

Medical Physiology II

Academic Year: (2018 / 2019)

Review date: 09-06-2018

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

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 finish 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)

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

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