

**COURSE DATA****DATA SUBJECT****Code:** 33964**Name:** Nutritional Pathology**Cycle:** Undergraduate Studies**ECTS Credits:** 4.5**Academic year:** 2026-27**STUDY (S)**

Degree	Center	Acad. year	Period
1205 - Degree in Human Nutrition and Dietetics	Facultat de Farmàcia i Ciències de l'alimentació	3	Second quarter
1211 - Double Degree in Pharmacy and Human Nutrition and Dietetics	Facultat de Farmàcia i Ciències de l'alimentació	5	Second quarter

**SUBJECT-MATTER**

Degree	Subject-matter	Character
1205 - Degree in Human Nutrition and Dietetics	Nutritional pathology	COMPULSORY
1211 - Double Degree in Pharmacy and Human Nutrition and Dietetics	Asignaturas obligatorias del PDG Farmacia-Nutrición Humana y Dietética	COMPULSORY

**COORDINATION**

ORTIZ MASIA MARIA DOLORES

**SUMMARY**

The subject **Nutritional Pathology** aims to provide students with a solid understanding of diseases in which nutrition plays a causal, contributory, or therapeutic role. The course addresses both **primary prevention** and the **clinical and rehabilitative** aspects of nutritional intervention, offering tools for **nutritional diagnosis**, dietary treatment, and follow-up in various pathological conditions.

It covers the main disorders related to nutritional deficiencies or excesses, as well as chronic diseases in which diet has a modulatory effect. This subject is framed within the **healthcare field**, closely linked to the professional practice of dietitians-nutritionists, and helps students understand the impact of food on health and disease from a **scientific, clinical, and public health** perspective.

**PREVIOUS KNOWLEDGE**



## RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

## OTHER REQUIREMENTS

To make the most of the **Nutritional Pathology** course, it is recommended that students have solid prior knowledge in **pathophysiology, molecular pathology, and diet therapy**, as this subject is directly based on these areas. **Although it is not a formal requirement, it is a key recommendation to successfully follow the course content and activities.**

## COMPETENCES / LEARNING OUTCOMES

### 1201 -

Acquire basic training for research activity, being able to formulate hypotheses, collect and interpret information for problem-solving following the scientific method, and understanding the importance and limitations of scientific thinking in health and

Act with autonomy in learning, making informed decisions in different contexts, issuing judgements based on experimentation and analysis, and transferring knowledge to new situations.

Be able to assist the healthcare team in the comprehensive management of various pathologies (renal, digestive, pulmonary, infectious, neurological, etc.) in which the dietitian is responsible for the dietary-nutritional aspect and must assess it accordin

Collaborate effectively in work teams, assuming responsibilities and leadership roles and contributing to collective improvement and development.

Contribute to the design, development and implementation of solutions that respond to social demands, taking into account the Sustainable Development Goals as a reference.

Demonstrate critical and self-critical thinking in the field of the degree programme, considering aspects such as professional ethics, moral values and the social implications of the different activities carried out.

Develop the profession with respect for other health professionals, acquiring teamwork skills.

Highlight and raise awareness of the importance of nutritional assessment in the evaluation of the sick patient, in order to detect alterations and initiate actions that allow better and faster recovery from disease.

Highlight the importance of nutrition in the development of osteoporosis and know how to prevent and treat it from a dietary perspective.

Highlight the importance of pathologies in which the future dietitian will be required to provide nutritional recommendations: hyperuricaemia and gout, nutritional anaemias, goitre and other thyroid disorders, etc.

Know, evaluate and correct quantitative nutritional deficiencies caused by under- or over-consumption, understanding the important role of the dietitian both in the treatment and the prevention of prevalent diseases such as thinness, anorexia nervosa and



Know, highlight and be able to provide dietary and nutritional advice on the prevention and treatment of diseases such as diabetes mellitus, dyslipidaemia and arterial hypertension, which are the main risk factors associated with the most frequent cause o

Know and understand, within the field of the degree programme, gender inequalities in society; integrate different needs and preferences based on sex and gender into the design of solutions and problem solving.

