

**COURSE DATA****DATA SUBJECT****Code:** 34085**Name:** Physiopathology**Cycle:** Undergraduate Studies**ECTS Credits:** 6**Academic year:** 2025-26**STUDY (S)**

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Facultat de Farmàcia i Ciències de L'alimentació	3	First quarter
1211 - Double Degree in Pharmacy and Human Nutrition and Dietetics	Facultat de Farmàcia i Ciències de L'alimentació	3	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	Physiopathology	COMPULSORY
1211 - Double Degree in Pharmacy and Human Nutrition and Dietetics	Asignaturas obligatorias del PDG Farmacia-Nutrición Humana y Dietética	COMPULSORY

COORDINATION

BLAS GARCIA ANA

SUMMARY

- Knowledge of Pathophysiology allows the student to understand the essential bases of diseases and to facilitate learning in other subjects of the degree, such as Pharmacology as well as Clinical Analysis and Laboratory Diagnostics.
- This subject provides knowledge of medical terminology that is crucial for the professional practice, reaffirming also the biomedical and health nature of this profession.

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

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

OTHER REQUIREMENTS



Knowledge in Physiology and Anatomy.

COMPETENCES / LEARNING OUTCOMES

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

Apply such knowledge to the professional world, contributing to the development of human rights, democratic principles, principles of equality between women and men, solidarity, environmental protection and promotion of a culture of peace with a gender pe

Be able to express oneself orally and in writing using the appropriate terminology for the subject.

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 habits of excellence and quality in professional practice.

Develop skills to update knowledge and undertake further studies, including pharmaceutical specialisation, scientific research, technological development and teaching.

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 and understand the general mechanisms of disease, as well as the alterations in the functions of our cells, organs, systems and apparatuses that give rise to disease manifestations, taking into account the implications of gender differences.

Know and understand the medical terminology and the syndromic expression.

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

Know how to interpret, evaluate and communicate relevant data in the different areas of pharmaceutical activity, using information and communication technologies.

Possess and understand knowledge in the area of Pathophysiology.

Possess and understand knowledge in the different areas of study included in pharmacist training.

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



Recognise one's own limitations and the need to maintain and update professional competence, placing particular emphasis on self-learning of new knowledge based on available scientific evidence.

Transmit ideas, analyse problems and solve them with critical spirit, acquiring teamwork skills and assuming leadership when appropriate.

Use of the scientific bibliography specific to the subject.

DESCRIPTION OF CONTENTS

1. General pathophysiology.

- Health and disease.
- Adaptation, injury, and cell death.
- General response to aggression, inflammation and fever.
- Aging and pathophysiology of age-associated diseases.
- Neoplasia.
- Environmental factors as causes of disease.
- Disorders of acid-base balance.
- Disorders of hydromineral balance.

2. Pathophysiology of the endocrine system.

- Pathophysiology of the hypothalamic-pituitary axis.
- Pathophysiology of the thyroid gland.
- Pathophysiology of phosphate and calcium metabolism.
- Pathophysiology of reproductive function, growth and development .
- Pathophysiology of the adrenal glands.
- Pathophysiology of the endocrine pancreas.

3. Pathophysiology of the nervous system.

- Pathophysiology of sensitivity and headache.
- Pathophysiology of motility.
- Pathophysiology of sleep and consciousness.
- Pathophysiology of neurodegenerative diseases.
- Disorders of behavior.

4. Pathophysiology of the cardiovascular system.

- Pathophysiology of circulatory failure: shock.
- Pathophysiology of circulatory failure: heart failure.



- Alterations of automaticity and conduction of cardiac impulse as a cause of heart failure.
- Coronary insufficiency.
- Pathophysiology of arterial hypertension.

5. Pathophysiology of the respiratory system.

- Manifestations of respiratory diseases.
- Respiratory failure.
- Syndromes of respiratory disorders.
- Pathophysiology of the pulmonary circulation.

6. Hematology.

- Pathophysiology of red blood cells.
- Pathophysiology of white blood cells.
- Pathophysiology of haemostasis.

7. Pathophysiology of the renal system.

- Acute renal failure.
- Chronic renal failure.
- Syndromes of renal pathology.

8. Pathophysiology of the digestive system.

- Manifestations of gastrointestinal diseases.
- Pathophysiology of motility and passage through the digestive tract.
- Pathophysiology of secretion and absorption in the digestive tract.
- Pathophysiology of peptic ulcer.
- Pathophysiology of the liver and bile ducts.

