



## Information about the subject

**Degree:** Bachelor of Science Degree in Nursing

**Faculty:** Faculty of Medicine and Health Sciences

**Code:** 1211203 **Name:** Physiopathology

**Credits:** 6,00 **ECTS Year:** 2 **Semester:** 1

**Module:** Common basic training

**Subject Matter:** Physiology **Type:** Basic Formation

**Field of knowledge:** Health sciences

**Department:** Pathology

**Type of learning:** Classroom-based learning

**Languages in which it is taught:** Spanish

### Lecturer/-s:

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## Module organization

### Common basic training

Subject Matter	ECTS	Subject	ECTS	Year/semester
Anatomy	6,00	Human and Functional Anatomy	6,00	1/1
Physiology	12,00	Human Physiology	6,00	1/2
		Physiopathology	6,00	2/1
Biochemistry	6,00	Clinical Biochemistry	6,00	1/1
Biostatistic	6,00	Biostatistics and Research Methodology	6,00	1/2
Psychology	6,00	Psychology of Care	6,00	1/1
Pharmacology	6,00	Pharmacology	6,00	2/1
Nutrition	6,00	Nutrition and Dietetics	6,00	2/1
ICT	6,00	ICT	6,00	3/1
English	6,00	English	6,00	1/2
Life support	6,00	Emergency Care and Life Support	6,00	4/1

### Recommended knowledge

It is recommended that students enrolling in the course have the necessary knowledge of the structure and function of the human body.



## Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 That students are able to base nursing interventions on scientific evidence and available means.
- R2 That students are able to promote healthy lifestyles, self-care, supporting the maintenance of preventive and therapeutic behaviors.
- R3 Students understand the molecular and physiological basis of cells and tissues.
- R4 That students know the physiopathological processes and their manifestations and the risk factors that determine the states of health and disease in the different stages of the life cycle.



## Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

BASIC		Weighting			
		1	2	3	4
CB1	Students have demonstrated possession and understanding of knowledge in an area of study that is at the core of general secondary education, and is often at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.			X	
CB2	Students are able to apply their knowledge to their work or vocation in a professional way and possess the skills usually demonstrated by developing and defending arguments and solving problems within their area of study.				X
CB3	Students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant social, scientific or ethical issues.				X
CB4	That students can convey information, ideas, problems and solutions to both specialized and non-specialized audiences.	X			
CB5	Students have developed those learning skills necessary to undertake further study with a high degree of autonomy.			X	
GENERAL		Weighting			
		1	2	3	4
CG0	Good Public Speaking.	X			
SPECIFIC		Weighting			
		1	2	3	4
1b	To know and identify the structure and function of the human body.	X			



2b	To understand the molecular and physiological basis of cells and tissues.					X
10b	To know pathophysiological processes and their manifestations and the risk factors that determine the health and disease states in the different stages of their vital cycle.					X
15b	To know and identify physiological and physical problems derived from gender violence and to train the students in prevention, early detection, assistance, and rehabilitation of victims of this form of violence.	X				

## TRANSVERSAL

## Weighting

		1	2	3	4
6	To base interventions in nursing on scientific evidence and on the available means.			X	
9	To promote healthy life spans, to promote taking care of each person by themselves and support the maintenance of preventive and therapeutic measures.			X	
16	To understand the systems of information related to health.	X			



## Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R4	75,00%	Theoretical written exams
R1, R2, R4	25,00%	Practical tests and works
	0,00%	Attendance and active participation

### Observations

**To pass the course, it will be a necessary but not sufficient condition to have obtained 50% of the possible score in the final exam.**

**\*The student must pass the theoretical part (exam) (3,5/7) and have a final score in the course of 5/10 to pass the course.**

#### **Criteria for awarding the Honor Roll: T**

In order to obtain an Honors Degree, it will be necessary to obtain a minimum of 90% of the total evaluation, at the discretion of the professor of the subject and in accordance with the legal percentages. In second and subsequent calls, only the honors that may remain after the first call may be awarded.

#### **1.- Final theoretical evaluation (70%):**

The theoretical evaluation will be carried out at the end of the course, through a final theoretical test and may consist of:

- Multiple-choice objective questions, with four answers to choose one (multiple choice). The wrong answers penalize according to the formula  $A - (E / n - 1)$ . Where A: number of correct answers, E: number of errors, n: number of answer options
- Clinical cases. Practical cases in which the student must identify issues related to the aspects that have been seen in the different topics.