Know how to communicate effectively, both orally and in writing, adapting to the characteristics of the situation and the audience.

Know the limits of the profession and its competencies, identifying when interdisciplinary treatment or referral to another professional is necessary.

Learn about nutrition-related diseases of low prevalence in developed countries today (beriberi, pellagra, scurvy, etc.) which may be detected in subclinical stages and require a nutritional approach.

Propose creative and innovative solutions to complex situations or problems within the field of knowledge, to respond to diverse professional and social needs.

## **1205 - Degree in Human Nutrition and Dietetics**

Acquire basic training for the research activity, be able to formulate hypotheses, collect and interpret information for problem solving using the scientific method, and understand the importance and the limitations of scientific thought in the field of health and nutrition.

Aplicar las Ciencias de los Alimentos y de la Nutrición a la práctica dietética.

Apply the basis of clinical nutrition to diet therapy.

Assess and calculate nutritional requirements in situations of health and illness at any stage of the life cycle.

Capacidad de integrar los contenidos estudiados en las diferentes materias cursadas en un conocimiento interdisciplinar aplicable al ámbito académico y profesional con especial interés en el campo de la patología nutricional en su doble vertiente, preventiva y terapéutica.

Communicate effectively, both orally and in writing, with people, with health or industry professionals and with the media, knowing how to use information and communication technologies, especially those related to nutrition and lifestyles.

Comprender la farmacología clínica y la interacción entre fármacos y nutrientes.

Conocer la organización hospitalaria y las distintas fases del servicio de alimentación.

Conocer las bases y fundamentos de la alimentación y la nutrición humana.

Conocer las distintas técnicas y productos de soporte nutricional básico y avanzado. Desarrollar e implementar planes de transición dietético-nutricional.

Conocer los aspectos fisiopatológicos de las enfermedades relacionadas con la nutrición.



Conocer los factores socioculturales y psicológicos que inciden en el origen, desarrollo y tratamiento de trastornos de la conducta alimentaria así como de riesgos y crisis alimentarias. Conocer la función del dietista clínico en el equipo multidisciplinar que trata a estos pacientes.

Conocer los límites legales y éticos de la práctica dietética.

Conocer los nutrientes, sus funciones y su utilización metabólica. Conocer las bases del equilibrio nutricional y su regulación.

Conocer los servicios relacionados con la alimentación y nutrición en atención primaria y hospitalaria, y colaborar dentro de equipos multidisciplinarios, interpretando y evaluando los aspectos nutricionales de la historia clínica, y elaborando planes de actuación dietética. Deberá revisar, valorar y en su caso modificar las dietas terapéuticas del centro sanitario que forman parte del proceso curativo de muchos pacientes.

Desarrollo de habilidades para emprender estudios posteriores y actividades de formación continuada en el campo de la sanidad.

Divulgar y colaborar con el personal sanitario de hospitales y centros de salud en el conocimiento de las medidas nutricionales que, tanto preventivas como curativas, se utilizan para tratar determinadas enfermedades en las que la alimentación y nutrición son fundamentales.

Identificar las bases de una alimentación saludable (suficiente, equilibrada, variada y adaptada).

Identificar los problemas dietético-nutricionales del paciente, así como los factores de riesgo y las prácticas inadecuadas.

Know, detect early and evaluate quantitative and qualitative deviations, due to surplus or shortage, of nutritional balance.

Know, judge and know how to use and apply the sources of information related to nutrition, food, lifestyles and health.

Manejar las herramientas básicas en TIC utilizadas en el campo de la Alimentación, Nutrición y la Dietética.

Participar en el equipo multidisciplinar de una Unidad de Nutrición Hospitalaria.

Participar en la gestión, organización y desarrollo de los servicios de Nutrición Hospitalaria, planificando y supervisando los menús y dietas, y proporcionando formación en materia dietética-nutricional e higiénicosanitaria al personal de dicho Servicio.

