

Human Anatomy II

Code: 102969
ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	FB	1	2

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

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Prerequisites

Although there are no prerequisites, it is advisable that the student has achieved basic competence for self-learning and group work, as well as pre-university biology knowledge. It is recommended that students have overcome the subject of Human Anatomy I of the first semester.

Objectives and Contextualisation

The Human Anatomy I course is a subject that is taught in the 2nd semester of the 1st year of the Degree in Physiotherapy and it is part of the basic education subjects. This subject is complemented with other basic subjects such as the Human Anatomy I and the Function of the human body.

The objectives of the subject are:

- Learn anatomical organization and descriptive anatomy, as well as the topographic anatomy of the main human body regions.
- Learn and use correctly, the anatomical nomenclature.
- Identify the different anatomical structures.
- Get practical skills.

Competences

- Analyse and synthesise.
- Develop independent learning strategies
- Display knowledge of the morphology, physiology, pathology and conduct of both healthy and sick people, in the natural and social environment.

Learning Outcomes

1. Analyse and synthesise.
2. Develop independent learning strategies
3. Explain the function of these anatomical structures.
4. Locate the different anatomical structures by surface palpation.
5. Recognise the layout of anatomical structures in a living subject.

Content

SECTION 1- HEAD AND RESPIRATORY SYSTEM

Head: study of the cranium (endo and exocranium). Bones, foramen and canals.

Respiratory system: Nose, nasal cavity and paranasal sinuses. Larynx. Trachea and bronchi. Lungs. Pleura and pleural cavities. Mediastinum. Innervation, vascular supply and lymphatic drainage of the respiratory system. Topographic, clinical and radiological anatomy of the respiratory system.

- Lectures: 5 hours.
- Practical Lab in the dissection room (PLAB 1): 2 hours.
- Seminars (SEM 1,2): 3 hours (1.5 hours each).

SECTION 2- UROGENITAL SYSTEM

Topographic, clinical and radiological anatomy of the urogenital apparatus.

Urinary system: kidneys, ureter, bladder, male and female urethra. Vascularization and innervation of the urinary apparatus.

Male reproductive system: Testes and epididymes, vas deferens and ejaculatory ducts. Spermatic cords. Accessory glandular structures: prostate, seminal vesicles, and bulbourethral glands. Scrotum, Penis. Innervation, vascular supply and lymphatic drainage of the male reproductive system.

Female reproductive system: Ovaries, uterine tubes, uterus, vagina and female external genital organs. Mama. Vascularization and innervation of the female reproductive system.

- Lectures: 4 hours.
- Practical Lab in the dissection room (PLAB 2A): 1 hour.

SECTION 3- DIGESTIVE SYSTEM

Oral cavity: cheeks, lips, oral vestibule, mouth, palate, tongue, teeth and salivary glands. Thyroid, parathyroid and thymus glands. Pharynx. Oesophagus. Stomach. Peritoneum and peritoneal cavity. Small intestine: duodenum, jejunum and ileum. Large intestine: caecum, vermiform appendix, colon (ascending, transverse, descending and sigmoid), rectum and anal canal. Hepatobiliary system: liver, gallbladder and biliary tree. Pancreas, spleen and suprarenal gland. Vascularization and innervation of the digestive system. Topographic, clinical and radiological anatomy of the digestive tract.

- Lectures: 10 hours.
- Practical Labs in the dissection room (PLAB 2B, 3): 3 hours.

SECTION 4- SENSE ORGANS

Hearing: external ear. Tympanic membrane. Middle ear or eardrum box (bones, muscles, walls). Inner ear or labyrinth (cochlea, semi-circular ducts).

Vision: Orbital cavity. Membranes: external or fibrous, medium or uvea, internal or nervous. Transparent media: aqueous humour, lens and vitreous humour. Eyelids. Lacrimal apparatus. Extraocular musculature.

- Lectures: 4 hours.
- Practical Labs in the dissection room (PLAB 4A): 1 hour.

SECTION 5- NERVOUS SYSTEM

Generalities of the nervous system. Telencephalon. Diencephalon. Encephalic trunk (midbrain, pons and medulla oblongata). Cerebellum. Spinal cord. Tracts (ascendents and descendents). Vascularization of the nervous system. Meninx. Ventricular system. Autonomous nervous system. Cranial nerves.

- Lectures: 16 hours.
- Practical Labs in the dissection room (PLAB 4B, 5): 3 hours.
- Seminar of clinical anatomy (SEM 3): 1 hour.