The minimum grade to pass the written test will be 5 out of 10.

#### **2 - Practical tests and assignments (20%)**

Throughout the course, activities on each topic will be carried out with reference to the attention and understanding of the topic and the retention capacity of each student, through oral and / or written questions in class and activities aimed at the student's autonomous work outside the classroom. These are activities requested by the teacher through the platform or in the classroom and whose performance is NOT essential in order to be evaluated.

#### **3.- Partial exam (10%)**

It will be done to check the student's learning pace. This tests will be part of the evaluation.



## Comments regarding the evaluation of the subject:

- The mark that appears in the minutes of the suspended students is the exam mark of 10. For example, a student who has a 2 in the written test and is above 6, the mark that must appear in the minutes is a 3, 3.
- Students who have passed the exam, but have not passed any of the remaining assessment tools, will be given 4.5. In the second call they will only have to carry out the assignments, seminars, etc. who have pending to pass the subject.
- The student has the right to know the grades of all the assessment tools included in the teaching guide at least one week before the written test and not on the date of the test review.
- For second or successive enrollment students, attendance at tutorials or teaching sessions **is not mandatory**.

## • DEVELOPMENT OF THE SUBJECT IN SECOND AND SUBSEQUENT ENROLLMENTS:

The professor responsible for the suspended group (second and subsequent registration), will contact the students through the virtual campus, which will indicate the days and hours of the corresponding tutorials.

There will be a specific group for students who are not first enrollment and a teacher in charge of that group.

The professor in charge of this group will contact the students through the virtual campus, through which he / she will indicate the days and hours of the corresponding tutorials. There will be 6 monitoring and tutoring sessions of 2 hours each. In each session the subject will be developed in such a way that the work of the competences that each student needs to be able to pass the subject will be reinforced. In the event that group S is greater than 40 students, 2 sessions per week of 2 hours will be established.

The content evaluation will take place in the exam set in the official calendar for this subject. These sessions are available on the specific schedule. The assessment instruments for the subject are detailed below:

### 1.- Final theoretical evaluation (75%):

The theoretical evaluation will be carried out at the end of the course, through a **final theoretical test** and may consist of:

- Multiple-choice objective questions, with four answers to choose one (multiple choice). The wrong answers penalize according to the formula  $A - (E / n - 1)$ . Where A: number of correct answers, E: number of errors, n: number of answer options.
- Clinical cases. Practical cases in which the student must identify issues related to the aspects that have been seen in the different topics.

The minimum grade to pass the written test will be 5 out of 10.

### 2.- Practical tests and assignments (25%)

Throughout the course, activities on each topic will be carried out with reference to the attention and understanding of the topic and the retention capacity of each student, through oral and / or written questions in class and activities aimed at the student's autonomous work outside the classroom. These are activities requested by the teacher through the platform or in the classroom and whose



performance is NOT essential in order to be evaluated.

The content blocks and tasks to be developed in each session will be the following:

**TEMPORARY ORGANIZATION OF LEARNING (Second or subsequent enrollment students):**

**CONTENT BLOCK / DIDACTIC UNIT NUMBER  
OF SESSIONS**

BLOCKS I -III --- **NUMBER OF SESSIONS 3**

BLOCK IV-VI --- **NUMBER OF SESSIONS 2**

BLOCK VII-IX --- **NUMBER OF SESSIONS 1**

**• DEVELOPMENT OF THE SUBJECT FOR INTERNATIONAL MOBILITY STUDENTS:**

The international mobility student must contact the professor responsible for the subject to inform him of this circumstance at the beginning and at the end of the subject. The content evaluation will take place in the exam set in the official calendar for this subject.

These sessions are available on the specific schedule.

**1.- Theoretical evaluation (75%):**

The theoretical evaluation will be carried out at the end of the course, through a **final theoretical test** and may consist of:

- Objective questions with multiple answers, with four answers to choose one (multiple choice). The wrong answers penalize according to the formula  $A - (E / n - 1)$ . Where A: number of correct answers, E: number of errors, n: number of answer options
- Clinical cases). Practical cases in which the student must identify issues related to the aspects that have been seen in the different topics. The minimum grade to pass the written test will be 5 out of 10.