Participate in the design of total diet studies.

Plan, implement and evaluate therapeutic diets for individuals or groups.

Plan and interpret the assessment of the nutritional status of individuals and/or groups, both healthy (in all physiological situations) and sick.

Planificar y llevar a cabo programas de educación dietético-nutricional en sujetos sanos y enfermos

Practise the profession with respect for other health professionals and acquire skills to work in teams.



Recognise the essential elements of the profession of the dietitian-nutritionist including ethical principles, legal responsibilities and the practice of the profession, apply the principle of social justice to professional practice, and work with respect to people, their habits, beliefs and cultures, from a gender perspective.

Recognise the need to maintain and update professional competence, with particular emphasis on independent and lifelong learning of new facts, products and techniques in the field of nutrition and food, and on motivation for quality.

Understand and use clinical and biochemical data in the nutritional assessment of patients and in their dietary-nutritional treatment.

Write and interpret a dietary history of healthy and sick individuals.

## DESCRIPTION OF CONTENTS

### **Block I: Introduction to Nutritional Pathology and Weight Management**

Topic 1. General Etiology of Nutritional Diseases

Topic 2. Malnutrition

Topic 3. Thinness: Etiology, Prevention and Treatment

Topic 4. Anorexia Nervosa, Bulimia, and Other Eating Behavior Disorders

Topic 5. Obesity

### **Block II: Pathologies Caused by Micronutrient Deficiencies**

Topic 6. Rickets and Osteomalacia

Topic 7. Osteopenia and Osteoporosis

Topic 8. Beriberi and Wernicke-Korsakoff Syndrome

Topic 9. Pellagra

Topic 10. Xerophthalmia and Nutritional Blindness

Topic 11. Scurvy

Topic 12. Nutritional Anemias

Topic 13. Iodine Deficiency, Endemic Goiter and Hypothyroidism

**Block III: Clinical Nutrition**

Topic 14. Food Allergies

Topic 15. Dyslipidemias

Topic 16. Cardiovascular Disease. Hypertension

Topic 17. Diabetes Mellitus

Topic 18. Hyperuricemia and Gout

Topic 19. Digestive and Hepatobiliary Diseases

Topic 20. Pulmonary Disease

Topic 21. Renal Disease

Topic 22. Oncological Disease

Topic 23. Infectious Disease

Topic 24. Oral and Dental Disease

Topic 25. Neurological Disease

Topic 26. Enteral and Parenteral Nutrition

**WORKLOAD****PRESENCIAL ACTIVITIES**

<b>Activity</b>	<b>Hours</b>
Tutorials	2,00
Theory	38,00
Seminar	2,00
<b>Total hours</b>	<b>42,00</b>

**NON PRESENCIAL ACTIVITIES**

<b>Activity</b>	<b>Hours</b>
Attendance at other activities	0,00
Individual or group project	15,00
Independent study and work	38,50
Preparation of lessons	26,00
Preparation for assessment activities	20,00
Resolution of case studies	13,00
<b>Total hours</b>	<b>112,50</b>

**TEACHING METHODOLOGY**



## Teaching Methodology

The teaching methodology is aimed at the acquisition of both theoretical and practical knowledge essential for the student's future professional practice. A combination of teaching strategies will be employed to encourage active participation, independent learning, and collaborative work:

### 1. Interactive lectures

Lectures will be delivered to cover the core content of the subject, providing students with a solid theoretical foundation. These sessions will incorporate audiovisual materials and clinical case studies to enhance understanding and facilitate practical application.

### 2. Systematic review project in small groups.

Students will work in small groups to develop specific topics from the subject syllabus. These projects will be presented during the final month of the course, both in written form and as an oral presentation to the rest of the class. Each group will be supervised by the professor, who will provide guidance, resolve doubts, and assess both the content and the presentation. This activity aims to foster students' ability to search for and critically evaluate updated information sources, and to develop oral and written communication skills. It also emphasizes the importance of research, lifelong learning, and staying up to date in the healthcare field, particularly in nutrition. Moreover, it seeks to encourage students to continue exploring these areas beyond university.

