

Medical Physiology II

Academic Year: (2018 / 2019)

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Department assigned to the subject: Bioengineering and Aerospace Engineering Department

Coordinating teacher: DESCO MENENDEZ, MANUEL

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

It is convenient, although not a requirement, to have completed:

- Cell and molecular biology
- Biochemistry
- Biological systems

DESCRIPTION OF CONTENTS: PROGRAMME

The program for the subjects Medical Physiology I and II include the following topics:

Medical Physiology I:

- Introduction to the human body
- The skeletal system and joints
- Muscular tissue and system
- Nervous tissue
- Nerves and spinal chord
- Autonomous nervous system
- The brain
- Sensory and motor nervous system
- The blood
- Immunity and lymphatic system
- Respiratory system

Medical Physiology II:

- Special senses: Vision, Audition, Olfaction, gustation, equilibrium
- Endocrine system
- Cardiovascular system: The heart
- Cardiovascular system: The circulation
- Digestive system
- Metabolism and nutrition
- Urinary system
- Fluid and acid-base balance, homeostasis
- Reproductive system, development and inheritance

LEARNING ACTIVITIES AND METHODOLOGY

Each section of the program will be divided into lectures and practical sessions/seminars.

Some practical sessions will take place at the Laboratories in the UC3M some others will require visits to Hospital Gregorio Marañón (lab coat mandatory).

ASSESSMENT SYSTEM

% end-of-term-examination/test:	60
% of continuous assessment (assignments, laboratory, practicals...):	40

Students should read assigned chapters before lectures and seminars. During seminars there will be interactive discussion with the students.

Periodically short-exams will be passed during the first half-hour of the session. Results of these exams will constitute an important part of the continuous evaluation.

Students will find in a laboratory notebook during practical sessions. This document is also evaluated.

Grading:

- Final exam: 60%
- Short exams, practical sessions and hospital visits: 30%
- Participation, attitude: 10%

NOTE 1:

To perform an average with the continuous evaluation the minimum score in the final exam has to be more than 4.5 out of 10.

NOTE 2:

The mark for students attending any extraordinary examination will be the maximum between:

- a) 100% exam
- b) 60% exam and 40% continuous evaluation if its is available in the same course (subject to NOTE 1)

BASIC BIBLIOGRAPHY

- Guyton & Hall Textbook of medical physiology, Saunders Elsevier, 2011
- Linda S. Costanzo Physiology. Cases and problems, Lippincot Williams & Wilkins, 2012
- Tortora & Derrickson Principles of Human Anatomy and Physiology, WILEY, 2009