**2.- Practical tests and assignments (25%)**

The supervised works that the subject consists of will be provided to the student so that they can work on them autonomously and can be delivered through the ucv platform in the space provided for it and within the established deadlines. This in NO CASE is a substitute for the final written evaluation test.



## MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

## Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M1 Exposition of contents by the teacher, analysis of competencies, explanation and demonstration of abilities, skills and knowledge in the classroom.
- M2 Group work sessions supervised by the teacher. Case study, diagnostic analysis, problems, field study, computer room, visits, data search, libraries, network, Internet, etc. Significant construction of knowledge through student interaction and activity.
- M3 Supervised monographic sessions with shared participation.
- M4 Application of interdisciplinary knowledge.
- M5 Activities developed in spaces and with specialized equipment.
- M6 Personalized attention and in small groups. Period of instruction and/or orientation carried out by a tutor with the objective of reviewing and discussing the materials and topics presented in the classes, seminars, readings, completion of assignments, etc.
- M7 Set of oral and/or written tests used in the initial, formative or summative evaluation of the student.



- M8 Student study: Individual preparation of readings, essays, problem solving, seminars, papers, memoirs, etc. To expose or deliver in the theoretical classes, practical classes and/or small group tutorials. Work done on the university platform ([www.plataforma.ucv.es](http://www.plataforma.ucv.es)).
- M9 Group preparation of readings, essays, problem solving, papers, memoirs, etc. To present or deliver in the theoretical classes, practical classes, seminars and/or small group tutorials. Work done on the university platform ([www.plataforma.ucv.es](http://www.plataforma.ucv.es)).

## IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Face-to-face class M1, M2, M4, M7, M8	R1, R2, R3, R4	40,00	1,60
Practice Classes M2, M5	R3, R4	12,00	0,48
Laboratory M5, M6, M7, M8, M9	R4	4,00	0,16
Tutorial M1, M6	R1, R2, R3, R4	2,00	0,08
Evaluation M5, M7	R3, R4	2,00	0,08
<b>TOTAL</b>		<b>60,00</b>	<b>2,40</b>

## LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
Student's self-employment M8	R3, R4	60,00	2,40
Group work M9	R3, R4	30,00	1,20
<b>TOTAL</b>		<b>90,00</b>	<b>3,60</b>



## Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
DIDACTIC UNIT I. INTRODUCTION TO PATHOPHYSIOLOGY. ALTERATION OF HOMEOSTASIA UNIT	<p><b>UNIT 1.</b> Introduction to pathophysiology. Alteration of homeostasis.</p> <p><b>UNIT 2.</b> Physiopathology of the hydroelectrolyte and acid base balance.</p> <p><b>UNIT 3.</b> Immune system. Pathophysiology of infections.</p>
DIDACTIC UNIT II. CARDIOVASCULAR AND HEMATOLOGICAL PATHOPHYSIOLOGY.	<p><b>UNIT 4.</b> Cardiac pathophysiology. Coronary ischemia: angina pectoris and acute coronary syndrome. Circulatory failure: Heart failure and shock. Valvular pathology. Cardiac automatism disorders. Pathology related to blood pressure.</p> <p><b>UNIT 5.</b> Vascular pathophysiology. Acute and chronic arterial insufficiency. Arterial ischemia syndrome. Venous insufficiency and valve disease. Thromboembolic phenomena. Lymphatic drainage disorders</p> <p><b>UNIT 6.</b> Hematological pathophysiology. Erythrocyte, leukocyte and platelet pathology.</p> <p><b>CLINICAL CASES</b></p>
DIDACTIC UNIT III. RESPIRATORY PHYSIOPATHOLOGY	<p><b>UNIT 7.</b> Semiology of respiratory pathology. Restrictive and obstructive ventilatory disorders. Respiratory insufficiency. Pathology of the parenchyma, pleura, mediastinum and pulmonary circulation.</p> <p><b>CLINICAL CASES</b></p>
DIDACTIC UNIT IV. RENAL AND UROLOGICAL PATHOPHYSIOLOGY	<p><b>UNIT 8.</b> Semiology of renal pathology. Abnormalities in kidney function: Renal failure. Glomerular, tubular and tubulo-interstitial pathology. Pathology of the urinary tract.</p> <p><b>CLINICAL CASES</b></p>



## DIDACTIC UNIT V. DIGESTIVE PATHOPHYSIOLOGY

**UNIT 9.** Semiology of digestive pathology. Motility and secretion disorders. Diseases of the esophagus, stomach and intestines. Alterations in digestion and absorption.

