SUBJECT TEACHING GUIDE

G7 - General Physiology and Immunology

Degree in Medicine
Degree in Medicine

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Medicine Degree in Medicine			Type and Year	Core. Year 1 Core. Year 1
Faculty	Faculty of Medicine				
Discipline	Basic Subject Area: Physiology Morphology, Structure and Function of the Human Body				
Course unit title and code	G7 - General Physiology and Immunology				
Number of ECTS credits allocated	6	Term		Semester based (2)	
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. FISIOLOGIA Y FARMACOLOGIA
Name of lecturer	JESUS MERINO PEREZ
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Other lecturers	RAMON MERINO PEREZ MARCOS LOPEZ HOYOS ESTHER TAMAYO REVUELTA NOEMI RUEDA REVILLA CARLOS MANUEL MARTINEZ CAMPA PAULA PEREZ ADRIAN CAROLINA CASTRO HERNANDEZ LUIS GIL DE GOMEZ SESMA

3.1 LEARNING OUTCOMES
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4. OBJECTIVES

Objectives of General Physiology section:
- To know the physiology and its divisions. What is the scientific method?
- To know the internal environment, its relations with the external environment and what is the homeostasis
- To characterize the different body fluid compartments
- To study the cell membrane and its excitability and transport functions
- To describe the different forms of cellular communication
- Study of chemical communication (hormonal)
- Study of neuronal communication
- The sensory receptors. Transduction of stimuli in electrochemical signals
- To know the autonomous and somatic nervous system
- To describe the effectors: smooth, skeletal and cardiac muscles

Objectives of the Immunology section:
- To describe the general functions of the immune system
- To study the innate immune response
- Study of immunoglobulins and antibodies
- To know the receptors of the acquired immune response
- To describe the cells involved in acquired immune response: T and B lymphocytes and the major hiscompatibility system
- To describe how activation of the immune response occurs
- Control of cell migration in the immune response
- To characterize the immune response against microorganisms
- To analyze the regulation of the immune response

6. COURSE ORGANIZATION

CONTENTS	
1	The first part of the subject is intended to describe the basic principles of the physiology of the organs and devices of the human body. The second part deals with the knowledge of the basic principles of functioning of the immune system under physiological conditions
2	Internal environment and homeostasis. Characterization of body fluids
3	Functions of cell membranes: transport and excitability
4	Overview of chemical communication. hormonal communication
5	Neuronal communication. synapse
6	General information about sensory receptors
7	Autonomous nervous system
8	Effectors. Smooth, skeletal and cardiac muscles
9	The innate immune response
10	The acquired immune response
11	Cells of the acquired immune response
12	Activation of the immune response
13	Migratory movements in the immune response
14	The immune response in action. Response to microorganisms. Regulation of immune response

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
practice exam	Work	No	No	15,00
The continuous assessment of the knowledge and skills acquired in the theoretical and practical classes will represent 40% of the final grade (4 points) and will be carried out as follows: - At the beginning of each practical activity, students will be pr	Written exam	Yes	Yes	60,00
Handbook with questions to resolve by the students (working in groups of 3 students) aplying the knowledge adquired during the classes	Work	No	No	5,00
Examination consisting in short questions	Written exam	No	No	20,00
Student´s personal work to be exposed in powerpoint presentation or similar	Others	No	No	0,00
TOTAL				100,00

Observations

The student continuous assesment of the knowlegde adquired in practical and theorical classes will represent 40% of the final qualification.
10% of questionnaires answered in practical classes
10% of a exam to be done at the middle of the six-month period
Individual (10%) and group (10%) works

Observations for part-time students

Part-time students must attend all compulsory practical exercises and they must go through the evaluation process as the rest of the students.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Silverthorn D: Fisiología Humana, Un enfoque integrado, 8ª edición Ed. Panamericana 2019
AK Abbas et al: Inmunología Celular y Molecular, Elsevier 9ª Edición, 2018
Kuby Inmunología, Mc Graw Hill 8ª Edición, 2020