
Structure and function of the human body I

Year
FIRST
1st
semester

Studies: Diploma in nursing

Code: INF

Type: CM **Year:** First **Semester:** 1st

Credits: 5

Credits ECTS: 4

Teacher: Andreu Folch Soler

Language: Catalan

Prerequisites: [-]

Subjects to be taken simultaneously: [-]

SUBJECT DESCRIPTION

Anatomophysiology is one of the fundamental sciences for the study of man. This knowledge must provide future nursing professionals with notions of the reality of man and health from a global scientific perspective. Knowledge of the structure and function of the human body provide a basis for improved professional practice and research.

SUBJECT OBJECTIVES

Graduates of this programme develop the following skills and acquire the following knowledge:

1. Have essential knowledge of physiology and anatomy for the practice of nursing. 2 The student therefore recognises the normal condition of the person as opposed to that involving pathologies or alterations 3 Communicate efficiently both in writing and orally. 4. Understand some contemporary aspects related to professional activity.

CONTENTS

1. Introduction - Anatomy and physiology. General constitution of the human body.

- Notions of embryology. · Histology. Different organic functions.
- 2. Locomotor system · Osteology. Myology. Arthrology. Basic functions. · Axial skeleton: cranium and trunk. Thoracic cavity. Fontanel. Vertebra. Respiratory musculature.
 - Upper extremity. Scapular waist. Principal musculature.
 - Lower extremity. Pelvic waist. Principal musculature.
- 3. Circulatory system. · General structure of the circulatory system. Major and minor circulation. · Anatomy of the heart: Mediastis. Cavity and valves. Radiography of the thorax.
 - Cardiac irritants: system of electrical conduction. · Physiology of the heart: de graphic register of electric activity, IECG. The cardiac cycle · Cardiac wear. Venous and arterial pressure. Sphigmomanometry. · Regulation of cardiovascular functions. · Anatomy of arterial circulation: basic lines.
 - Special areas: Willis polygon.
 - Anatomy of venous circulation. Special areas: Porta system.
 - Anatomy and physiology of the lymphatic system.
- 4. Blood and immune System . · General constitution of blood elements. Plasma and serum. General functions. · Erythrocytes or red corpuscles. Haemoglobins, transport of oxygen.
 - Platelets. Haemostasis and coagulation. fibrinolysis. · Leucocytes. Myeloid and lymphoid lines. Macrophages. The spleen. · Lymphocytes T and B. The antigene-antico system. Basic concepts of immunology: Vaccinations.
 - Blood groups. The RH and ABO system.
- 5. Digestive system. · General anatomy of the digestive system · Anatomy of the abdomen. Peritoneum and mesentery. Retroperitoneal area. · Anatomy and physiology of the digestive tube. Mouth, esophagus, stomach, small and large intestine.
 - Anatomy and physiology of the liver and biliary tracts.
 - Anatomy and physiology of the exocrine pancreas.
- 6. Reproductive system
 - Male reproductive system. Anatomy of the male genitals. Hormonal physiology and regulation.
 - Female reproductive system. Anatomy and relation between organs. Physiology of the female reproductive system. Hormonal regulation

METHODOLOGY

The subject is taught through conventional classes which elicit active participation on the part of the student. Pathology/normality cases are presented to achieve a solid basis to enable students to assess a healthy and patient student.

At his/her disposal, the student has an anatomy room with different anatomic parts to

improve understanding of the main theories. There is group work, known as a self-directed credit, which requires consulting bibliographic information and other learning resources at his/her disposal.

EVALUATION

C Test-type examination.

F Group work.

L Clinical experience.

Theory 80%. Self-directed project 20%. Both must be passed for an average to be taken.

EVALUATION CRITERIA

Objective 1:

- The student must display an ability to describe human anatomy and physiology [C].
- The student must demonstrate to work as a team and prepare the project, based on the subject matter, using subject notes, internet resources and the library [F].

Objective 2:

- The student must display in practical and theory & practice activities an ability to recognise anatomy. [L].

BASIC BIBLIOGRAPHY

THIBODEAU, G. (2002). *Anatomía y fisiología*. 4ª edició. Barcelona. Ed. Harcourt. ·

KHALE, W. LEONHARDT, H PLATZER, W (1995). *Atlas de Anatomía*.

5ª edició. Barcelona. 3 volums. Ed. Omega. · TORTORA, G-

GRABOWSKI, SR. (1998). *Principios de anatomia i fisiología*. Madrid. Ed. Mosby/Doyma. ·

AMERALLY, P. (1998). *Lo esencial en anatomia*. Cursos Crash de Mosby. Madrid. Ed. HarcourtBrace.

COMPLEMENTARY BIBLIOGRAPHY AND MATERIAL

Atlas d'anatomia:

· NETTER, FH. (1995). *Atlas de Anatomia Humana*. Barcelona. Ed. Masson Salvat.

· WOLFHEIDEGGER'S. (2000). *Atlas de Anatomia*. 5ª Edició. Ed. Marban.

· MOORE, KL (1995). *Anatomia con orientación clínica*. Madrid. Ed. Panamericana.

· MCMINN, RM. (1995). *Atlas d'Anatomia Humana*. (Fotogràfic). Barcelona. Ed. Oceano-

Espaxs. ·

SOBOTTA (2000). *Atlas d'Anatomia Humana*. 21^a edició. Madrid

. Ed. MèdicaPanamericana.

Llibres d'histologia:

· STEVENS, A. (1999). *Histologia Humana*. 2^a edició. Madrid. Ed. Harcourt Brace.

· FAWCETT, D. (1994). *Tratado de Histologia*. 12^a edició. Madrid. Interamericana Mcgraw-Hill.

Llibres de Fisiologia:

· GUYTON, AC (1996). *Tratado de Fisiologia Mèdica*. 9 edició. Madrid. Ed. Macgrawhill Interamericana.

· GANONG, W. (1998). *Fisiologia mèdica*. 16^a edició. Mexic. Ed. Manual Moderno

Prepared by:

Andreu Folch Soler

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