

Teaching Guide of the subject

Year 2026 - 2027

HUMAN BODY STRUCTURE

Code: 106096

ECTS credits: 6

Qualification	Types	Course	Semester
2500891 Nursing	FB	1	1

Contact	Use of languages
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Prerequisites

There are no official prerequisites.

Contextualisation and objectives

This subject is part of the Basic Sciences training module, Human Anatomy subject and is planned in the first semester of the Bachelor's Degree in Nursing.

Caring for healthy and sick people defines us as a profession. To provide quality care, it is necessary to have a deep knowledge of the human body.

The purpose of this course is to introduce students to the different elements involved in the structure of the human body, both at the internal and microscopic level of cytology, genetics and histology, as well as at the external and macroscopic level, such as the most important anatomical characteristics of the systems of men and women throughout the different stages of the life cycle.

Learning objectives of the subject

1. To acquire knowledge of cell biology and genetics that allows understanding the organization of the cell.
2. To achieve knowledge of anatomy, embryology and histology that allows understanding the structural organization of the human body in normal situations.
3. Identify the anatomical structures and relationships of the different organs of the human body in normal situations.

Learning Outcomes

Learning Outcomes of the DEGREE (RAT)	LEARNING OUTCOMES OF THE SUBJECT (RAM)
KT02. Describe the structure and functioning of the human body, the physiological and biochemical foundations, and the pathophysiological processes across the different stages of the life cycle	KM01. Define the structure and function of the human body (KT02). KM02. Identify the molecular and physiological bases of cells and tissues (KT02).
CT01. Apply comprehensive and continuous nursing care in health and social care settings, ensuring the health and well-being of individuals, families, and communities. Such care must be grounded in available scientific evidence, clinical practice guidelines, and current legislation to guarantee well-being, quality, and safety.	CM01. Perform physical examinations by body systems (CT01).

Contents

MODULE 1 . Basic anatomical structures

- GLOBAL STRUCTURE OF THE HUMAN BODY
Introduction to anatomy and apply the terminology used in anatomy.
Describe the levels of organization of the human body.
Cite the interactions between anatomy and physiology.
Describe the parts of the human body and anatomical positions.
Describe the planes and axes of the human body.
- CELL BIOLOGY. LULAR
Identify cells: types and functions.
Know the parts of the cell: membranes. Cytoplasm. Nuclei.
Identify cellular activities: metabolism and transfer across membranes.
Know the cell cycle.
Describe the mechanisms of cell division: Mitosis, Meiosis.
Identifying Cell Death: Necrosis and Apoptosis.
- HUMAN GENETICS
Introduction to genetics.

Know the chemical bases of molecular genetics: Disposition. DNA Replication and Transcription and RNA Synthesis.

Identifying the genetic code: Translation of the message. Protein synthesis.

To know the regulation of genes.

Describe the molecular analysis of the human genome.

Identify chromosomes: Karyotype.

Describe the objectives of meiosis and its phases: Recombination.

Describe Oogenesis and Spermatogenesis.

Remember the general concepts of heredity applied to the human species.

Describe the possibilities of occurrence and genetic risk of autosomal inheritance: both dominant and recessive.

Describe the possibilities of occurrence and genetic risk of sex-linked inheritance: Linked to the X chromosome.

Genetic counseling.

Identify mutations.

Describe chromosomal abnormalities in humans: numerical and structural.

Correlate chromosomal abnormalities and carcinogenesis.

○ HISTOLOGY

To know the embryonic origins of tissues. Classify fabrics.

Name and know the epithelial tissue and glands. Classify the glands.

Name and know Connective Tissue: lax, supportive (cartilage and bone) and hematopoietic. Name and know Muscle tissue: smooth and striated.

Name and know Nervous tissue.

Name and know the basic tissues of the skin (dermis and epidermis) and the appendages of the skin.

MODULE 2. Anatomical structures of the systems that make up the human body.

○ MUSCULOSKELETAL SYSTEM

To know the structure of the musculoskeletal system.

Name and know the structure and classification of the different types of bones. Identify and name the anatomical components: bones, muscles and joints. Describe the microscopic structure and histology of bones and joints.

Classify joints anatomically and functionally. Classify the muscles.

Describe the histology of the striated muscle.

Identify and name of the head: bones, muscles and joints of the skull and face. Identify and name the spines: bones, muscles and joints of the spine. Identify and name the thorax: bones, muscles and joints.

Identify and name of the upper limb: bones, muscles and joints of the shoulder girdle, elbow, wrist and hand.

