

Degree	Type	Year
2500891 Nursing	FB	1

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Teaching groups languages

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Prerequisites

As a subject of the first semester of the first year of the Nursing Degree, there are no special requirements.

Objectives and Contextualisation

To acquire knowledge about anatomy and histology, that allow us to understand the structural organization of the human body.

To learn in a weighted way the characteristics of the human structure, which are applied in nursing practice.

To achieve the basic skills that allow the identification of the most relevant anatomical structures in nursing practice.

Competences

- Offer technical and professional health care and that this adequate for the health needs of the person being attended, in accordance with the current state of scientific knowledge at any time and levels of quality and safety established under the applicable legal and deontological rules.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Learning Outcomes

1. Analyse differences by sex and gender inequality in ethiology, anatomy, physiology. Pathologies, differential diagnosis, therapeutic options, pharmacological response, prognosis and nursing care.
2. Describe the main and differential characteristics and the components that make up the structure of the human body.
3. Identify the structure of the human body.
4. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.

Content

The subject is organized in two modules, one of Anatomy and one of Histology.

MODULE: ANATOMY

Contents:

1. General concepts and locomotive apparatus

General osteology. General arthrology. General myology. Axial and appendicular skeleton. Muscles of the head and trunk. Muscles of the upper limb. Muscles of the lower limb.

2. Cardiovascular system

Introduction to the study of the cardiovascular system. Heart. Location of the heart. Mediastinum. Pericardium: fibrous and serous pericardium. Pericardial cavity. Heart position. Morphology of the heart: external and internal morphology, atria, ventricles, cardiac valves. Coronary circulation. Conduction system. Minor circulation: pulmonary artery, pulmonary veins. Major circulation: aorta and its branches, arteries of the neck and head, arteries of the upper limb, arteries of the thorax, arteries of the abdomen, arteries of the lower limb. Veins of the major circulation: superior vena cava system, inferior vena cava system, portal vein system. Lymphatic system.

3. Respiratory system

Organization of the respiratory system. Nose: nasal pyramid and cavities. pharynx Larynx, trachea and main bronchi. Associated endocrine structures: thyroid gland and parathyroid glands. Lungs and pleuras.

4. Nervous system

General organization. Meninges and cerebrospinal fluid. Brain structure: cerebral cortex, subcortical white matter, basal ganglia, limbic system, thalamus, hypothalamus, brainstem, cerebellum. Associated endocrine structures: pituitary gland and pineal gland. Cranial nerves. Spinal cord and spinal nerves. Autonomic nervous system. Organ of hearing and balance. External, middle and internal ear. Organ of vision. Eyeball and its appendages.

5. Digestive system

Organization of the digestive system. Supradiaphragmatic digestive system: mouth, pharynx, esophagus, adnexal glands (parotid, submandibular and sublingual). Abdominopelvic cavity: Peritoneal cavity and extraperitoneal spaces. Infradiaphragmatic digestive system: stomach, small intestine (duodenum, jejunum and ileum), large intestine (vermiform appendix, cecum, ascending colon, transverse colon, descending colon, sigmoid colon and rectum). Adnexal glands: Liver and Pancreas. Spleen.

6. Urinary system

Organization of the urinary system. Kidney: Location. External covers. Internal organization (cortex and medulla). Vascularization. Associated endocrine structures: adrenal glands. Urinary tract: Renal calyces (minor and major), renal pelvis, ureter, urinary bladder and urethra.

7. Reproductive system: Male reproductive system. Scrotum and testicles. Spermatic tract: epididymis, deferent duct, ejaculatory duct. Adnexal glands: seminal vesicles, prostate and bulbourethral glands. Male urethra and penis. Female reproductive system: Ovaries. Fallopian tubes and uterus (fundus, body and neck). Broad and round ligaments. Vagina. External genital organs and female urethra

Practices:

In brackets is the labeling with which is announced in the calendar of the first semester.

1 ECH-PLAB-S1. Anatomy of the locomotor system. Anatomy of the upper and lowerlimbs. Anatomy of the trunk and neck. Anatomy of the head. Study of dissected cadaveric material and bones.

2 ECH-PLAB-S2. Cardiovascular and respiratory systems. Heart. Arterial system. Venous system. Respiratory tract. Lungs and pleura. Study of dissected cadaveric material and didactic models.

