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**Degree in Medicine and Surgery**

Teaching: **Clinical Practice IV Year**

Total CFU : **18**

SSD	TEACHING MODULE	CFU
MED/10	Clinical Practice of Pneumology	1
MED/11	Clinical Practice of Cardiology	2
MED/21	Methods in Thoracic Surgery	1
MED/22	Methods in Vascular Surgery	1
MED/23	Methods in Cardiac Surgery	1
MED/12	Clinical Practice in Gastroenterology	1
MED/13	Clinical Practice in Endocrinology	1
MED/14	Clinical Practice in Nephrology	1
MED/24	Clinical Practice in Urology	1
MED/18	Practical Activities Of Surgical Semeiotics	2
MED/09	Practical Activities Of Medical Semeiotics	2
MED/15	Clinical Practice in Haematology	1
MED/16	Clinical Practice in Rheumatology	1
MED/17	Clinical Practice in Infectious Diseases	1
MED/09	Clinical Practice in Geriatrics	1

**LEARNING OBJECTIVES**

**Medical course:** The student will participate in all clinical activities on the assigned ward.

In particular, he/she will learn how to welcome the patient to the ward, inform the patient and obtain consent for the diagnostic and therapeutic pathway, correctly compile the medical record (anamnesis, objective examination and diary), carry out the physical examination of the patient, set up the differential diagnostic pathway.

**Surgical course:** The student will participate in all clinical activities of the assigned ward; the student will be directly involved in welcoming the patient to the ward, correctly completing the medical record (anamnesis, objective examination and diary), setting up the diagnostic pathway, informing the patient and obtaining consent for the diagnostic and therapeutic pathway.

## LEARNING OUTCOMES

### Knowledge and understanding

Knowledge of the total patient approach. Acquire the medical skills necessary for clinical decision making. Demonstrate knowledge of therapeutic approaches.

### Applying knowledge and understanding

Recognise and critically interpret the main pathologies, using knowledge of clinical semiotics and the laboratory and instrumental diagnostic tools useful to complete the information obtained from the anamnesis and the objective picture. To interpret from a pathophysiological point of view the symptoms, clinical signs and laboratory and instrumental findings of individual clinical cases and to establish the clinical-diagnostic reasoning leading to the diagnosis and therapeutic measures. To be able to formulate a differential diagnosis based on specific clinical data and to justify it with coherent arguments. Know the practical aspects of diagnostic instruments, when to use them and how to use them.

### Autonomy of judgement

Recognise the importance of thorough subject knowledge consistent with good medical education. Recognise the fundamental role of correct theoretical knowledge in clinical practice.

### Communication skills

Explain arguments orally in an organised and coherent way. Use academic language that is appropriate and consistent with the topic of discussion.

### Learning skills

Recognise the possible applications of the recognised skills in the future career. Evaluate the importance of the acquired knowledge in the general medical education process.

## PREREQUISITES

Knowledge of Microbiology, Physiology, Systematic Pathology, Internal Medicine and General Surgery.

## COURSE SYLLABUS

**Surgical course:** The student will participate in all clinical activities on the assigned ward.



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In particular, he/she will learn how to welcome the patient to the ward, inform the patient and obtain consent for the diagnostic and therapeutic pathway, correctly compile the medical record (anamnesis, objective examination and diary), carry out the objective and physical examination of the patient, establish the differential diagnostic pathway.

**Medical course:** The student will participate in all clinical activities on the assigned ward. In particular, he/she will learn how to welcome the patient to the ward, inform the patient and obtain consent for the diagnostic and therapeutic pathway, correctly compile the medical record (anamnesis, objective examination and diary), carry out the physical examination of the patient, set up the differential diagnostic pathway.

### **Clinical practice in pneumology**

- Clinical approach to the respiratory patient: history and objective examination;
- Performance and interpretation of arterial gas analysis;
- Performance and interpretation of respiratory function tests: simple spirometry, global spirometry, alveolar-capillary diffusion test, walking test;
- Interpretation of chest imaging: chest x-ray, chest CT (HRCT, CT with mdc), PET/CT, lung scintigraphy;
- Indication and basics of interventional pneumology: video fibrobronchoscopy, EBUS, interventional pneumology;
- Thoracic oncology;
- Assessment and clinical management of the acute and chronic respiratory patient;
- Outpatient assessment for the diagnosis and management of respiratory disease;

### **Clinical practice in cardiovascular system**

- Taking the history of the cardiac patient;
- Interpretation of laboratory tests related to cardiovascular disease;
- Cardiovascular semeiotics (general objective examination with emphasis on cardiac listening);
- Reading the electrocardiogram with the ability to recognise bradyarrhythmia, tachyarrhythmia and ischaemic changes (chronic ischaemia and acute coronary syndromes);
- Basic interpretation of echocardiography: cardiac contractility and valvular disease;
- Basic interpretation of coronary angiography;
- Formulation of a cardiological diagnosis and establishment of appropriate therapy;

