GENERAL AIM

The course entitled ‘General signs and an introduction to clinical pathology’ covers the basic scientific knowledge needed to begin applying the methods and techniques used in diagnosing illness. Its broad aim is the study of the patient and it therefore provides students with knowledge of the general and basic aspects of disease and illness. It constitutes students’ first contact with clinical pathology and offers them an overall and systematic view of the patient.

The medical training acquired by students through assimilation of the course’s theoretical knowledge and the successful acquisition of the required practical skills will enable them to identify and recognize, without external guidance, both the main symptoms reported by the patient during history taking and the signs which appear upon physical examination, the aim being that they are able to diagnose the disorder based on all the information provided by the history, physical examination and basic complementary tests.

The knowledge gained about basic clinical pathology and general signs and physiopathology will enable students to tackle the clinical study required by the second cycle of the degree as they will by now be familiar with the nature of the patient, the doctor-patient relationship, methods for obtaining subjective information about the problem, and methods for obtaining objective information from the physical examination and basic complementary tests. The ultimate aim is that they are able to group together the basic signs and symptoms, leaving aside any superfluous information, and thus describe the most important disorders of internal medicine.

SYLLABUS

Part I: BASIC CONCEPTS

Topic 1. The patient and the illness
Concept and general characteristics of disease, its mechanisms of diffusion and dynamic structure, the concepts of organic functional disorder and the personal and constitutional aspects of becoming ill. This will form the basis on which the content and general aims of the subject are developed.

Topic 2. Concept of aetiology, pathogeny, evolution of pathology, physiopathology, signs and techniques for identifying them, and nosology
Causes of and mechanisms through which illness develops, its evolution and the changes which may occur, physiological alterations during illness, its subjective and objective manifestations, techniques of evaluation, grouping illnesses into syndromes, the classification of disease and the criteria used for this purpose.

Topic 3. Clinical judgement: diagnosis and prognosis of illness
General theory of disease recognition, diagnostic methods and types of diagnosis, predicting the evolution of disease, its scope and types.

Topic 4. Inherited diseases
General theory of types of hereditary transmission, its phenotypic expression in terms of morphology or biochemistry, the distinction with respect to the concept of congenital disease, and current possibilities of early diagnosis.

Topic 5. Immunity I: Basic types of immunological reaction
General theory of immune reactions, their types and mechanisms of production.
Topic 6. Immunity II: autoimmunity and immunodeficiency

Concept of autoimmune disease and the concept and classification of immunodeficiency.

Topic 7. Fever: physiopathological mechanisms and types of signs. Fever of unknown origin

Concept, general aetiopathogeny, physiopathology and signs of the fever syndrome. Understanding the concept and general aetiopathogeny of fever of unknown origin.

Part II: INTRODUCTION TO CLINICAL PATHOLOGY

Topic 8. The clinical history

Concept of clinical pathology and definition of the clinical history, its importance, types and parts, as well as its value with respect to teaching, audit and medico-legal issues.

Topic 9. The case history: the current illness and its background

General theory of the clinical interview, methods and approaches to information gathering, the reason for the visit, prodromes, the real onset of symptomatology and its evolution over time, current problems, family history, personal physiological history, toxic habits and pathological history of the patient.

Topic 10. The case history: case history by systems

Concept and approach to taking the history by systems.

Topic 11. The patient’s history of pain

Asking questions about spontaneous pain in order to establish when and where it occurs or has occurred, its qualitative and quantitative aspects, the accompanying circumstances which modify it and the associated symptoms.

Topic 12. The physical examination

General theory of the medical examination based on the senses, its importance with respect to correct diagnosis and the advantages and disadvantages of the topographical and systematic exploratory techniques.

Topic 13. General inspection I: general information

Concept of general inspection, methods and technique and approaches to gathering general information, temperature, height, weight, musculoskeletal development and constitutional type.

Topic 14. General inspection II: static and dynamic aspects

The meaning of both static information, such as changes in colour and basic skin lesions, and dynamic information, such as spontaneous position, general state and state of awareness.

Topic 15. Palpation, percussion and auscultation

General theory, the method and techniques of superficial and deep palpation, as well as the concepts of fluctuation, resistance, thrill and painful points. Understanding the general theory, method and techniques of percussion, the theoretical sounds and their meaning. Understanding the general theory, method and techniques of auscultation.

Topic 16. Complementary examinations

Concept and diagnostic value of instrument-based and laboratory techniques which complement the history-taking and physical examination.

Topic 17. Topographical examination I: cranium, facies and cheeks

Applying the physical examination techniques to each part of the body and understanding the meaning of the findings in terms of signs.