Methodology

In accordance with the objectives of the subject, the teaching methodology of the course is based on the following activities:

DIRECTED ACTIVITIES

Lectures (39 hours): Systematic exhibition of the subject, giving relevance to the most important concepts. The student acquires basic knowledge of the subject attending master classes and complementing them with personal study of the topics explained.

Seminars (4 hours): Sessions with a smaller number of students. Three hours of anatomy of the head are programmed. One hours of clinical seminar are scheduled where students apply the knowledge acquired to solve clinical cases.

Practical Labs (10 hours): The students attend in small groups to the dissection room to study the different thematic contents of the subject in their respective sections. Students identify different anatomical structures in dissections, prosections and imaging techniques (radiology, computerized tomography, magnetic resonance imaging, ultrasound, etc.). The objective is to consolidate the knowledge acquired in lectures, tutorials and the autonomous activities.

SUPERVISED ACTIVITIES

Tutorials: The tutorials will be made in a personalized way in the teacher's office (hours to be arranged). The aim of the tutorials is to clarify concepts, establish the knowledge acquired and facilitate the study by the students. They can also be used to solve doubts that the students have about the preparation of the seminars.

AUTONOMOUS ACTIVITIES

Comprehensive reading of texts and articles. Personal study, schemes and summaries preparation. Conceptual assimilation of the contents of the subject.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	39	1.56	3, 5
Practical Labs	10	0.4	1, 2, 3, 4, 5
Seminars	4	0.16	1, 2, 5
Type: Supervised			
Tutorials	15.5	0.62	1, 2, 3
Type: Autonomous			
Summaries preparation / Personal study	77	3.08	1, 2, 3, 5

Assessment

The competences of the subject are evaluated through two partial exams, each with a weight of 50% to the final grade of the subject. The subject of each partial exam can be eliminatory if the students reach a minimum grade of 5.00, both the theory exam as well as the practical. All students will have two opportunities to pass the two parts of the subject: partial exam (during the semester) and retrieval exam (at the end of the semester).

PARTIAL EXAMS:

In order to take these exams, it is mandatory for the student attend all practical labs and seminars programmed for each partial. Only 1 absence in each partial will be allowed without justification.

The subject will program 2 partial exams with a weight of 50% each.

- First partial: This partial exam will focus on the contents of the head, respiratory, urogenital and the digestive systems. Lectures of section 1, 2, 3 + PLAB 1, 2, 3 + SEM 1, 2.
- Second partial: It will focus on the contents of sense organs and nervous system. Lectures of section 4, 5 + PLAB 4, 5 + SEM 3.

Each partial will consist of: written evaluations: objective tests based in lectures, SEM and PLAB contents.

- Theoretical evaluation - Multiple-choice questions: test with 5 answers, only 1 true and with a penalty of 0.25 points for incorrect answer. This test represents 70% of the partial mark.
- Practical evaluation - Restricted questions raised on preparations or anatomical images. Wrong or blank answers are not penalized. This test represents 30% of the partial mark.

The mark of each partial = theoretical evaluation (70%) + practical evaluation (30%). Provided that it fulfils with the two premises to eliminate partial matter.

To eliminate matter of a partial, it is necessary to fulfil the two premises:

1. Theoretical evaluation: minimum mark 5.00
2. Practical evaluation: minimum mark 5.00

In the event that a student has a good grade in one of the exams but in the other has a grade below 5.00, the student will NOT have eliminated partial matter (regardless of whether the weighted sum of the two types of exams are greater than or equal to 5.00). In these cases, the student will have to submit to the examination of recovery of the partial not eliminated.

RECOVERY EXAM:

The students who have eliminated subject in the partial evaluations will not be obligated to make the final evaluation or recovery.

The subject will schedule a final assessment, in accordance with the Faculty's teaching calendar. All those students enrolled in the subject can be presented, although they have not attend any of teaching activity programmed during the semester.

Students with the following criteria have to attend the final evaluation:

- Students who have not eliminated material in 1 or 2 partials (students who do not meet the two premises to eliminate matter of the partial).
- Students who have not submitted to any of the partial exams.
- Students who have eliminated material but want to upgrade of one or both partial exams. In these cases:

An email must be sent to the coordinator of the subject at least 1 week before the recovery exam.