3 ECH-PLAB-S3. Anatomy of the nervous system and sense organs. Anatomy of the spinal cord and spinal nerves. Anatomy of the brain and cranial nerves. Anatomy of the meninges and circulation of cerebrospinal fluid. Anatomy of the eyeball and its annexes. Anatomy of the external, middle and inner ear. Anatomy of the pituitary gland and pineal gland. Study of dissected cadaveric material and didactic models.

4 ECH-PLAB-S4. Digestive system. Supradiaphragmatic digestive tract and associated structures (salivary glands, tongue and teeth). Abdominal cavity. Infradiaphragmatic digestive tract. Adnexal glands (liver and pancreas) and spleen. Urinary tract. Kidney and urinary tract. Male reproductive system. Female reproductive system. Study of dissected cadaveric material and didactic models.

MODULE: HISTOLOGY AND ORGANOGRAPHY

Contents:

1. Introduction and epithelial tissue

Concept of histology, histological preparations, tissue classification, lining epithelia, glands.

2. Connective tissues

Connective tissue types, extracellular matrix, fibroblasts, dense and loose connective tissue, reticular and elastic connective tissue, blood and blood cells, adipose tissue, hyaline cartilage, fibrocartilage, elastic cartilage, bone tissue, Haver's systems and bone remodeling.

3. Muscle tissue

Types of muscle, smooth, cardiac and skeletal tissue.

4. Nervous tissue

Organization of the nervous system, neurons and glial cells, parts of the neuron and synapses, types of glial cells, gray matter and white matter, types of nerve fibers, meninges and blood-brain barrier.

5. Cardiovascular system

Structure of the heart, types of blood vessels, muscular and elastic arteries, veins, capillaries and microcirculation, lymphatic vessels.

6. Respiratory system

Structure of the trachea, bronchi and types of bronchi, bronchioles, alveoli and blood-air barrier.

7. Integumentary system

Organization of the skin, epidermis, dermis, accessory glands, fur, nails and sensitive terminals.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Classroom practices	17	0.68	
Laboratory practices	8	0.32	
Theory	28	1.12	
Type: Autonomous			
Personal study	91	3.64	

DIRECTED ACTIVITIES:

Theoretical classes of Anatomy:

They are intended to provide the basic information on the anatomy of the human body, as well as the tools for its study. They will consist of a total of 28 hours of class.

Practices of Anatomy:

Students work in the Dissection Room using properly prepared cadaver material and anatomical models. This activity is intended to provide skills in the identification and location of anatomical structures as well as to understand the anatomical basis of the most common techniques of nursing practice. Each session will last for 2 hours and there will be a total of 4 sessions.

Theoretical and practical activities of the Histology:

They are intended to provide knowledge of the microscopic structure of tissues and organs of the human body. These are integrated activities where basic theoretical training and practical verification of microscopic images is done in the same session for each topic.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
First practical exam anatomy	10	1	0.04	1, 2, 3, 4
First theory exam anatomy	30	1	0.04	1, 2, 3, 4
Histology continuous evaluation	5	1	0.04	1, 2, 3, 4
Histology exam	15	1	0.04	1, 2, 3, 4
Second practical exam anatomy	10	1	0.04	1, 2, 3, 4
Second theory exam anatomy	30	1	0.04	1, 2, 3, 4

Anatomy module

Two partial evaluations are scheduled. Each one includes a test corresponding to the theoretical content and a practical exam

Evaluation contents

First partial assessment:

- Test: Topics 1-3
- Practical exam: Practices 1 and 2

Second partial assessment:

- Test: Topics 4-7
- Practical exam: Practices 3 and 4.

Features of the exams:

- Test: Will consist of test type questions with possible options and only one valid answer. Each incorrect answer will have a penalty of 1/3 point. Blank answers will not be penalized. Test exams represent 75% of the weight of the partial evaluation.
- Practical exams: In these exams, the student will have to name and identify anatomical structures in pictures from the material used in the practice lessons. Incorrect answers are not penalized. Neither do blank answers. The practical exams represent 25% of the weight of the partial evaluation.

Histology module

- Continuous evaluation of the PAULS: At the end of each subject, an evaluation will be carried out in the same session. These evaluations will represent the 25% of the histology module qualification.
- Final exam: It will consist of a test-type exam that will be carried out together with the second partial exam of anatomy. This exam will correspond to 75% of the qualification of the module.

Calculation of the qualification and sufficiency criteria:

- The anatomy module will correspond to the 80% of the final qualification.
- The histology module will correspond to the 20% of the final qualification.