9. Pathophysiology of the Skin.

- Manifestation of skin disorders, primary disorders of the skin and skin manifestations of Infancy and Childhood

WORKLOAD

PRESENCIAL ACTIVITIES



Activity	Hours
Tutorials	3,00
Theory	47,00
Seminar	10,00
Total hours	60,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	15,00
Independent study and work	53,00
Preparation of lessons	20,00
Preparation for assessment activities	1,00
Resolution of case studies	1,00
Total hours	90,00

TEACHING METHODOLOGY

This subject will be taught in the third year of the Degree in Pharmacy. The theoretical content of most of the lessons will be exposed through master classes. During the classes, examples of the applications of the contents of the subject in relation to the Sustainable Development Goals (SDG) will be indicated, besides being included in the topic proposals for the seminars. The aim is to provide students with knowledge, skills and motivation to understand and address these SDG, and to especially incorporate SDG 3 (Good Health and Well-Being), 4 (Quality Education) and 5 (Gender Equality) to the teaching of this subject, promoting healthy living and well-being in society, as well as inclusive, equal and quality education. Regarding the seminars, teachers will promote teamwork on clinical cases and relevant hot topics related to the subject, due to their relevance in the area. Students will present their teamwork to the teacher and other classmates. In seminars, students can share with other students and the teacher their doubts and comments, get responses to them and then reach the expected abilities as stated above. Other comments on educational activities and the resolution of additional doubts will take place in tutorships in small groups or in personal tutorships between one student and the teacher.

EVALUATION

EVALUATION AREA	POINTS
Exam(s)	8,0
Continuous evaluation (activities and questionnaires)	1,0
	1,0



Seminars	
MAXIMUM MARK	10,0

A qualifying examination of first half of the content of the subject will be performed. There will be a final exam for the whole content of the subject, or only for the second half of the content if the student has passed the qualifying examination. The date of the final exam will be established in accordance with the official date approved by the Board of the School of Pharmacy. Students who do not pass the subject in the first call will go to the second call with the complete content of the subject. The exams contain multiple-choice questions and / or questions to develop. To pass the subject, the student must reach a minimum of 5 points and pass the final exam or both exams of half of the subject. The seminars will be given a maximum value of 1 point out of 10.

Evidence of copying or plagiarism in any of the assessable tasks will result in failure to pass the subject and in appropriate disciplinary action being taken. Please note that, in accordance with article 13. d) of the Statute of the University Student (RD 1791/2010, of 30 December), it is the duty of students to refrain from using or participating in dishonest means in assessment tests, assignments or university official documents.

In the event of fraudulent practices, the "**Action Protocol for fraudulent practices at the University of Valencia**" will be applied (ACGUV 123/2020): <https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

REFERENCES

BASIC

- De Castro del Pozo, S.: Manual de Patología General. Ed. Masson.
- Esteller, A. y Cordero, M: Fundamentos de Fisiopatología. Ed. McGraw-Hill Interamericana.
- García Conde, J.: Patología general: semiología clínica y fisiopatología. Ed. McGraw-Hill Interamericana.
- Laso, F.J. Patología General. Introducción a la medicina clínica. Ed. Masson.
- Pérez Arellano, J.L.: Sisinio de Castro. Manual de Patología General. Ed. Masson. - Guyton, A. Y Hall, J.E.: Tratado de Fisiología Médica. Ed. Elsevier.

COMPLEMENTARY

- Anderson, D.: Diccionario MOSBY Medicina, Enfermería y Ciencias de la Salud. Elsevier Science.



- Andreoli, T.; Carpenter, Ch.; Griggs, R. y Loscalzo, J.: Cecil Medicina Interna. Elsevier.
- Beers, M. y Berkow, R.: El Manual Merck de Diagnóstico y Tratamiento. Elsevier.
- Dorland, Diccionario Enciclopédico Ilustrado de Medicina. Ed. McGraw-Hill Interamericana.
- Farreras, V.: Medicina Interna. Ed. Harcourt.
- Harrison, J.: Principios de Medicina Interna. Ed. McGraw-Hill Interamericana.
- Kumar, V.; Cotran, R. y Robbins, S.: Robbins Patología Humana. Elsevier.
- Netter, F.: Colección Ciba de Ilustraciones Médicas. Ed. Salvat.
- Pfreundschuh, M. y Schölmerich, J.: Fisiopatología y Bioquímica. Ed. Harcourt.
- Robbins, S.L.: Patología Estructural y Funcional. Ed. McGraw-Hill Interamericana.