Identify and name of the lower extremity: bones, muscles and joints of the pelvic girdle, knee, ankle and foot.

- **NERVOUS SYSTEM**

Identify the components of the nervous tissue. Classifying neurons: shapes and types.

Classify the nervous system.

Identifying the brain: location and relationships.

Identify and name the cranial meninges, the spaces they delimit and the circulation of cerebrospinal fluid.

Identify and name the parts of the brain: situation and relationships. Identify and name the parts of the cerebellum: situation and relationships.

Identify and name the parts of the diencephalon: thalamus, hypothalamus. Situation and relations.

Identify and name the parts of the brainstem: midbrain, protuberance, medulla oblongata.

Describe the situation and trajectory of the cranial nerves.

Identify and name the parts of the spinal cord: location.

Identify and describe the path of the spinal nerves and the plexuses they form.

Describe the organization of the autonomic nervous system: sympathetic and parasympathetic.

Situation and relations.

Describe the types of synapses between preganglionic and postganglionic fibers.

Describe the sense of vision and identify its components: eyeball, lenses, extrinsic and intrinsic ocular muscles, protective accessory elements.

Describe the sense of hearing and balance: external, middle and internal ear.

Describe the sense of taste: localization of taste.

Describe the sense of smell: location of smell.

- **ENDOCRINE SYSTEM**

Identify the location of the endocrine system.

Describe the endocrine glands: Location, relationships and irrigation.

Describe the pituitary gland: situation and relationships. Adenohypophysis. Hypothalamus-pituitary axis. Neurohypophysis. Identify the thyroid gland: situation and relationships.

Identify the parathyroid gland: situation and relationships. Identify the adrenal gland: situation, relationship and births.

Identifying the pancreas as an endocrine gland: situation and relationship.

- **URINARY SYSTEM**

Know the general organization of the urinary system.

Identify and locate the different parts of the urinary tract and their relationships: kidney, ureter, urinary bladder and urethra.

Relate the urinary system to the genital and digestive systems. Describe the differences between the female and male urinary tract. Describe the histological structure of the urinary tract.

Identify the components of the nephron: glomerulus, Bowmann's capsule, contoured tubules, Henle's loop and collecting tubules.

Describe the vascularization of the nephron.

- **DIGESTIVE SYSTEM**

Know the organization of the digestive system.

Identify and locate each of the parts of the digestive tract: mouth, pharynx, esophagus, stomach,

small intestine, large intestine, sigma and rectum.

Identify and locate the exocrine pancreas, liver, gallbladder.

Relate the different parts of the digestive system to each other and to the respiratory system.

Know the histology of the digestive system.

○ RESPIRATORY SYSTEM

Know the organization of the respiratory system.

To know the microscopic and histological structure of the respiratory system.

Identify and locate the different structures of the upper respiratory system: nose, pharynx, larynx and trachea.

Identify and locate the different parts of the intrathoracic respiratory system: bronchi, bronchioles, alveoli and pleura.

Relate the different parts of the respiratory system to the digestive and cardiovascular system.

To know the irrigation and innervation of the lungs.

Describe the muscles involved in respiratory mechanics.

○ CARDIOCIRCULATORY SYSTEM

To know the organization of the cardiocirculatory system.

Describe the histology of the three layers of the heart: endocardium, myocardium and pericardium. Identify the anatomy of the heart: cavities and valves, conduction tissue, and coronary arteries. Describe the two circuits of blood circulation: Systemic and Pulmonary.

Identify the main arteries and veins of the body.

Know micro-circulation. Structure of capillaries.

Describe the anatomy of fetal circulation.

○ DEFENSE SYSTEMS

Know the composition of the blood: plasma, red blood cells, platelets and leukocytes. Describe the structure of erythrocytes and their life cycle.

Describe blood groups and Rh system. Describe platelets.

Describe white blood cells or leukocytes.

Describe hematopoietic tissues: myeloid, lymphatic. Explain the concept of immunity.

Identify the different types of immunity: natural immunity. Acquired immunity: humoral and cellular. Differentiate the types of lymphocytes in acquired immunity: T lymphocytes and B lymphocytes.

Know and classify antigens and antibodies. Differentiate between vaccination and passive immunity.

○ REPRODUCTIVE SYSTEM

To know the general organization of the reproductive system.

Identify and locate the structures of the female reproductive system: ovary, fallopian tubes, uterus, vagina, external genitalia.

Relate genital structures to the organs of the peritoneal cavity and pelvis. To know the structure and relationships of the mammary gland.

Identify and locate the structures of the male reproductive system: testicle, epididymis, vas deferens, seminal vesicles, prostate, penis and scrotum.

