



## Information about the subject

**Degree:** Bachelor of Science Degree in Medicine

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

**Code:** 342007 **Name:** Physiological Records and Functional Tests

**Credits:** 3,00 **ECTS Year:** 2 **Semester:** 2

**Module:** Diagnostic and therapeutical procedures.

**Subject Matter:** Diagnostic procedures **Type:** Elective

**Field of knowledge:** Health Science

**Department:** Anatomy and Physiology

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

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

### Lecturer/-s:

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## Module organization

### Diagnostic and therapeutical procedures.

Subject Matter	ECTS	Subject	ECTS	Year/semester
Diagnostic procedures	39,00	Basic Immunology	3,00	1/2
		Functional Assessment	6,00	This elective is not offered in the academic year 24/25
		Genetics	3,00	1/1
		Introduction to Medicine	3,00	1/2
		Laboratory of Diagnostic Tests	3,00	5/1
		Medical Microbiology and Parasitology	6,00	3/1
		Pathological Anatomy	6,00	2/2
		Physiological Records and Functional Tests	3,00	2/2
		Radiodiagnostic and Imaging Techniques	6,00	3/1
Therapeutic procedure	27,00	Anaesthesia and Resuscitation	3,00	5/1
		Biotechnology	6,00	This elective is not offered in the academic year 24/25
		General and Special Pharmacology	9,00	3/2



Therapeutic procedure	General Procedures of Intervention	6,00	This elective is not offered in the academic year 24/25 4/2
	Rehabilitation and Physical Therapy	3,00	

## Recommended knowledge

Knowledge imparted in Physiology 1 and Physiology 2

## 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 Assess the risk-benefit ratio and costs of diagnostic procedures.
- R2 Know the main disciplines that form the basis of physiological records and functional tests.
- R3 Distinguish the different procedures from physiological records and functional tests.
- R4 Know and employ basic techniques of functional scans and physiological records.
- R5 Extract qualitative information about physiological records and functional tests.
- R6 Be able to produce documents on functional tests and physiological records and work as a team.
- R7 Be able to write understandable and organized text on various aspects of functional tests.



## 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 to possess and understand knowledge in a study area that starts from the base of the general secondary education, and is usually found at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study			X	
CB2	Students know how to apply their knowledge to their job or vocation in a professional way and possess the competences that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study			X	
CB3	Students have the ability to collect and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical topics			X	
CB4	Students can pass on information, ideas, problems and solutions to both a specialized and non-specialized audience		X		
CB5	Students have developed the learning skills needed to undertake further studies with a high degree of autonomy			X	
GENERAL		Weighting			
		1	2	3	4
CG1	Recognizing the essential elements of the medical profession, including ethical principles, legal responsibilities, and patient-centered professional exercise			X	
CG2	Understanding the importance of such principles for the benefit of the patient, society and profession, with special attention to professional secrecy			X	
CG3	Knowing how to apply the principle of social justice to professional practice and understanding the ethical implications of health in a changing global context		X		



CG4	Developing professional practice with respect to patient autonomy, beliefs and culture	x		
CG5	Recognizing the limitations themselves and the need to maintain and update their professional competence, giving special importance to the autonomous learning of new knowledge and techniques and to the motivation for quality		x	
CG6	Developing professional practice with respect for other health professionals, acquiring teamwork skills		x	
CG12	Understanding the basis of action, indications and efficacy of therapeutic interventions, based on available scientific evidence	x		
CG15	Having the ability to make an initial diagnostic judgment and establish a reasoned diagnostic strategy		x	
CG18	Indicating the most appropriate therapeutics of the most prevalent and chronic acute processes, as well as terminally ill patients	x		
CG21	Listening to carefully, obtain and synthesize relevant information about the problems afflicting the patient and understand the content of this information			x
CG22	Writing medical histories and other medical records in an understandable way to outsiders		x	
CG23	Communicating effectively and clearly, both orally and in writing, with patients, family members, media workers and other professionals	x		
CG30	Basic knowledge of the National Health System and health legislation	x		
CG32	Knowing how to use information and communication technologies in clinical, therapeutic, preventive and research activities	x		
CG33	Maintaining and using records with patient information for further analysis, preserving data confidentiality	x		

SPECIFIC		Weighting			
		1	2	3	4
CE61	Assessing the risk-benefit ratio of diagnostic and therapeutic procedures				x
CE62	Knowing the indications of biochemical, haematological, immunological, microbiological, anatomopathological and imaging tests				x



