COURSE DATA

DATA SUBJECT

Code: 34493
Name: Diet and dietetics
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1204 - Degree in Medicine	Facultat de Medicina i Odontologia	3	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1204 - Degree in Medicine	Optional subjects	ELECTIVES

COORDINATION

OLASO GONZALEZ GLORIA

SUMMARY

The objective of this subject is to provide the necessary knowledge about the basic principles of human nutrition and feeding as well as thevaluation of the nutritional status and diets design in the different stages of life and in the treatment of determined pathologies.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

1204 - Degree in Medicine

Acknowledge diversity and multiculturality.

Capacity for communicating with professional circles from other domains.

Consideration of ethics as a fundamental value in the professional practise.

Criticism and self-criticism skills.

Proper organisation and planning of the workload and timing in professional activities.

Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

Team-working skills and engaging with other people in the same line of work or different.

Understand and recognise the structure and normal function of the human body, at the following levels: molecular, tissue, organic, and of systems, in each phase of human life and in both sexes.

Working capacity to function in an international context.

DESCRIPTION OF CONTENTS

1. THEORY
Block I - Main Concepts

1. NUTRITION. NUTRITIONAL VALUE OF THE FOOD. General concepts.
Nutritional value of the food. Nutritional composition of the food and ways to express their energy.
2. ENERGY CONSUMPTION. Basal metabolism. Energy consumption during the physical activity. Thermogenesis of the diet. Energy balance of the human organism. Daily energy requirements.
3. INTEGRATION OF THE ENERGY METABOLISM. Basic strategy of the metabolism. Nutrients metabolism in postprandial situation. Nutrients metabolism in interdigestive situation.
4. BALANCED DIET. DAILY IMPORTANCES AND NEEDS OF ESSENTIAL NUTRIENTS. Characteristics of the balanced diet. Essential aminoacids. Essential fatty acids. Vitamins. Minerals. Importance of the flavonoids and other antioxidants in the diet. Mediterranean diet. Vegetarian diet. Macrobiotic diet. Dissociate diet.

2. Block II - Nutritional composition of the food.

5. CLASSIFICATION OF FOOD I. COMPOSITION OF THE FOOD AND OF THE GROUPS I-III. Cereals, legumes and derivatives: bread and pastries. Natural and artificial sweeteners. Meat and derivatives. Fish. Eggs. Milk and dairy products.
6. CLASSIFICATION OF FOOD II. COMPOSITION OF THE FOOD AND OF THE GROUPS IV-VI. Oils and fatty food. Chocolate. Fruits and vegetables. Water. Alcoholic and non-alcoholic drinks.

3. Block III Nutrition in the different stages of life.

7. NUTRITION IN THE DIFFERENT STAGES OF LIFE (I): CHILDHOOD AND ADOLESCENSE.
Nutritional needs of a healthy child. Nutrient and energetic daily recommendations in childhood. Physiological evolution and nutritional needs in the adolescence.
8. NUTRITION IN THE DIFFERENT STAGES OF LIFE (II): OLD AGE. Physiological evolution of the old age. Nutritional needs of the old age. Nutrient and energetic daily recommendations in old age.
9. NUTRITION IN DIFFERENT PHYSIOLOGICAL SITUATIONS: GESTATION AND LACTATION.
Gaining weight in pregnancy. Nutritional needs during gestation. Alcohol, caffeine and sweeteners effects. Diet precautions in pregnancy. Effects of the maternal nutrition in lactation.
10. ATHLETE ALIMENTATION. Use of nutrients during physical activity. Athlete energetic needs. Alimentation and aerobic output. Antioxidants and physical activity.

4. Block IV - Specific diets.

11. BASIC MODIFIED DIETS. MODIFIED DIETS IN MINERALS. Hydric diet. Liquid diet: complete and incomplete. Semisolid or semiliquid diet. Bland diet. Bland diet of easy mastication. Sodium-controlled diet. Potassium-controlled diet. Diet recommendations in osteoporosis. Anemia and iron overload.
12. RECOMMENDED DIETS FOR SITUATIONS OF DYSLIPIDEMIA AND DIABETES. Consumption of nutrients indicated in situations of dyslipidemia. Control in the intake of fats and carbohydrates in the diabetic person.
13. DIETS WITH CONTROL IN THE CONSUMPTION OF CARBOHYDRATES. Diet controlled in lactose. Diet controlled in fructose. Diet controlled in sucrose. Diet restricted in galactose.
14. DIET WITH CONTROL IN THE CONSUMPTION OF PROTEINS: Celiac disease. Diet in the patient with celiac disease. Substitution model vs exclusion model. Phenylketonuria. Diet controlled in phenylalanine. Artificial supplements.
15. DIETS TO VARY THE BODY WEIGHT. Objectives of diet treatment in obesity. Energy restriction in obesity. Balanced hypocaloric diets. Diets with very low energetic weight. Diets with low content in carbohydrates and low or high content of fat. Diet rich in proteins.

