

Systems Histology

Code: 101895
ECTS Credits: 6

2024/2025

Degree	Type	Year
2501230 Biomedical Sciences	OB	2

Contact

Name: Beatriz Almolda Ardid

Email: beatriz.almolda@uab.cat

Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

There are no official prerequisites. However, a basic knowledge of Cell Biology and Histology of tissues is recommended.

Objectives and Contextualisation

This is an obligatory subject in the 2n year, concerning the cellular and tissue bases of human organs and systems. It has been designed assuming students have a basic knowledge of Histology and Physiology that will facilitate they acquire a comprehensive understanding and an integrated approach to the organization of human organs.

The subject gives the basic knowledge to understand the subject of Anatomy of pathology next year.

The main goals of the subject are:

- Understand the cellular and tissular organization of the different organs and systems of the human body.
- Recognize and identify at the microscopic level the different organs and systems of the human body.
- Relate the tissular composition of the organs with their function.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Display knowledge of the bases and elements applicable to the development and validation of diagnostic and therapeutic techniques.
- Display knowledge of the basic life processes on several levels of organisation: molecular, cellular, tissues, organs, individual and populations.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.

- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- 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 account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Work as part of a group with members of other professions, understanding their viewpoint and establishing a constructive collaboration.

Learning Outcomes

1. Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
2. Define the morphological characteristics of the tissues and cells of the digestive system.
3. Define the morphological characteristics of the tissues and cells of the excretory system.
4. Describe the morphological characteristics of the tissues and cells of the cardiovascular system.
5. Describe the morphological characteristics of the tissues and cells of the endocrine glands.
6. Describe the morphological characteristics of the tissues and cells of the respiratory system.
7. Describe the principal histological techniques for studying human tissues and their component cells.
8. Discern the morphological characteristics of the tissues and cells of the genital system.
9. Discern the morphological characteristics of the tissues and cells of the nervous system.
10. Identify the different organs and tissues of the body microscopically.
11. Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
12. Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
13. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
14. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
15. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
16. 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.
17. Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
18. Work as part of a group with members of other professions, understanding their viewpoint and establishing a constructive collaboration.

Content

Themes:

1. Integumentary system
2. Sensory organs
3. Cardiovascular system
4. Immune system

5. Endocrine system
6. Respiratory system
7. Digestive system
8. Excretory system
9. Male reproductive system
10. Female reproductive system

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	38	1.52	2, 3, 5, 4, 6, 7, 8, 9, 10
Seminars	10	0.4	18
Type: Supervised			
Tutorials	6	0.24	2, 3, 5, 4, 6, 7, 8, 9, 10
Type: Autonomous			
Seminars	23	0.92	18
Study	66	2.64	

The contents of Systems Histology include theoretical lectures and seminars.

Theory classes

The theory program will be taught in 38 classes. They will be carried out using audiovisual material prepared by teacher, material that the students will have at their disposal in the Virtual Campus.

Seminars

The scheduled seminars are designed for students to work in small groups, and acquire group work and critical reasoning skills. The students will be divided into groups to work on a topic specific of the program for the subsequent collective discussion. Image recognition will be also addressed.

Tutorials

Tutoring will take place in a personalized way in the teacher's office (hours to be agreed). The tutorials they must be used to clarify concepts, establish the knowledge acquired and facilitate the study by the students.

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
Seminars	20	2	0.08	1, 17, 2, 3, 5, 4, 6, 7, 8, 9, 10, 11, 15, 14, 12, 13, 18
Written exams	80	5	0.2	2, 3, 5, 4, 6, 7, 8, 9, 10, 16, 15, 14, 12, 13

The skills of this subject will be assessed through continuous assessment, which will include individual tests of theoretical and practical knowledge and group seminars.

The evaluation system is organized in two sections, each of which is evaluated independently and will have assigned a specific weight in the final grade of the subject:

Written tests (80% of the overall mark): In this section, the knowledge achieved by each student. There will be two partial tests, eliminatory subject, throughout the course and a final recovery test (see course schedule). Students who have obtained a grade lower than 5 (out of 10) in any of these tests will have to take the recovery exam a the final maturity test.

Seminars (20% of the overall mark). At the end of each seminar it will be a test to prove the knowledge of the students about the specific field of the seminar.

Passing the subject

To pass the subject, at least 5 points out of 10 must be obtained in the overall calculation of the tests theory papers and seminars, only if the student obtained a minimum mark of 5 out of 10 in both the seminar and the written tests.

The presentation of the student to any remedial exam (theory and/or practical) entails the waiver of the previously obtained qualification.

To participate in the recovery, students must have previously been assessed in a set of weight activities of which is equivalent to a minimum of two thirds of the total qualification of the subject. So, the student will obtain the qualification of "Not assessable" when the assessment activities carried out have one weighting lower than 67% in the final qualification.

Unique assessment:

This subject foresees the single assessment system. In this sense, this consists of a synthesis test

only one that will coincide with the same date fixed in the calendar for the last continuous assessment test (2nd term)

and the same system will be applied in case of need for recovery.

Bibliography

BOOKS

- Fawcett, D.W.: Tratado de Histología (ed. Interamericana-McGraw Hill).
- Gartner, L.P. Hiatt, J.L.: Texto Atlas De Histología, (ed. McGraw Hill).
- Geneser, F.: Histología (ed. Panamericana).
- Krstic, R.V.: Los tejidos del hombre y de los mamíferos (ed. McGraw Hill).
- Krstic, R.V.: Human Microscopic Anatomy (ed. Springer-Verlag).
- Ross, M.H. y Pawlina, W: Histología. Texto y atlas color con biología celular y molecular (ed. Panamericana).

- Stevens, A. y Lowe, J.: Histología Humana. (ed. Elsevier).
- Welsch, U.: Sobotta Welsch Histología. (ed. Panamericana).
- Kierszbaum, A. y Tres, L.: Histología y Biología Celular. Introducción a la anatomía patológica. (Ed. Elsevier)

ATLAS

- Boya, J. Atlas de Histología y organografía microscópica, ed. Panamericana.
- Cross, P.C. & Mercer, K.L. Cell and Tissue Ultrastructure. A functional perspective, ed. Freeman and Company.
- Eroschenko, V.P. Di Fiore's Atlas of Histology, ed. Lea and Febiger.
- Fawcett, D.W. The Cell, ed. W.B. Saunders Company.
- Gartner, L.P. & Hiatt, J.L. Atlas color de Histología, ed. Panamericana.
- Kessel, R.G. and Kardon, R.H.: Tissues and organs: a text-atlas of scanning electron microscopy, ed. Freeman and Company.
- Kühnel, W. Atlas de Citología y Anatomía microscópica, ed. Omega.
- Stanley, L.E. & Magney, J.E. Coloratlas Histología, ed. Mosby.
- Welsch, U. Histología (Sobotta / Hammersen), ed. Marbán.
- Young, B. & Heath, J.W. Histología funcional (Wheater), ed. Churchill Livingstone
- <https://histologyguide.org//index.html>

Software

There is no specific software for this course

Language list

Name	Group	Language	Semester	Turn
(SEM) Seminars	521	Catalan/Spanish	first semester	morning-mixed
(SEM) Seminars	522	Catalan/Spanish	first semester	morning-mixed
(TE) Theory	52	Catalan/Spanish	first semester	afternoon