○ EMBRYOLOGY

To know the development of the embryo and the fetus. To know the phenomena of fertilization and segmentation.

Cite the phenomena that appear during the embryogenesis period. Gastrulation. Embryonic disc. And the appearance of the trilaminar disc. Appearance of the ectoblast, mesoblast and endoblast. Explain the concept of organogenesis. Explain the changes during fetogenesis. Describe the umbilical cord and placenta.

Methodology

The methodological approach of the subject is based on considering that the protagonist in the teaching and learning process is the student. Students must be active and autonomous throughout the process and teachers support them, providing the necessary information and resources for learning to take place.

Directed activity:

The subject is face-to-face with non-compulsory attendance. The theoretical class (TE) is used as a teaching methodology, developing active listening and presentation. Classroom practices (PAUL) with discussion and performance of exercises and activities in groups or individually.

Supervised activity:

Different articles and documents are worked on. The classes are a support for the student's autonomous study of the recommended bibliography. Tutorials can be face-to-face or electronically. Depending on the time needs in the development of the subject, the tutorial classes will be integrated within TE and PAUL classes. Doubts presented by students in relation to the subject can be resolved at any time, preferably in any type of class, or by e-mail to the professor responsible for the subject that generates the doubt, otherwise it is not possible to access face-to-face.

Training activities¹

Activity	Hours	ECTS	Learning Outcomes
Type: Directed			
. Theoretical classes (TE) . Classroom Practices (PAUL)	52,50	2,1 0	KM01 KM02 CM01
Supervised Types			
. Tutoring	1	0,02	KM01 KM02 CM01

¹ The teaching staff will allocate approximately 15 minutes once the subject is finished to allow that their students can answer the assessment surveys on teaching and subject.

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Type: Self-employed: . Bibliographic queries and documents.	82,50	3,30	KM01 KM02 CM01
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Evaluation

The student has only one call per academic year to pass the subject.

Academic progression and passing the subject is assessed through continuous and formative assessment, through two multiple-choice tests and a written concept test that will be carried out at the same time as the second continuous assessment. Each multiple-choice test will have a weight of 47.5%, while the proof of concept will have a weight of 5%.

In multiple-choice tests, the negative answers are according to the following formula:

NOTE = Correct answers - (errors/n-1), where n is the number of answer options. Its value will be between 0 and 10.

The proof of concept will be valued from 0 to 10.

The grade of the subject is given by the weighted average of the grades obtained in the two multiple-choice tests (from a 5 in each of them) and the concept test.

Requirements to be able to do the weighted average:

1.- A minimum grade of 5 is required in each of the two multiple-choice evaluations. The proof of concept grade may be less than 5.

2.- The student must have taken a minimum of 66.6% of the total weight of the evaluation tests (this requires having taken at least two multiple-choice evaluations).

Feedback on the results of the evaluation tests will be made through the classroom and tutorials if necessary.

Qualification

- 0 to 4.9: Suspense
- 5.0 to 6.9: Passed
- 7.0 a 8.9: Notable
- 9.0 to 10: Excellent (in the event that the student has obtained a grade equal to or higher than 9, he/she may opt, at the discretion of the teacher, for an honors degree).

Single assessment

1. The date of the single test will coincide with the date of the last continuous assessment test that appears in the daily programme and in the calendar of training and assessment activities.

2. The single assessment will consist of:

- Test 1 which will consist of a **multiple-choice test** and weights **47.5%**
- Test 2 which will consist of a **multiple-choice test** and weights **47.5%**
- Test 3 which will consist of a **Proof of concepts** that will consist of and weights 5 %

Recovery activity

1. A single date is determined for the recovery activity for all students, whether or not they are subject to single assessment
2. A recovery activity is proposed for those students who have been previously evaluated for the set of activities whose weight is equivalent to a minimum of 2/3 of the total grade of the subject, and have obtained a final grade higher than 3.5 and less than 5 out of 10.
3. This test will consist of an evaluation activity depending on the part not passed. That is, if the multiple-choice test not passed is the first, it will only have to be evaluated. In the event that it is the second, only the second must be evaluated. In the event that both have been failed, both must be evaluated. There will be no proof-of-concept retake test. In the event that the student passes the retake test corresponding to the failed part (grade of 5 or more), their grade for the test will be recorded as a 5. This grade will be the one that averages the other test (if passed) and the concept test, in order to obtain the final grade of the subject.
4. The retake tests will be determined by the teaching staff, usually multiple-choice tests, which will include all the contents of the failed part.
5. Once the subject has been passed, it cannot be subject to a new evaluation.