Topic 18. Topographical examination II: eyes and ears

Applying the physical examination techniques to the eyes and ears and understanding the meaning of the findings in terms of signs.

Topic 19. Topographical examination III: nose and mouth

Applying the physical examination techniques to the nose and mouth and understanding the meaning of the findings in terms of signs.
Topic 20. Topographical examination IV: neck, upper limbs and lower limbs
Applying the physical examination techniques to the neck and extremities and understanding the meaning of the findings in terms of signs.

Topic 21. Topographical examination V: thorax and abdomen
Applying the physical examination techniques to the thorax and abdomen and understanding the meaning of the findings in terms of signs.

Part III: GENERAL SIGNS AND PHYSIOPATHOLOGY OF APPARATUS AND SYSTEMS

RESPIRATORY APPARATUS

Topic 22. Reasons for the visit I: dyspnoea and chest pain
Concept and signs of dyspnoea. Understanding the signs of tracheobronchial, vascular pulmonary and pleural pain.

Topic 23. Reasons for the visit II: cyanosis and acropachy
Concept, pathogenetic classification and signs of cyanosis. Understanding the general aetiopathogeny and the signs of acropachy.

Topic 24. Reasons for the visit III: coughing, expectoration and haemoptisis
General aetiopathogeny of coughing and its meaning in terms of signs. Understanding the macroscopic and microscopic characteristics of sputum and their meaning in terms of signs.

Topic 25. Physical examination of the respiratory apparatus I: inspection and palpation
Understanding in terms of signs the static arrangement of the thorax and its modifications as a result of respiratory movements. Understanding the aims and method of thoracic palpation as well as the meaning of thrills in terms of signs.

Topic 26. Physical examination of the respiratory apparatus II: percussion and auscultation
Method of percussion and auscultation of the respiratory apparatus and understanding the findings in terms of signs.

Topic 27. Complementary examinations in respiratory pathology I: radiology, bronchoscopy and isotopic analysis
The most widely-used complementary examination techniques: chest x-ray, bronchoscopy and isotopic analysis.

Topic 28. Complementary examinations in respiratory pathology II: functional respiratory tests
Exploratory techniques for ventilation, perfusion and lung gas exchange, and understanding the meaning of the findings in terms of signs.

Topic 29. Airway obstruction disorders I: acute obstruction disorders
Classification of obstructive airway diseases, physiopathology and signs of acute obstruction disorders.

Topic 30. Airway obstruction disorders II: chronic obstruction disorders
Concept, physiopathology and signs of chronic airway obstruction disorders.

Topic 31. Condensation disorders, athelectasis and pulmonary cavitation
General aetiopathogeny, physiopathology and signs.

Topic 32. Pulmonary hypertension syndrome
General aetiopathogeny, physiopathology, clinical forms and signs.

Topic 33. Pulmonary interstitial syndromes
General aetiopathogeny, physiopathology and signs.

Topic 34. Pleural disorders I: pleural haemorrhage
General aetiopathogeny, physiopathology and signs of dry pleuritis and pleural haemorrhage.
Topic 35. Pleural disorders II: fibrothorax and pneumothorax
General aetiopathogeny, physiopathology and signs.

Topic 36. Mediastinitis
General aetiopathogeny, physiopathology and signs.

Topic 37. Respiratory insufficiency
Concept, pathogeny, evolution of pathology, pathogenetic classification, physiopathology and signs of the different clinical forms.

CARDIOVASCULAR APPARATUS
Topic 38. Reasons for the visit I: pain in cardiocirculatory pathology
Mechanism of production and signs of pain in angina pectoris, myocardial infarct and pericarditis, with special reference to the characteristics which differentiate them from other kinds of chest pain. Understanding the signs of peripheral vascular, arterial and venous pain.

Topic 39. Reasons for the visit II: dyspnoea, syncope, lipothymia and palpitations
Concept, general aetiopathogeny and the meaning of these manifestations in terms of signs.

Topic 40. Reasons for the visit III: oedemas
Concept and types, mediated and immediate oedematogenic factors and their meaning in terms of signs.

Topic 41. Physical examination of the cardiocirculatory apparatus I: inspection and palpation
Techniques for obtaining and the meaning of findings in the inspection and palpation of the precordial region and neck.

Topic 42. Physical examination of the cardiocirculatory apparatus II: arterial and venous examination
Techniques for obtaining and the meaning of findings in the peripheral vessels, with special reference to signs associated with the arterial and venous pulse.

Topic 43. Physical examination of the cardiocirculatory apparatus III: auscultation
Focus of cardiac auscultation, the meaning of abnormal noises, reinforcements, splitting, opening snaps and clicks.

