### Title
PATHOLOGICAL ANATOMY I - II

### Code
MC 4102

### ECTS Credits
<table>
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<tr>
<th>PA I</th>
<th>PA II</th>
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### Teaching Format
Lectures and practical training

### Semester/Year
1º & 2º / 4º

### Assessment/ Exam Type
Oral

### Teaching Hours
- Lectures PA I: 32
- Lectures PA II: 32

### FTE
5

### Student Rating
Good

### Exam Rating
Very Good

### Preconditions
All the exams of the first three years

### Contents
Structure of the programme
The Pathological Anatomy teaching programme, intended to be fully comprehensive in nature (area 7 and area 15), will be divided into 3 parts:
- Introduction to Pathological Anatomy
- Pathology of the organ
- Clinico-pathological correlations

This section has the aim of imparting on students an understanding of the significance of the Pathological Anatomy discipline, its applications and the role it plays in guiding a doctor’s decisions, as well as its possibilities and limitations.

It will also discuss the fundamental aspects of diagnostic-prognostic parametrization in human cancers, in the light of their natural history and the therapeutic possibilities.

Clinico-pathological correlations
In this section we will deal with the greater part of area 15, in which the unifying concept of Pathological Anatomy in general medicine will be our focus: the student will be expected to learn the epicritical integration of anatomy and pathology, in order to be able to provide a complete morphological and functional interpretation of the disease state.

The principal methods that will be used to achieve these aims are the anatomo-clinical conference and the integrated anatomo-clinical lecture.

The student will be expected to attend a certain number of diagnostic follow-ups conducted using a specific diagnostic and anatomo-clinical approach, as well as diagnostic microscopy lectures in small groups.

General aspects
Diagnostic techniques in Pathological Anatomy
- cytology
- biopitic histopathology
- surgical histology
- the diagnostic follow-up

Special techniques in Pathological Anatomy
- special stains
- cyto-chemistry
- immuno-histochemistry
- in situ hybridization
- electronic microscopy
- The anatomo-pathological diagnosis

General aspects of tumours
- Epidemiological notes
- Carcinogenesis
- Oncogenes
- Tumoral suppressor genes
- Prognostic factors of neoplasias
- Nomenclature and classification aspects
- The staging of tumours

Endocrine disease
- Diseases of the adeno-hypophysis:
  - hypophyseal adenomas
  - lymphocytic adenohypophysitis
  - Rathke’s cysts
  - craniofaryngioma
- Diseases of the cortical subrenals:
  - congenital hyperfunction
  - primary hyperfunction
  - macronodular hyperplasia
- adenomas
- carcinomas
- secondary hyperfunction
- hypofunction
- Diseases of the thyroid
- goitre
- tumours
- thyroiditis

Diseases of the digestive system
- Elements and methodology of histocytological diagnostics
- Diseases of the oesophagus
- Non-neoplastic diseases of the stomach
- Gastrointestinal polyps
- Tumours of the stomach
- Non neoplastic diseases of the intestine with particular focus on intestinal inflammatory diseases
- Tumours of the intestine
- Hepatic histopathological diagnostic parameters
- Acute and chronic Hepatitis
- Cholestatic and alcoholic liver diseases
- Cirrhosis and liver cancer
- Liver transplant diseases
- Diseases of the cholecysts and extra-hepatic bile ducts
- Non neoplastic diseases of the pancreas
- Pancreatic tumours

Pathological Anatomy and anatomo-clinical correlations. Pleuro-pulmonary and mediastinal diseases.
- Neonatal hyaline membrane disease
- Pulmonary oedema
- Pulmonary emboli
- Pulmonary emphysema
- Hypertension of the pulmonary circulation
- Diffuse alveolar damage (DAD) and acute respiratory failure
- Pneumonia and bacterial broncho-pneumonia
- Infective pulmonary diseases in immunocompromised subjects
- Interstitial pneumonia; pulmonary fibrosis
- Bronchial asthma; extrinsic allergic alveolitis
- Lung cancers
- Pneumoconiosis
- Pulmonary tuberculosis
- Diseases of the pleura
- Diseases of the mediastinum, with particular focus on those involving the thymus

Male and female genital systems
Diseases of the breast:
- general aspects
- non-carcinomal diseases
- proliferative diseases of the breast
- cancer of the breast
- general aspects
- macroscopic and microscopic types
- screening methods
- prognostic factors
- morphological aspects
- immuno-histochemistry
- ploidal levels

Diseases of the prostate:
- inflammatory diseases
- benign neoplastic disease
- malignant neoplastic disease
- prostate cancer
- morphology
- prognostic factors

Diseases of the ovaries:
- non neoplastic ovarian diseases
- neoplastic ovarian diseases
- benign neoplasia
- malignant neoplasia
- borderline tumours

Diseases of the uterus:
- diseases of the myometrium
- diseases of the endometrium
- diseases of the cervix

Diseases of the testicles:
- non neoplastic diseases
- neoplastic diseases (classification)

Blood Pathologies
- T-lymphocyte ontogenesis
- B-lymphocyte ontogenesis
- Morpho-function of the peripheral lymphoid organs
- The secondary follicle and germinative centre in the immune response
- Lymphadenitis
- The classification of lymphomas
- Anatomo-clinical aspects of non-Hodgkin’s lymphomas
- Anatomo-clinical aspects of Hodgkin’s lymphomas
- Chronic lymphatic leukaemias
Monoclonal antibody diseases
Myeloproliferative syndromes
Splenomegaly

Central Nervous System
Endocranial hypertension
Circulatory disorders
Trauma
Inflammation
Tumours

Uropoietic system
Nephrotic syndrome
Nephritic syndrome
Principal primary and secondary glomerular diseases
Pyelonephritis
Nephroangiosclerosis
Tumours of the kidneys and excretory pathways (ureters and bladder)
Renal tuberculosis

Diseases of the heart and major vessels
Ischemic heart disease
Myocarditis
Pericarditis
Endocarditis
Primary heart diseases
General aspects of cardiac malformations
Atherosclerosis
Aneurysms
Arteritis

Diseases of the skin
Moles
Melanomas
Basal or squamous cell carcinomas

Diseases of the bone
Inflammatory bone diseases
Bone tumours

Objectives

The principal role that the teaching of Pathological Anatomy plays in the training of a doctor rests in the knowledge it provides regarding the changes occurring in the organism in the face of disease; this in turn enables the doctor to understand the effects such diseases may have on the body’s function as well as the appearance of specific semiological and clinical profiles. For this reason, the fundamental objective of this course is not to enable the student to recognise or diagnose pathological morphologies as an end to itself. On the contrary, the presentation to students of various pathological profiles— with their macroscopic, microscopic, ultrastructural, pheno- or genotypical aspects— should always be with the aim of their acquiring a full understanding of clinical medicine.

At the same time, during the course of training, the professional contribution made by the Anatomopathologist in the diagnostic and therapeutic process, together with any eventual prognostic and therapeutic implications, should be highlighted, as well as their involvement in scientific research.

A further point to stress will be the strict conceptual and operational inter-dependence between Pathological Anatomy (essentially perceived as Applied Pathology) and other disciplines such as general and specialist Clinical Medicine, and those of a diagnostic-instrumental nature (Radiology, Immunology, Clinical Chemistry, etc.).

Structure of the programme

Material/Equipment required
Identity badge and White coat

Additional Costs
None