The following formulas will be used to calculate the qualifications:

- Anatomy first partial evaluation = (Test score x 0.75) + (Practical exam score x 0.25)
- Anatomy second partial evaluation = (Test score x 0.75) + (Practical exam score x 0.25)
- Anatomy module qualification = (first partial score + second partial score) /2
- Histology module qualification = (continuous assessment score x 0.25) + (final exam score x 0.75)
- Final qualification = (anatomy module score x 0.8) + (histology module score x 0.2)

Sufficiency criteria

To approve the subject, the following conditions must be met:

- Obtain a final score equal to or higher than 5.0
- The qualification for the anatomy and histology modules cannot be lower than 4.0

The student will be considered non-evaluable if the weight of the tests he/she has taken is less than 40% of the total of the subject.

Recovery evaluation/Scores Improvement

Students who have not achieved the sufficiency of the subject during the course, or who, having obtained it, want to improve their score, can re-examine those tests or practical exams that they decide whenever and when they end up meeting the sufficiency criteria previously specified. The test characteristics the same than previously specified. The scores obtained in the recovery test/qualification improvement will replace those obtained in the partial assessments whenever and wherever it is higher than this. Otherwise, the score obtained initially will be maintained.

The continuous assessment of the histology module is not subject to recovery

Single evaluation

Students who wish to can take the single assessment modality. To do so, they must apply in accordance with the procedures and deadlines specified by the Faculty of Medicine's Academic Management.

Single evaluation procedure

Students who opt for the single assessment procedure will be examined on the day set for the recovery tests of the continuous assessment. They will have to take the exams corresponding to the anatomy and histology modules. These exams will be the same as the recovery exams. The sufficiency criteria are also the same as in the case of continuous assessment.

- Test exam equivalent to the first part (T1): Anatomy (Subjects 1-3)
- First partial equivalent practical exam (P1): Practices 1 and 2
- Second partial equivalent test (T2): Anatomy (Subjects 4-7)
- Second partial equivalent practical exam (P2): Practices 3 and 4.
- Histology module exam

In the case of the single assessment, the following formulas will be applied to calculate the scores

- Anatomy module note: (Note T1 x 0.375) + (Note P1 x 0.125) + (Note T2 x 0.375) + (Note P2 x 0.125)
- Final qualification: (Anatomy module score x 0.8) + (Histology exam score x 0.2)

Recovery test of the single assessment

Those students who do not approve the subject will be able to choose to retake those suspended exams that they decide, as long as and when they end up passing the sufficiency criteria indicated in the point. In these cases, the theoretical recovery exams will be of a non-test type. The practical make-up exams will be of the same characteristics.

Bibliography

Anatomy

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Garcia-Porrero JA, Hurlé JM (2020). Anatomia Humana. 2ª edición Ed. McGraw-Hill Interamericana.

Gilroy AM et al. PROMETHEUS Atlas of Anatomy. 2nd ed. Ed. Panamericana. 2013

Paulsen, F. Waschke J. Sobotta Atlas of Human Anatomy. 24th ed. Ed. Elsevier. 2018.

Histology

Kierszenbaum AL, Tress LL. Histology and cell biology. Introduction to pathological anatomy. Elsevier. 2012

Ross, Pawlina. Histology. Text and color atlas with cellular and molecular biology. Ed. Panamericana. 2008

Welsch. Sobota Histology. 2nd ed. Ed. Panamericana. 2008

Software

No specific software is required for this subject

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	101	Catalan/Spanish	first semester	morning-mixed
(PAUL) Classroom practices	102	Catalan/Spanish	first semester	morning-mixed
(PAUL) Classroom practices	103	Catalan/Spanish	first semester	morning-mixed
(PAUL) Classroom practices	104	Catalan/Spanish	first semester	morning-mixed
(PAUL) Classroom practices	105	Catalan/Spanish	first semester	afternoon
(PAUL) Classroom practices	106	Catalan/Spanish	first semester	afternoon
(PLAB) Practical laboratories	101	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	102	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	103	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	104	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	105	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	106	Catalan	first semester	morning-mixed

(PLAB) Practical laboratories	107	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	108	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	109	Catalan	first semester	afternoon
(PLAB) Practical laboratories	110	Catalan	first semester	afternoon
(PLAB) Practical laboratories	111	Catalan	first semester	afternoon
(PLAB) Practical laboratories	112	Catalan	first semester	afternoon
(TE) Theory	101	Catalan	first semester	morning-mixed
(TE) Theory	102	Catalan	first semester	morning-mixed
(TE) Theory	103	Catalan	first semester	afternoon

PROVISIONAL