### 3. Coordinated seminars

Thematic seminars will be conducted in accordance with the official seminar regulations available on the degree's website. Topics will be assigned by the teaching staff, and progress will be supervised through scheduled tutorials between lecturers and students.

### 4. Tutorials

In-person tutorials will be offered during scheduled hours, along with support via email, to ensure continuous and personalized academic guidance.

This methodology not only aims to convey knowledge, but also to promote research skills, critical thinking, teamwork, and communication abilities, all of which are fundamental for a career in the health sector.

## EVALUATION



The final grade will be distributed as follows:

- **Class participation**

Active and regular participation in face-to-face sessions will be positively valued as an additional merit. Justified absences will not be penalized, but they do not entitle the student to obtain this merit, as the goal is to reward direct involvement in the classroom. Fraudulent use of the attendance control system will result in the cancellation of all merits obtained under this criterion.

- **Tutorials**

Attendance at tutorials is **mandatory** for all students, including those repeating the course.

**Systematic review Project: written submission and oral presentation (20%)**

Failure to complete the project will result in the **automatic loss of the 20%** corresponding to this component of the final grade. Participation as an audience member during group presentations will be positively valued. For repeat students, the project grade may be **retained for one academic year**.

- **Coordinated Seminars (10%)**

Attendance at Coordinated Seminars is **compulsory** for all students enrolled in the course, including repeaters. These seminars are organized by the Academic Committee of the Degree and follow the general guidelines published on the Faculty's website.

- **Multiple-choice written exam (70%)**

This will be an objective test with multiple-choice questions based on both the theoretical content and clinical cases discussed in class. In order for the exam to be averaged with the other graded components (attendance, Nutritional Pathology project, and, if applicable, Coordinated Seminar), students must obtain a **minimum score of 4 out of 10** (equivalent to 28 out of 70).

### Specific considerations

- **Repeat students:** Must attend the Coordinated Seminars and tutorials again. The Nutritional Pathology project grade will only be retained **for one academic year**.

- **Students exempt from participating in the Coordinated Seminar** (e.g., Erasmus students or other justified cases): In such cases, the **Nutritional Pathology project will count for 30%** of the final grade instead of 20%.

In cases of **academic dishonesty**, action will be taken according to the protocol established in the "*Protocol for action against academic fraud at the University of Valencia*" (ACGUV 123/2020):

<https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

**Continuous assessment activities** in this course (practical sessions, tutorials and seminars) are **mandatory and not recoverable**, in accordance with Article 6.5 of the *Regulations for Assessment and Grading at the University of Valencia for Undergraduate and Master's Degrees*.

If a student cannot attend any of these activities for a justified reason, they must notify the course coordinator **in advance** so that they may be assigned to another group if possible.



## REFERENCES

- Gilbert, J. A., & Schlenker, E. (2023). *Williams' Essentials of Nutrition and Diet Therapy* (13.<sup>a</sup> ed.). Elsevier.
- Loscalzo, J., Fauci, A. S., Kasper, D. L., Hauser, S. L., Longo, D. L., & Jameson, J. L. (Eds.). (2022). *Harrison's Principles of Internal Medicine* (21.<sup>a</sup> ed., Vols. 1 & 2). McGraw Hill
- Revista Nutrición Clínica y Dietética Hospitalaria: <https://revista.nutricion.org/index.php/ncdh>.
- Ross, A. C., Caballero, B., Cousins, R. J., Tucker, K. L., & Ziegler, T. R. (Eds.). (2023). *Modern Nutrition in Health and Disease* (13<sup>a</sup> ed.). Jones & Bartlett Learning
- Salas-Salvadó, J., Bonada i Sanjaume, A., Trallero Casañas, R., Saló i Solà, M. E., & Burgos Peláez, R. (Eds.). (2019). *Nutrición y dietética clínica* (4<sup>a</sup> ed.). Elsevier España.