

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

Sandra López Gordo
Gemma Manich Raventos
Jordi Gascón Bayarri

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

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Analyse and synthesise.
- Display knowledge of the morphology, physiology, pathology and conduct of both healthy and sick people, in the natural and social environment.

- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Analyse and synthesise.
3. Communicate using language that is not sexist.
4. Consider how gender stereotypes and roles impinge on the exercise of the profession.
5. Critically analyse the principles, values and procedures that govern the exercise of the profession.
6. Explain the explicit or implicit code of practice of one's own area of knowledge.
7. Explain the function of these anatomical structures.
8. Identify situations in which a change or improvement is needed.
9. Identify the social, economic and environmental implications of academic and professional activities within one's own area of knowledge.
10. Locate the different anatomical structures by surface palpation.
11. Propose new methods or well-founded alternative solutions.
12. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
13. Propose projects and actions that incorporate the gender perspective.
14. Propose viable projects and actions to boost social, economic and environmental benefits.
15. Propose ways to evaluate projects and actions for improving sustainability.
16. Recognise the layout of anatomical structures in a living subject.
17. Weigh up the risks and opportunities of suggestions for improvement: one's own and those of others.

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+ SEM 2): 3 hours.

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- 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 4): 3 hours.
- Seminar of clinical anatomy (SEM 3): 1 hour.

SECTION 5- 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 5): 1 hour.

Methodology

NOTE: The proposed methodology may undergo some modification depending on the face-to-face restrictions imposed by the health authorities.

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 hour 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.

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.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	39	1.56	3, 7, 16
Practical Labs	10	0.4	5, 2, 1, 3, 6, 7, 9, 8, 10, 17, 15, 11, 12, 13, 14, 16, 4
Seminars	4	0.16	2, 16
Type: Supervised			
Tutorials	15.5	0.62	5, 2, 6, 7, 15
Type: Autonomous			
Summaries preparation / Personal study	77	3.08	5, 2, 1, 3, 6, 7, 9, 8, 17, 15, 11, 12, 13, 14, 16, 4

Assessment

NOTE: The proposed evaluation may undergo some modification depending on the face-to-face restrictions imposed by the health authorities.

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. 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:

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 + SEM 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.

- **Test 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 60% of the partial mark.
- **No test evaluation** - This test represents 40% of the partial mark.

The mark of each partial = test evaluation (60%) + no test evaluation (40%). A grade below 5.00, the student will NOT have eliminated partial matter. 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 subjects 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.

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

- **Students who have not eliminated material in 1 or 2 partials.**

- Students who have not submitted to any of the partial exams.
- Students who have eliminated material but want to upgrade 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.
Although the student presents to the recovery exam to upgrade, it is mandatory to have a minimum grade of 5.0 on the partial exam of the recovery exam. Otherwise, the student will have suspended the subject.

The recovery exam of each partial will consist of written evaluations: objective tests based in lectures, SEM and PLAB contents. The student who has to recover the 2 partials, will recover the 1st partial + the 2nd partial. It will have, then, a partial note of recovery of the 1st part and another of the 2nd part.

To pass the recovery exam, The student needs a grade of 5.00 to pass the recovery exam. In case the student will NOT have approved the partial recovery exam and therefore the student will have suspended the subject.

GRADE OF THE SUBJECT:

Grade of the subject = 1st partial (50%) + 2n partial (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 (1st and 2n partial). 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 a 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) Written evaluation nº 1: multiple-choice questions	30%	1.5	0.06	2, 7, 10, 16
B) Written evaluation nº 1	20%	0.75	0.03	5, 2, 1, 3, 6, 9, 8, 10, 17, 15, 11, 12, 13, 14, 4
C) Written evaluation nº 2	30%	1.5	0.06	2, 7, 10, 16
D) Written evaluation nº 2	20%	0.75	0.03	5, 2, 1, 3, 6, 9, 10, 17, 15, 11, 12, 13, 14, 4

Bibliography

Text books:

- Drake RL, Vogl W, Mitchell AW (2020). Gray- Anatomía para estudiantes. 4ª ed. Ed. Elsevier Science, Madrid.
- Garcia-Porrero JA, Hurlé JM (2020). Anatomía Humana. 2ª edición. Ed. Mc Graw Hill. Format e-book a la biblioteca de la UAB
- Moore KL, Dailey AF, Agur AMR (2018). Moore Anatomía con orientación clínica. 8ª ed. Ed. Wolters-Kluwer-Lippincott-Williams. Barcelona. Format e-book a la biblioteca de la UAB
- Pro EA (2014). Anatomía clínica. 2ª ed. Ed. Médica Panamericana. Format e-book a la UAB Format e-book a la biblioteca de la UAB

Atles

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

Software

For this subject we do not need any specific software