The student will have to submit to the theoretical + practical evaluation of the partial (s) that wishes to upgrade mark

Although the student presents to the recovery exam to upgrade, it is mandatory to have a minimum grade of 5.0 on the theoretical examination and a minimum grade of 5.0 on practical examination of the recovery exam. Otherwise, the student will have suspended the subject.

Once the student has a minimum grade of 5.0 in both exams (theoretical and practical) of the recovery exam, the final grade will be calculated, using the highest score obtained by the student (between the partial and recovery exam).

The recovery exam of each partial will consist of written evaluations: objective tests based in lectures, SEM and PLAB contents.

- Theoretical evaluation: the coordinator at the time of the call will specify whether this evaluation will be test type or essay. This evaluation represents 70% of the partial mark.
- Practical evaluation - Restricted questions raised on preparations or anatomical images. Wrong or blank answers are not penalized. This test represents 30% of the partial mark.

The student who has to recover the 2 partials, will recover the 1st part (theoretical and practical) + the 2nd part (theoretical and practical). It will have, then, a partial note of recovery of the 1st part and another of the 2nd part.

To pass the recovery exam, it is necessary to fulfil these two premises for each partial:

- Theoretical evaluation: minimum mark 5.0
- Practical evaluation: minimum mark of 5.0

In case the student has a good grade in one part of the exam but the other does not have a minimum grade of 5.0, the student will NOT have approved the partial recovery exam and therefore the student will have suspended the subject.

STUDENTS REGISTERED MORE THAN ONCE (REPEATERS):

Students enrolled two or more times in the subject and have not eliminated the entire subject in the partial exams, can ask the coordinator (through email) for an essay test (instead of a multiple-choice test), at least 1 week before the recovery exam. The practical exam in the dissection room will be the same as the rest of the students enrolled in the subject.

GRADE OF THE SUBJECT:

Grade of the subject = Head, Respiratory, urogenital and digestive system (50%) + sense organs and nervous system (50%).

The final grade of the subject will have a numerical expression, with a decimal on the scale of 0-10 and with the qualitative equivalence in accordance with the criteria of the UAB, of "suspens" (0-4.9), "aprovat" (5.0-6.9), "notable" (7.0 -8.9) and "excellent" (9.0-10.0). Following indications of the UAB will be rounded off to the nearest whole number when it is one tenth of a value that entails a qualitative change of qualification. The honour distinction will be among students who have achieved an excellent qualification. The number of license plates awarded may not exceed 5% as established by the academic regulations of the UAB.

To pass the subject it is necessary to obtain a minimum grade of 5.0 in each part (head, respiratory, urogenital and digestive system + sense organs and nervous system). In case that a part has a good mark but in the other part the mark is less than 5.0, the student's mark will be 4.8 points maximum, although the weighted sum of the two parts is greater than or equal to 5.0. The mark of each part is that obtained in the partial exams or in the recovery exam.

It is considered non-evaluable student, who has NOT performed a minimum of two evaluation activities.

ANNOUNCEMENTS, REVISIONS:

Exams (day, hour, classroom ...) and revision of the marks will be announced through the UAB moodle. The procedure for reviewing marks will be in accordance with the current regulations of the UAB and in any case be individually.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
A) Theoretical evaluation nº 1: multiple-choice questions	35%	1.5	0.06	1, 3, 4, 5
B) Practical evaluation nº 1	15%	0.75	0.03	1, 2, 4

C) Theoretical evaluation nº 2	35%	1.5	0.06	1, 3, 4, 5
D) Practical evaluation nº 2	15%	0.75	0.03	1, 2, 4

Bibliography

Text books:

- Drake RL, Vogl W, Mitchell AW (2015). Gray- Anatomía para estudiantes. 3ª ed. Ed. Elsevier Science, Madrid.
- Garcia-Porrero JA, Hurlé JM (2015). Anatomía Humana. Ed. Mc Graw Hill. Format e-book a la UAB
- Moore KL, Dailey AF, Agur AMR (2018). Moore Anatomía con orientación clínica. 8ª ed. Ed. Wolters-Kluwer-Lippincott-Williams. Barcelona.
- Pro EA (2014). Anatomía clínica. 2ª ed. Ed. Médica Panamericana. Format e-book a la UAB

Atles

- Gilroy AM et al. PROMETHEUS Atlas de Anatomía (2013). 2ª ed. Ed. Panamericana: Buenos Aires. Format e-book a la UAB
- Rohen JW, Yokochi C, Lütjen-Drecoll E (201). Atlas de Anatomía Humana. 8ª ed. Ed. Elsevier Science, Madrid