VNIVERSITAT DE VALÈNCIA

Course Guide
34085 Physiopathology

COURSE DATA

Data Subject	
Code	34085
Name	Physiopathology
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Faculty of Pharmacy and Food Sciences	3	First term
1211 - D.D. in Pharmacy-Human Nutrition and Dietetics	Faculty of Pharmacy and Food Sciences	3	First term

Subject-matter

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	19 - Physiopathology	Obligatory
1211 - D.D. in Pharmacy-Human Nutrition and Dietetics	1 - Asignaturas obligatorias del PDG Farmacia-Nutrición Humana y Dietética	Obligatory

Coordination

Name	Department
BLAS GARCIA, ANA	190 - Physiology

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.

OUTCOMES

1201 - Degree in Pharmacy

- To possess and to understand the knowledge in the different areas of study included in the formation of the pharmacist.
- To apply this knowledge to the professional world, contributing to the development of Human Rights, democratic principles, principles of equality between women and men, solidarity, protection of the environment and promotion of a culture of peace with Gender perspective.
- To know how interpret, value and communicate relevant data in the different aspects of pharmaceutical activity, making use of information and communication technologies.
- Skill to communicate ideas, analyze problems and solve them with a critical mind, achieving team-working abilities and assuming leadership whenever required.
- Development of skills to update their knowledge and undertake further studies, including pharmaceutical specialization, scientific research and technological development, and teaching.
- To recognize personal limitations and the need to keep up to date professional competence, paying particular attention to the self-learning of new knowledge based on available scientific evidences.
- To develop habits of excellence and quality in the professional career.
- Ability of oral and written expression using correctly the terminology which belongs to the subject
- To use of the scientific bibliography of the subject.
- To Know and understand general mechanisms of the disease, as well as the disorders of the functions of our cells, organs and systems, characteristic of the diseases that lead to the manifestations of the same, taking into account the implications of the differences of gender.
- To know and understand medical terminology and syndromic expression.

LEARNING OUTCOMES

-To understand the alterations in the function of cells, organs and systems, as well as the alterations in regulatory mechanisms that control them. These alterations are characteristic of diseases leading to pathological manifestations.

-To know the medical terminology.
-To use appropriately the scientific literature related to the subject.
-To stimulate the critical view, analysis and synthesis of the content of this subject.
-To get experience in team work.
-To be able to speak and write correctly using the terminology of 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

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Seminars	10,00	100
Tutorials	3,00	100
Development of group work	15,00	0
Study and independent work	50,00	0
Readings supplementary material	3,00	0
Preparing lectures	20,00	0
Resolution of case studies	1,00	0
Resolution of online questionnaires	1,00	0
TOTAL	**148,00**	

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 commets, 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

Seminars	1
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.

REFERENCES

Basic

- De Castro del Pozo, S.: Manual de Patología General. Ed. Masson.
  Esteller, A. y Cordero, M: Fundamentos de Fisiopatología. Ed. McGraw-HillInteramericana.

  García Conde, J.: Patología general: semiología clínica y fisiopatología. Ed. McGraw-HillInteramericana.
  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.

Additional

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

  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-HillInteramericana.

  Farreras, V.: Medicina Interna. Ed. Harcourt.
  Harrisons: Principios de Medicina Interna. Ed. McGraw-HillInteramericana.

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-HillInteramericana.