**UNIT 10.** Hepatobiliary and pancreatic pathology.

**UNIT 11.** Vascular pathology of the digestive system. Pathology of the peritoneum.

### CLINICAL CASES

## DIDACTIC UNIT VI. METABOLIC AND ENDOCRINE PATHOPHYSIOLOGY

**UNIT 12.** Physiopathology of endocrine disorders.

Pathology of the hypothalamic-pituitary axis. Thyroid disease. Adrenal pathology. Gonadal pathology.

**UNIT 13.** Disorders in the metabolism of carbohydrates, proteins and lipids.

### CLINICAL CASES

## DIDACTIC UNIT VII. NEUROLOGICAL PATHOPHYSIOLOGY. PATHOPHYSIOLOGY OF THE SENSE ORGANS (OR SYNESTHETIC FP)

**UNIT 14.** General pathology of the nervous system.

Pathology of motor coordination. Pathology of the extrapyramidal system. Pathology of sna and snp. Spinal cord pathology. Pathology of the cerebral cortex. Pathology of the state of consciousness. CSF pathology. Neurovascular pathology.

**UNIT 15.** Pathology of sensitivity

### CLINICAL CASES

## DIDACTIC UNIT VIII. RHEUMATOLOGICAL PATHOPHYSIOLOGY

**UNIT 16.** Pathology of rheumatological diseases.

## DIDACTIC UNIT IX. ONCOLOGICAL PATHOPHYSIOLOGY

**UNIT 17.** Generalities on oncological pathology



## Temporary organization of learning:

Block of content	Number of sessions	Hours
DIDACTIC UNIT I. INTRODUCTION TO PATHOPHYSIOLOGY. ALTERATION OF HOMEOSTASIA UNIT	4,00	8,00
DIDACTIC UNIT II. CARDIOVASCULAR AND HEMATOLOGICAL PATHOPHYSIOLOGY.	4,00	8,00
DIDACTIC UNIT III. RESPIRATORY PHYSIOPATHOLOGY	4,00	8,00
DIDACTIC UNIT IV. RENAL AND UROLOGICAL PATHOPHYSIOLOGY	3,00	6,00
DIDACTIC UNIT V. DIGESTIVE PATHOPHYSIOLOGY	3,00	6,00
DIDACTIC UNIT VI. METABOLIC AND ENDOCRINE PATHOPHYSIOLOGY	3,00	6,00
DIDACTIC UNIT VII. NEUROLOGICAL PATHOPHYSIOLOGY. PATHOPHYSIOLOGY OF THE SENSE ORGANS (OR SYNESTHETIC FP)	3,00	6,00
DIDACTIC UNIT VIII. RHEUMATOLOGICAL PATHOPHYSIOLOGY	3,00	6,00
DIDACTIC UNIT IX. ONCOLOGICAL PATHOPHYSIOLOGY	3,00	6,00



## References

### BASIC BIBLIOGRAPHY:

#### 1. Digital format (clinical Key):

- Kumar V. Robbins and Cotran. Structural and functional pathology. 10th ed. Elsevier España, S.L.U.; 2021
- Kumar V. Robbins. Human pathology. 10th ed. Elsevier España, S.L.U.; 2018.
- Von Domarus A. Farreras Rozman. Medicina Interna. 19th ed. Elsevier España, S.L.U.; 2020.

#### 2. Manuals:

- Porth CM. Physiopathology: health-disease: a conceptual approach. Buenos Aires: Médica Panamericana; 2014.
- De Castro S. Manual de Patología General. 6th ed. Masson; 2006.

### COMPLEMENTARY BIBLIOGRAPHY:

- Harrison. Principios de Medicina Interna. 16ª ed. McGraw Hill 2006
- Rozman C. Farreras/Rozman: Medicina Interna. 16ª ed. Barcelona
- Robbins. Patología humana. Elsevier. Masson. España