5. PRACTICES

SEMINAR TOPICS
1. Consumption of soybeans and longevity in the South-east Asian countries.
2. Food intolerances and allergies.
3. Eating disorders.
4. Hospital nutrition.
5. The superfoods of today's society.
6. Ketogenic diet and neuroprotection.
7. Sustainable food
8. French paradox.
9. Nutrigenomics and nutrigenetics.
10. Transgenic foods.
11. Entomophagy: insects, the food of the future?
12. History and evolution of food additives.

LABORATORY PRACTICES

1. Myths in the alimentation.
2. Use and handling of tables of food composition. Dishes analysis.
3. Estimation of the energetic needs. Diet elaboration.
4. Use and handling of exchange lists. Diet elaboration.
5. Assessment of food intake and nutritional status. Case study I.
6. Assessment of food intake and nutritional status. Case study II.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	19,00
Seminar	14,00
Laboratory	12,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	28,00
Independent study and work	33,50
Preparation of lessons	0,00
Preparation for assessment activities	6,00
Resolution of case studies	0,00
Total hours	**67,50**

TEACHING METHODOLOGY

Theoretical classes (15 thematic units), which will be raised in sessions of 1 or 2 hours.

Practical classes in the laboratory (6 thematic units), which will be raised in sessions of 2 hours. In these sessions, exercises and case studies that the student will have to resolve.

Practices seminar (7 thematic units), which will be raised in sessions of 2 hours. Each seminar will be developed by a group of students through a written work and an oral presentation.

The gender perspective, the respect for diversity, and the sustainable development goals (SDGs) will be incorporated into teaching, whenever possible.

EVALUATION

Theoretical evaluation: 50% of the final score (5 points). It will be done through a written test which will be

useful to assess knowledge acquisition and which will consist of contents on the theoretical programme and seminars.

The test will consist of 50 multiple choice questions about the theory lessons. The grading criteria of this test will be the following: for each correctly answered question, 0.2 points will be added, for each question answered erroneously, 0.067 points will be subtracted. Blank answers will not be subtracted.

En este ejercicio será necesario conseguir un mínimo de un 50% de la puntuación máxima para superar la asignatura.

Practice evaluation: 50% of the final grade (5 points). Of the 5 points, 2 correspond to the practices grade (participation, resolution of activities and practice cases will be assessed) and 3 correspond to the assessment of the written work, the presentation of the assigned seminar and resolution of tests on all topics of the seminars).

In order to access to an advance on the call of this subject, it is a requirement that the student has coursed all his/her practices.

Attendance at practical activities is mandatory. The student is considered to meet this requirement if he or she has attended a minimum of 80% of these activities and has adequately justified the impossibility of attending the remaining sessions due to the occurrence of a cause of force majeure. It will be essential to comply with this requirement to pass the subject.

Students are reminded of the importance of carrying out evaluation surveys on all the teaching staff of the degree subjects.

cts.

REFERENCES

- Mahan,L; Raymond,J. Nutrición y Dietoterapia de Krause (15ªed.) Elsevier. 2021.
- Gil Hernández, A. Tomo IV: Nutrición Clínica (Tratado de Nutrición).(3ª ed.) Editorial Médica Panamericana. 2017.
- Kaufer-Horwitz, M, Pérez-Lizaur, AB; Arroyo P. Nutriología Médica (5ª ed.). Editorial Médica Panamericana.2023.
- Daniel A. De Luis Román, Diego Bellido Guerrero, Pedro Pablo García Luna. Dietoterapia, nutrición clínica y metabolismo (3ªEd). Ediciones Díaz de Santos. 2017
- Salas-Salvadó, Bonada i Sanjaume, Trallero Casañas, Saló i Solà, Burgos Peláez. Fecha de publicación Nutrición y dietética clínica (4ª ed.). Elsevier. 2019
- Biesalski, HK, Grimm, P y Nowitzki-Grimm S.Texto y atlas de nutrición (8ªed.). Elsevier.2021.
- Pavón Rymer-Rythén EK. Comiendo con Miedo. Editorial Astronave.2022.
- Ying V. El fantasma que alimento. Editorial La cúpula ediciones. 2023.
- RECURSOS e-Salut:
  - ClinicalKey Student Medicina, Odontologia y Enfermería
  [https://uv-es.libguides.com/RecursosSalut]

- Acces Medicina [https://uv-es.libguides.com/Access_Medicina]
- Médica Panamericana [https://uv-es.libguides.com/Medica_Panamericana]