No available

It is considered that the subject will not be assessable when one of these circumstances is met:

1. Not having delivered any of the continuous assessment activities provided for in the teaching guide.
2. Not having attended any of the practical or compulsory sessions, when these are necessary to assess learning outcomes and as indicated in the teaching guide.
3. Not having taken the final test (exam, written or oral test, work defense, etc.), if This represents an essential percentage of the grade.
4. Not having completed the minimum required participation in training activities (for example, seminars, presentations, forums, etc.), when these are part of the evaluation.
5. Not having submitted the final project or compulsory project, if this constitutes a central evidence of learning of the subject.

Exam Review

Once the final grade has been published, the student can request to carry out the review of the test within the established period. Review requests outside of this period are not accepted.

Procedure in case of copying / plagiarism

1. Copying **or plagiarism** in any type of evaluation activity constitutes a crime, and will be penalized with a 0 as a grade for the subject, losing the possibility of recovering it, whether it is an individual or group work (in this case, all members of the group will have a 0).
2. If, during the completion of an individual assignment in class, the teacher considers that a student is trying to copy or is discovered some type of document or device not authorized by the teacher, the same will be graded with a 0, without the option of recovery, and therefore, the subject will be suspended.
3. A work, activity or exam will be considered to be "copied" when it reproduces all or a significant part of the work of oneself, another classmate.
4. A work or activity will be considered "plagiarized" when a part of a text by an author is presented as one's own without citing the sources, regardless of whether the original sources are in paper or digital format.

The use of Artificial Intelligence (AI) technologies

The use of Artificial Intelligence (AI) technologies is regulated according to the type of work to be carried out:

1. In the event that the work aims at personal reflection and meaningful learning by the student, **the use of AI technologies is prohibited** in any of its phases of completion.
Any work that includes AI-generated fragments (e.g. abstracts, translations, text writing or image creation) will be considered a lack of academic honesty and may lead to a partial or total penalty in the grade of the activity, as well as greater penalties in cases of seriousness.
2. In other works, **the restricted use of AI technologies is allowed** exclusively in those support tasks, such as bibliographic or information searches, proofreading, translations, and other specific situations that are indicated. In these cases, the student will have to clearly identify which parts have been generated with this technology, specify the tools used and include a critical reflection on how they have influenced the process and the final result of the activity. The non-transparency of the use of AI in this assessable activity will be considered a lack of academic honesty and may lead to a partial or total penalty in the grade of the activity, as well as greater sanctions in cases of severity.

In any case, in the description of each assignment, the teacher in charge will clearly indicate **whether the prohibited or restricted use of AI applies**.

Aspects of evaluation related to values and attitudes

1. The teacher may reduce the grade of the subject between 1 and 2 points out of 10 for those students who repeatedly do not respect the indications on the rules of behavior in class and/or disturb the normal functioning of the same.
2. "No lack of respect for classmates or teachers will be tolerated. Homophobic, sexist or racist attitudes

will also not be tolerated. Any student in whom any of the attitudes described above are detected will be classified as having failed the subject."

Other considerations

1. All the evaluation tests will be published in the daily program and in the calendar of training and evaluation activities.
2. The date of the single test will coincide with the date of the last continuous assessment test.
3. Students who repeat the subject may request at the beginning of the course to carry out only one final synthesis assessment (article 117, page 46 of the Academic Regulations of the Universitat Autònoma de Barcelona (Approved by agreement of the Governing Council of 7 July 2022, and modified by agreement of the Governing Council of 1 February 2023).

Students in second or more enrolment who have taken all the assessment tests in the previous year may opt to be assessed with a single synthesis assessment activity. This activity will consist of an exam at the end of the subject coinciding with the written exam of the subject. Students in second or more enrolment who wish to opt for the final exam must notify the teaching staff responsible for the subject in writing two weeks before the published date.

Evaluation activities

Activity	Weight	Hours	ECTS	Learning Outcomes
Multiple-choice test 1	47,5%	7,50	0,20	KM01
Multiple-choice test 2	47,5%			KM02
Concept test	5%			CM01

Bibliography

STRUCTURE AND FUNCTION OF THE HUMAN BODY

Author: Escudero B, Sánchez J.M, Borrás J, Serrat J.

Edition: 2nd Edition. Mac GRAW Hill Interamericana de España 2002.

ISBN: 9788448604684

INTRODUCTION TO THE HUMAN BODY

Author: Tortora. Derrickson.

Edition: Editorial Médica Panamericana, 2008.

ISBN: 9789687988993

To the program

- Moodle