### **Methods in Chest Surgery**

- Assist and learn to perform the close and remote history taking of patients with respiratory/thoracic pathology;
- Assist and learn to perform the objective examination of patients with respiratory/thoracic pathology, with emphasis on percussion and auscultation of the chest;
- Learn how to communicate with cancer patients and their families, taking into



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account the mode of communication and information requirements of this particular patient population;

- Assisting and assisting operators in the preparation of endoscopic examinations (fibrobronchoscopy, EBUS, EUS) and in the performance of thoracentesis;
- Assisting in the operating theatre during lung resection, lobectomy, thymectomy, apicoectomy for pneumothorax, pleural drainage, mediastinal biopsies and removal of mediastinal masses using both thoracotomy and thoracoscopic and robotic techniques.

### **Methods in vascular surgery**

- Taking a vascular history (history of intermittent claudication or rest pain, symptoms of cerebral ischaemia, symptoms of venous stasis in the lower limbs);
- Perform vascular semiotics (assessment of peripheral arterial pulses and puffing, palpation of the abdominal aorta and popliteal space);
- Carrying out carotid endarterectomy, carotid stenting, endovascular exclusion of aortic aneurysm, aortic aneurysm resection, percutaneous aorto-iliac, femoro-popliteal and tibial angioplasty, varicectomy.

### **Methods in cardiac surgery**

- Obtain the patient's cardiovascular history on admission (previous illnesses. History of the pathology for which the patient is being admitted. Symptoms and signs of the disease. Diagnostic tests performed);
- Bedside examination. Palpation, auscultation, control of blood pressure values and frequency, review of laboratory tests;
- Visit to intensive care unit. Monitoring vital signs, pressure, rate, saturation, diuresis and checking blood gas analysis parameters;
- Visiting the operating theatre and understanding the principles of extracorporeal circulation;
- Observing coronary artery bypass graft surgery, heart valve repair and aortic aneurysm resections.

### **Gastroenterology Clinical Practice**

- Define the meaning and severity of different symptoms (e.g. alarm symptoms);
- Knowledge of the main signs and symptoms in the gastroenterological field and ability to differentiate between pathologies, e.g. between acid-related and extradigestive pathologies; classification of malabsorption syndromes; classification of infectious and non-infectious diarrhoea; deficiency syndromes; approach to the different types of hepatitis: diagnostic suspicion, aetiology, staging, complex therapy from simple hepatitis to severe and fulminant hepatitis Recognition of advanced fibrotic hepatopathies, prevention and treatment of complications;
- Biliary pathology: dd between colic-colangitis-cholecystitis;
- Jaundiced patients: dd between benign and malignant pathology;
- Propose a symptom-based diagnostic flowchart to formulate a diagnostic



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hypothesis; this diagnostic hypothesis must be supported by clinical and pathophysiological elements;

- For each clinical picture observed, apply the main therapeutic schemes, both pharmacological and instrumental, and propose the elements of a differential diagnosis;
- Be able to relate the clinical pictures observed to the principles of anatomy, physiology, pathophysiology and biochemistry.

### **Clinical practice in endocrinology and diabetology**

- Collect the patient's family and personal history in a timely and accurate manner;
- Acquire the ability to perform an objective examination with particular attention to endocrine pathologies: thyroid palpation, cardiac auscultation, inspection of the face, skin, oral cavity;
- Recognise the presence of signs/symptoms of major pituitary disorders: acromegaly, hypopituitarism, hyperprolactinemia, pituitary adenoma, diabetes insipidus;
- Recognise the presence of signs and symptoms of the main thyroid disorders: goiter, hypothyroidism, hyperthyroidism;
- Recognise the signs and symptoms of the main adrenal disorders: Cushing's disease, Addison's disease, endocrine hypertension;
- Be able to interpret laboratory tests, including dynamic tests, essential for the diagnosis and differential diagnosis of the main pituitary, thyroid and adrenal disorders;
- Be able to interpret imaging studies (including medico-nuclear diagnostics) essential to the diagnosis and differential diagnosis of the main pituitary, thyroid and adrenal disorders;
- Acquire the basics of the ultrasound anatomy of the thyroid gland, know how to detect the presence of nodular thyroid pathology, hyperplastic parathyroid glands or pathological lymph nodes in the laterocervical region. Recognise the ultrasound elements of increased risk of malignancy;
- Know the technique for performing thyroid needle aspiration. Know how to interpret the results of cytology;
- Be able to propose a correct therapeutic approach (lifestyle, medical, surgical) to the main pathologies of the pituitary, thyroid and adrenal glands;
- To acquire the theoretical and practical knowledge necessary for the diagnosis of the different forms of diabetes mellitus (in particular: type 1 diabetes mellitus, type 2 diabetes mellitus and gestational diabetes mellitus);
- To acquire the theoretical and practical knowledge necessary for the correct management (pharmacological and non-pharmacological) of the different forms of diabetes mellitus (in particular: type 1 diabetes mellitus, type 2 diabetes mellitus and gestational diabetes mellitus);
- To acquire the theoretical and practical knowledge necessary for the management of diabetes mellitus using modern technologies (subcutaneous sensors for



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continuous glucose monitoring, insulin pumps and artificial pancreas);

- Theoretical and practical knowledge necessary for the diagnosis and correct (pharmacological and non-pharmacological) management of metabolic syndrome and dyslipidaemia;
- Acquisition of the essential theoretical and practical knowledge for the diagnosis and correct (pharmacological and non-pharmacological) management of osteopenia and osteoporosis;

### **Clinical practice in nephrology**

- Outpatient haemodialysis and peritoneal dialysis treatments
- Nephrology renal and combined transplantation units with all the different modalities, from the evaluation of the transplant candidate to the subsequent follow-up.
- Attend critical care haemodialysis treatments
- Attend nephrology consultations in various wards
- Attend outpatient clinics in the nephrology department
- Assist with interventional nephrology procedures (e.g. arteriovenous fistula packing, peritoneal catheter placement, temporary or permanent vascular catheter placement for haemodialysis, kidney biopsy).

### **Urology Clinical Practice**

- Acquisition of the main urological surgical techniques
- Management of clinical cases
- Acquisition of the basics of ward management

### **Clinical practice of Blood Diseases**

- Acquisition of practical knowledge to carry out a targeted clinical examination of haematological patients
- Accompany and observe clinical tutors performing diagnostic and therapeutic procedures in a haematology ward: bone marrow aspiration, bone biopsy and lumbar puncture.
- Acquisition of practical knowledge of the clinical significance of the main laboratory tests for haematological disorders
- Learn the basics of light microscopy for the morphological identification of blood cells.
- Acquisition of practical knowledge of the diagnostic, prognostic and therapeutic pathway of the haematological patient
- Acquisition of practical knowledge of the influence of chemotherapy on the clinical course of the patient during haematological reconstitution

### **Clinical practice in rheumatology**

- Carrying out a rheumatology patient history and physical examination



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### **Clinical Practice in Infectious Diseases**

- Clinical infectious syndromes: Localised infections, sepsis and septic shock; Infectious endocarditis; Acute infectious enteritis and food poisoning;
- Infectious hepatitis; Urinary tract infections; Infectious osteomyelitis; Meningitis and meningoencephalitis.
- Diseases caused by bacteria and viruses.
- Diseases caused by mycetes, protozoa and helminths.
- Principles of therapy: antibacterial, antiviral, antifungal and antiparasitic.

### **Geriatric Clinical Practice**

- Carry out a correct history and clinical assessment of the older adult;
- Apply and interpret the principles of evidence-based medicine in the target population and key guidelines;
- Use multidimensional geriatric assessment tools;
- Recognise the major pathological conditions that may be encountered in the older patient;
- Appropriately manage the complexity and frailty of the patient.

### **COURSE STRUCTURE**

The course includes attendance in the laboratory, classroom, multimedia seminars, etc. Attendance is compulsory.

### **COURSE GRADE DETERMINATION**

At the end of the course, the student will be assessed by a written test on the knowledge acquired. The final assessment will be expressed as 'idoneo' (qualified) on the basis of the following criteria:

Non Idoneo (Unqualified): significant deficiencies and/or inaccuracies in the knowledge and understanding of the topics in relation to the practical activity carried out; limited ability to analyse and synthesise, frequent generalisations.

Idoneo (Qualified): Routine knowledge and understanding of the field;

Correct capacity for analysis and synthesis with coherent logical argumentation in relation to the practical activity carried out.

Moderate knowledge and understanding of the subject matter; good ability to analyse and synthesise rigorously reasoned arguments in relation to the practical work undertaken.

Broad knowledge and understanding of the subject matter; considerable ability to analyse and synthesise in relation to the practical work undertaken.

Good autonomy of judgement.

Excellent knowledge and understanding of the subject in relation to the practical work undertaken.

Remarkable ability to analyse, synthesise and exercise independent judgement.

Arguments expressed in an original way in relation to the practical activity undertaken.





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**READING MATERIALS**

No specific texts are required.