CE65	Knowing the main techniques of microbiological and parasitological diagnosis and interpret the results				X
CE72	Knowing the main indications of electrophysiological techniques (ECG, EEG, EMG, and others)				X
CE78	Knowing how to interpret the results of the laboratory's diagnostic tests				X

## TRANSVERSAL

## Weighting

	1	2	3	4
CT1 Analytical and synthesis capacity			X	
CT2 Planification and organization capacity		X		
CT6 Manage information capacity			X	
CT7 Solving problems		X		
CT8 Making decisions	X			
CT9 Team work	X			
CT10 Interdisciplinary team work			X	
CT12 Interpersonal relationship skills		X		
CT14 Critical reasoning			X	
CT16 Individual learning			X	
CT18 Creativity	X			
CT19 Leadership	X			
CT24 Ability to take responsibility	X			
CT25 Autocriticism capacity	X			



CT26 Knowing how to value personal action and know your own skills and limitations

x

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

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4	10,00%	Open questions
R1, R2, R3, R4	70,00%	Tests
R1, R2, R3, R4	5,00%	Practices
R1, R2, R3, R4	15,00%	Practice exam

### Observations

#### 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 Masterclass
- M2 Problems resolution and practical cases
- M4 Content presentations by teacher
- M5 Knowledges and skills explanation
- M6 Laboratory practices
- M7 Oral presentation by student
- M8 Group activities supervised by professor
- M9 Knowledge acquirance through student interaction and activity
- M11 Personalised attention by professor
- M12 Tests to understand the level of knowledge acquirance and skills
- M13 Written work
- M14 Online activity on e-learning
- M15 Personal study
- M16 Information research
- M17 Discussion and solving issues in group





- M18 Work in team
- M19 Group work for searching, discussion and information research
- M21 Supervision of clinical histories

## IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theory class M4, M9, M14	R1, R2, R3, R4	30,00	1,20
Seminar and group practices M2, M5, M6, M8, M12, M14	R1, R2, R3, R4	4,00	0,16
Tutoring M11	R1, R2, R3, R4	3,00	0,12
Evaluation M2, M12	R1, R2, R3, R4	3,00	0,12
<b>TOTAL</b>		<b>40,00</b>	<b>1,60</b>

## LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
No attendance M15	R1, R2, R3, R4	35,00	1,40
<b>TOTAL</b>		<b>35,00</b>	<b>1,40</b>



## Description of the contents

Description of the necessary contents to acquire the learning outcomes.

### Theoretical contents:

Content block	Contents
Physiological recordings in neurology: electroencephalogram	Concept, physiological principles and normal values ??of the electroencephalogram
Physiological recordings in neurology: evoked potentials	Concept, physiological principles and normal values ??of evoked potentials
Physiological recordings in neurology: electromyogram	Concept, physiological principles and normal values ??of the electromyogram
Physiological recordings in neurology: Polysomnography	Concept, physiological principles and normal values ??of polysomnography
Physiological recordings in cardiohemodynamics: Electrocardiogram	Concept, physiological principles and normal values ??of the electrocardiogram
Physiological recordings in respiratory: Pulse oximetry; Capnography; Spirometry	Concept, physiological principles and normal values ??in pulse oximetry, capnography and spirometry.
Analytical physiological records	Concept, physiological principles and normal values ??of biochemistry, blood count, coagulation and gasometry



## Temporary organization of learning:

Block of content	Number of sessions	Hours
Physiological recordings in neurology: electroencephalogram	2,00	4,00
Physiological recordings in neurology: evoked potentials	2,00	4,00
Physiological recordings in neurology: electromyogram	2,00	4,00
Physiological recordings in neurology: Polysomnography	2,00	4,00
Physiological recordings in cardiohemodynamics: Electrocardiogram	6,00	12,00
Physiological recordings in respiratory: Pulse oximetry; Capnography; Spirometry	2,00	4,00
Analytical physiological records	4,00	8,00

## References

Marriott Electrocardiography Practice. Wagner, G. and Strauss, D. 12th Edition. Publisher WOLTERS KLUWER

Manual of clinical neurophysiology. Jorge Iriarte Franco and Julio Artieda González-Granda. Pan American Publisher

Clinical Interpretation of Diagnostic Tests. Rao, L. and Snyder, L. 11th Edition. Publisher WOLTERS KLUWER

Practical Guide for the Interpretation of Pulmonary Function Tests. Hyatt, R.; Scanlon, P.; Nakamura, M. 3rd Edition. Publisher WOLTERS KLUWER