietetics |
| ECTS | 9.0 |
| Course | 2 |
| Period | Annual |
| Subject Type | Basic Education |
| Module | --- |

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

1. Theoretical classes:

Module 1. Introduction to human nutrition: The first block of theoretical subject is dedicated to basic concepts in human

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nutrition as classification of nutrients and type of nutritional recommendations, fundamentals, applications and target groups.

Lesson 1. Introduction to nutrition. Classification of nutrients.

Lesson 2. Nutritional recommendations: Dietary Reference Intakes, and other nutrient recommendations in the healthy adult.

Module II: Energy metabolism and energy macronutrients: The second thematic section will focus on the study of energy metabolism and energy balance in humans, as well as integrated vision of proteins, carbohydrates and lipids metabolism in human nutrition.

Lesson 3. Energy balance: energy intake and energy expenditure.

Lesson 4. Proteins.

Lesson 5. Lipids.

Lesson 6. Carbohydrates.

Lesson 7. Dietary fibers.

Lesson 8. Integrated macronutrient metabolism in human nutrition.

Module III: Micronutrients and other dietary components:

In the third part, water, vitamins and minerals will be studied from the point of view of human nutrition (functions, general metabolism and nutritional needs). This section ends with the study of other diet components with important physiological functions such as nitrogenous substances, stimulatory compounds, anti-nutrients and various plant compounds (phytochemicals).

Lesson 9. Introduction to the micronutrients.

Lesson 10. Vitamins and minerals.

Lesson 11. Water.

Lesson 12. Other dietary components.

Module IV: Assessment of nutritional status: The final section of the theoretical program will focus on the basics, techniques and protocols used in adult nutritional assessment in order to provide the basic knowledge for application to other courses.

Lesson 13. Methodology of nutritional status assessment: fundamentals and applications.

Lesson 14. Other components of nutritional status assessment.

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Lesson 15. Dietary intake assessment.

Lesson 16. Body composition assessment.

2.- Practical classes:

- DIETARY REFERENCE INTAKES: Nutrient adequacy ratio. Nutritional food labelling.

- ENERGY EXPENDITURE AND ENERGY BALANCE: Determination of energy expenditure using indirect calorimetry. Energy metabolism. Theoretical determination of total daily energy expenditure and its components.

- CARBOHYDRATES. Glycemic index and glycemic load.

- PROTEINS: Dietary protein quality evaluation in human nutrition.

- MINERALS: Evaluation of iron dietary intake and its bioavailability.

- ASSESSMENT OF NUTRITIONAL STATUS:
 - * Body composition assessment using anthropometry and electric bioimpedance.
 - * Methodology of dietary intake assessment.

Biochemical assessment: biochemical measures, malnutrition rates.

- * Analysis and evaluation of changes in nutrient concentrations in blood. Glucose and lipid metabolism disorders in relation to nutrition.
- * Assessment of body protein status: nitrogen balance; urinary creatinine and serum proteins. Structured questionnaires in nutritional screening.
- * Use of different software tools in human nutrition.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources