Teaching guide

IDENTIFICATION DETAILS

Degree:	Biomedicine
Scope	Biology and Genetics
Faculty/School:	Experimental Sciences
Course:	PATHOLOGICAL ANATOMY
Type:	Compulsory
ECTS credits:	4,50
Year:	3
Code:	2152
Teaching period:	Fifth semester
Subject:	General Principles of Disease
Module:	Foundations of Biomedicine
Teaching type:	Classroom-based
Language:	Spanish
Total number of student study hours:	112,50

SUBJECT DESCRIPTION

Human Pathological Anatomy is the branch of Medicine that deals with the study, using morphological, microscopic and microscopic techniques, of the causes, development and consequences of diseases in man. The ultimate goal is to determine the correct diagnosis of a person's illness. In the case of Biomedicine, the fundamental field is human diseases, as well as experimental pathology and/or comparative pathology, the latter being used as tools to understand the mechanisms by which diseases are carried out as well as the possible contributions to their treatment.

The course is divided into two parts: the first part deals with Basic General Pathology in which the main objective is to understand cell and tissue biopathology. The second part deals with General System Pathology, in which the main objective is to understand specific organic pathology.

GOAL

The main objective of the Pathological Anatomy course is to introduce students to the fundamental bases of basic and system pathology, as well as the techniques for obtaining, processing and staining surgical samples or autopsies, biopsies and cytologies used for subsequent evaluation, both of human origin and in other animal experimentation models.

The specific aims of the subject are:

-Know the different histological processing techniques for subsequent evaluation from surgical samples or autopsies, biopsies and cytology.

-Know the characteristics and fundamentals of Basic Pathology.

-Know the different pathologies of systems such as cardiovascular, digestive, reproductive, urinary, respiratory, liver-pancreas, nervous system, hematopoietic system, endocrine system, musculoskeletal system and skin.

PRIOR KNOWLEDGE

It is recommended that the student have a fundamental knowledge base of General Human Anatomy and Embryology, Human Anatomy of Organs and Systems, Histology and Cell Biology.

COURSE SYLLABUS

BLOCK I: BASIC GENERAL PATHOLOGY
1. Cell pathology.
2. Inflammation and repair.
3. Pathology of the immune system.
4. Neoplasms.
5. Environmental and nutritional pathologies.
6. Genetic disorders. 7. Pediatric diseases.
8. Homeostasis and Hemodynamic Disorders.

BLOCK II: SYSTEM PATHOLOGY
9. Vascular pathology.
10. Heart pathology.
11. Neuropathology.
12. Hematopathology.
13. Pulmonary pathology.
14. Gastrointestinal pathology.
15. Pathology of the liver, pancreas and gallbladder.
16. Male and female reproductive system and mom.
17. Endocrine pathology.
18. Pathology of bones and joints.

EDUCATION ACTIVITIES

The teaching+learning methodology in the subject of Pathological Anatomy will be carried out through the following mandatory training activities (AF):
AF1. Participatory expository class sessions.
AF2. Participatory practical class sessions.
AF3. Carrying out practical work.
AF4. Attendance at seminars.
AF5. In-person tutoring (scheduled and/or at the student's request).
TUTORING The tutoring schedule will be informed by the teacher at the beginning of the course. Given the face-to-face nature of the subject, the possibility of holding on-line or virtual sessions to clarify doubts about the subject taught or the tools used in learning is not contemplated. It will be necessary to arrange individual and/or group tutoring for these purposes.
“The teachers of the subject do not authorize the publication by the student of the material provided by the teachers of the subject in the virtual classroom, or by any other means.”

DISTRIBUTION OF WORK TIME

TEACHER-LED TRAINING ACTIVITIES	INDIVIDUAL WORK
45 Horas	67,50 Horas

LEARNING RESULTS

Know the pathological anatomy of the different devices and systems.

To know the fundamentals of the response of cells and organs of the human body to injury, from a molecular, systemic and clinical perspective.

To know the general mechanisms of the disease and its associated molecular, structural and functional alterations, its syndromic expression and the therapeutic tools to restore health.

To know the changes in cellular and systemic physiology that take place in the most prevalent diseases in our society.

Know the different laboratory instruments and materials (biological and non-biological) and their obtaining and handling for different purposes, observing the necessary safety principles.

SPECIFIC LEARNING RESULTS

Determine the routine and special techniques used for the diagnosis of tissue and cytological samples.

Recognize the alterations produced in the face of aggressions regardless of the organ or system where they are located.

Recognize the specific alterations and characteristics produced in each of the organs.

Recognize and describe microscopic findings of pathologies in biopsy samples, surgical specimens and cytology.

Differentiate morphological, macroscopic and microscopic criteria between benignity and malignancy

LEARNING APPRAISAL SYSTEM

The following percentages will apply to both ordinary and extraordinary calls:
SE1-Evaluation of the theoretical content of the subject through written tests with short answer or test-type questions: 60%. You will evaluate RA 2, 3, 4 and 5 learning outcomes.
SE2 - Realization and evaluation of the practical work carried out in the laboratory 25%. You will evaluate learning outcomes RA1, 1 and 5. For this purpose, images will be projected and/or histological preparations will be provided that the student must recognize and must justify the basis that lead to this pathology and its characteristics.
SE3-Carrying out and evaluating group work: 10%. You will evaluate the results of RA 2, 3, 4 and 5. A cross-cutting activity will be carried out together with the subject of Human Genetics.
SE4-Participatory work in classes and seminars 5%
Passing the subject will require obtaining a minimum grade of 5 in each of the sections (both in the ordinary and in the extraordinary call). Ordinary call: With regard to the evaluation of expository and practical classes, a partial exam will be held approximately halfway through the program. This exam may release material for the final exam. The grade from which it can be released will be communicated by the teachers in due course. If the minimum grade required is not exceeded, the exam will not be taken into account in the student's final grade and the student must be examined for the entirety of the subject in the final exam.
If the required minimum grade is exceeded, the student must only examine the rest of the contents of the subject in the final exam. In this case, each of the exams will constitute 30% of the final grade (adding up to the 60% specified above). In order to pass this section of the partial grade, it will be necessary to obtain a minimum score of 5 in each of the two exams. Any student who, having passed the minimum grade required to release the subject in the partial exam, wishes to give up this grade and take all the subject for the final exam may do so. There will be no more deadline for giving up the partial exam than the day on which the final exam takes place. In any case, the exams that evaluate the expository classes may contain test-type, short or developmental questions.
With regard to laboratory practices, your attendance is mandatory. Only in extremely serious cases (to be determined by the teacher) will non-attendance be allowed on the date on which the student is officially summoned and the move to another group on other dates. If they do not attend any of the sessions, the student must justify it properly, recover that practice (if there are still dates available) and do a written work (to be specified by the teacher of the subject). Failure to attend more than one of the practical sessions will mean not exceeding this section of the subject and in the extraordinary call the student must be examined in writing. The time allocated for learning and carrying out the internships is that stipulated in the official calendar of the subject. The recovery of internships at a different time is not contemplated.
It will be an essential requirement to pass the subject: 1) pass the written evaluation of the expository classes, 2) attend each and every laboratory practice (as mentioned in the previous paragraph), 3) approve the written evaluation of the practical laboratory work and 4) the due date delivery of the group work.

If these requirements are not met, the student will not pass the call.
Plagiarism, as well as the use of illegitimate means in evaluation tests, will be sanctioned in accordance with those established in the Evaluation Regulations and the University's Coexistence Regulations.
For students in second or subsequent enrollment, the criteria for continuous evaluation of the subject will be agreed with the teacher.
Extraordinary call: If in the ordinary call the student has met some of the four requirements listed in the previous paragraph but not all, the qualifications of those parts that he would have passed will be maintained for the extraordinary call. Thus, in this call, you will only have to overcome the pending parts. The student who has to be examined in the expository classes will do so for the complete subject (Partial grades are not saved for the extraordinary call). The official exams will be carried out in person.

ETHICAL AND RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE

1.- The use of any Artificial Intelligence (AI) system or service shall be determined by the lecturer, and may only be used in the manner and under the conditions indicated by them. In all cases, its use must comply with the following principles:
a) The use of AI systems or services must be accompanied by critical reflection on the part of the student regarding their impact and/or limitations in the development of the assigned task or project.
b) The selection of AI systems or services must be justified, explaining their advantages over other tools or methods of obtaining information. The chosen model and the version of AI used must be described in as much detail as possible.
c) The student must appropriately cite the use of AI systems or services, specifying the parts of the work where they were used and describing the creative process followed. The use of citation formats and usage examples may be consulted on the Library website(https://www.ufv.es/gestion-de-la-informacion_biblioteca/).
d) The results obtained through AI systems or services must always be verified. As the author, the student is responsible for their work and for the legitimacy of the sources used.
2.- In all cases, the use of AI systems or services must always respect the principles of responsible and ethical use upheld by the university, as outlined in the Guide for the Responsible Use of Artificial Intelligence in Studies at UFV. Additionally, the lecturer may request other types of individual commitments from the student when deemed necessary.
3.- Without prejudice to the above, in cases of doubt regarding the ethical and responsible use of any AI system or service, the lecturer may require an oral presentation of any assignment or partial submission. This oral evaluation shall take precedence over any other form of assessment outlined in the Teaching Guide. In this oral defense, the student must demonstrate knowledge of the subject, justify their decisions, and explain the development of their work.

BIBLIOGRAPHY AND OTHER RESOURCES

Basic

Kumar V, Abbas AK, Aster JC. Human Pathology (10th ed.) Elsevier, 2017.

Additional

Mohan H. Textbook of pathology. (6th ed.). Ed. Jayne Brothers Medical Publishers. 2010.

Robbins and Cotran. Atlas of Pathological Anatomy. (3rd ed.). Klatt and C.ed. Elsevier. 2015.

O'Dowd, G. — Bell, S. — Wright, S. WHEATER Pathological Anatomy. Text, Atlas and Review of Histopathology 6th Edition Elsevier, 2020