HUMAN AND CELL PHYSIOLOGY II

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<td>MEDICINE AND PHARMACOLOGY</td>
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<td>2rd</td>
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<td>6 ECTS (4,5 T + 1,5 P)</td>
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**LECTURER(S)**
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- Jorge Moreno Fernández (P*)
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(T*: Theory; P*: Practice)

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**DEGREE WITHIN WHICH THE SUBJECT IS TAUGHT**
- Pharmacy

**TUTORING**
- http://www.ugr.es/~fisiougr/tutorias.php

**PREREQUISITES and/or RECOMMENDATIONS (if necessary)**

Recommendations: to have previous basic knowledge (background knowledge of Chemistry, Anatomy and Histology, Biochemistry, Metabolism. Human and Cell Physiology I.

A good standard of English and informatics skills are also required.

**BRIEF ACCOUNT OF THE SUBJECT PROGRAMME (ACCORDING TO THE DEGREE ¿??)**


**GENERAL AND PARTICULAR ABILITIES**

GC9. - To intervene in the activities of promotion of health, prevention of disease, in the individual, familiar and community area with an integral and multiprofessional vision of the process health and disease.

GC13. - To develop skills of communication and information, both oral and written, to deal with patients and users of the center where it is
developed the professional activity. To promote the capacities of work and collaboration in multidisciplinary teams and those related to other sanitary professionals.

GC15. - To recognize the own limitations and the need to support and update the professional competences, giving special importance to the autolearning of new knowledge being based on the scientific available evidence.

EC47. - To know and to understand the structure and function of the human body, as well as the general mechanisms of the disease, molecular, structural and functional alterations and therapeutic tools to restore the health.

### OBJECTIVES (EXPRESSED IN TERMS OF EXPECTED RESULTS OF THE TEACHING PROGRAMME)

The above mentioned objectives in this area are focus on promote that the future pharmacist acquires knowledge about the functioning of the human organism. To do so:

- Understanding the physiological processes, analyzing their biological meaning, description, regulation and integration at different levels of organization: cell, organ and body systems in health.
- Establish the basis for understanding the physiological adaptation process taking place due to a continuously changing environment.

### DETAILED SUBJECT SYLLABUS

**Theory program**

1. Peripheral organisation of the autonomic nervous system
2. Central organization of the autonomic nervous system
3. Body Fluids. The blood
4. Physiology of the erythrocyte and leukocyte
5. Platelet physiology and hemostasis
7. Cardiac cycle. Cardiac output and factors affecting it.
8. Arterial and venous circulation.
10. Cardiovascular regulation.
13. Regulation of respiration.
16. Regulation of renal function.
17. Regulation of acid-base balance.
19. Composition, function and regulation of digestive secretions.
20. Digestion and absorption.
21. Functions of the male reproductive and hormonal systems
22. Female physiology before pregnancy and female hormones
23. Physiology of fertilization, pregnancy, birth and lactation.
24. Thermoregulation
25. Integumentary system. Physiology of the skin and related structures.
26. General adaptation syndrome

**Laboratory practice program**
Practice 1. - Microscopy study of cell components of the blood (functional description)
Practice 2. - Cardiovascular Physiology (simulated). Electrocardiogram
Practice 5. - Physiology of the renal system (simulated)
Practice 6. - Physical and chemical processes of digestion (simulated).
Practice 7. - Measurement of glucose uptake. Intestinal perfusion
Practice 8. - Physiology of the Reproductive System: Hormone replacement therapy (simulated)

For each academic year, a selection of the above list will be performed at the physiology laboratory.

**READING**

**Print Books on Physiology**

**Print Journals**
- News in Physiological Sciences
- Physiological Review
- Current Advances in Physiol
- Annual Review of Physiology

**RECOMMENDED INTERNET LINKS**
http://www.the-aps.org/ The American Physiological Society
http://physoc.org/ The Physiological Society
http://www.seccff.org/ Sociedad Española de Ciencias Fisiológicas
http://www.feps.org/ Federación Europea de Sociedades de Fisiología