Topic 44. Physical examination of the cardiocirculatory apparatus IV: auscultation
Physiopathology, types and meaning of murmurs in terms of signs.

Topic 45. Complementary examinations in cardiocirculatory pathology
Exploratory techniques currently in use: biological tests, radiology, angiography, electrocardiography, isotopic analysis, oscillometry, Doppler, echocardiography and cardiac catheterization.

Topic 46. Arrhythmias I: stimulus formation disorders
Classification and electrocardiographic signs of normal and active and passive heterotopic arrhythmias.

Topic 47. Arrhythmias II: stimulus conduction disorders
Classification and electrocardiographic signs of blockages.

Topic 48. Cardiac valve disorders
Physiopathology and signs of stenosis and cardiac valve insufficiency.

Topic 49. Chest pain disorders I: coronary insufficiency
General aetiopathogeny, physiopathology, clinical forms and signs.

Topic 50. Chest pain disorders II: pericardial disorder
General aetiopathogeny, physiopathology, clinical forms and signs.

Topic 51. Cardiac insufficiency I: aetiopathogeny and physiopathology
Concept, general aetiopathogeny, pathogenetic classification and physiopathology.

Topic 52. Cardiac insufficiency II: signs
Signs of right, left and bilateral ventricular failure. Understanding other non-cardiogenic forms of pulmonary oedema.
Topic 53. Arterial hypertension I: concept and classification
Concept, techniques for determining arterial pressure, aetiopathogeny, classification, physiopathology and signs.

Topic 54. Arterial hypertension II: aetiopathogeny of essential arterial hypertension. Genetic and environmental factors involved in the onset of this disorder

Topic 55. Arterial hypertension and shock
Concept, general aetiopathogeny, physiopathology and signs of acute circulatory insufficiency. Understanding the technique for and importance of determining central venous pressure.

Topic 56. Arterial and venous disorders
Signs of acute and chronic arterial ischemia disorders, acute venous obstruction and chronic venous insufficiency.

HAEMATIC SYSTEM

Topic 57. Reasons for the visit: pale skin and mucosa, haemorrhages and adenopathy
Concept, mechanisms of production and the meaning of signs.

Topic 58. Physical examination of the haematological patient
Findings in the skin and mucosa, head, neck, ganglion areas, thorax, abdomen and extremities and their meaning in terms of signs.

Topic 59. Complementary examinations of the haematopoetic organs
Importance of complementary exploratory techniques in use today: haematometry, iron metabolism, vitamin B12 and folic acid, haemolysis tests, conventional radiology, isotopic analysis, ultrasonography, computerized axial tomography, examination of the bone marrow and lymphatic ganglions.

Topic 60. Anaemia
Concepts of anaemia and anaemic disorder, their pathogenetic classification, physiopathology and signs.

Topic 61. Polyclonublia
Concept, classification, physiopathology and signs.

Topic 62. Leukopenia and leukocytosis
Pathogenetic classification of leukocytosis and leukopenia, their signs, the concepts of leukemoid reaction, leukoerythroblastosis and leukosis, morphological and functional anomalies of granulocytes.

Topic 63. Adenopathy
Concept of adenopathy, its general aetiopathogeny and the differential signs of inflammatory and neoplastic adenopathy.

Topic 64. Splenomegaly
Aetiological classification of splenomegaly. Understanding the signs of hypersplenism.

Topic 65. Haemorrhagic diathesis
Concept, pathogenetic classification and signs. Understanding the laboratory tests used for its differential diagnosis.

Topic 66. Dysglobulinemia
Concept, pathogenetic classification and signs of immunoglobulin alterations and complementary tests used for diagnosis.

DIGESTIVE APPARATUS

Topic 67. Reasons for the visit I: abdominal pain
Mechanisms of production, clinical types, differential characteristics and meaning in terms of signs.

Topic 68. Reasons for the visit II: ptyalism, asialia, dysphagia
Concept, mechanisms of production, classification and meaning in terms of signs.

Topic 69. Reasons for the visit III: nausea and vomiting
Concept, mechanisms of production, clinical types and meaning in terms of signs.
Topic 70. Reasons for the visit IV: diarrhoea and constipation
Concept, conditions, mechanisms of production, pathogenetic classification and meaning in terms of signs.

Topic 71. Reasons for the visit V: digestive haemorrhage
Topographical classification, general aetio-pathogeny, physiopathology and signs.

Topic 72. Reasons for the visit VI: ascites
Concept, general aetio-pathogeny, physiopathology and signs.

Topic 73. Reasons for the visit VII: jaundice
Concept, mechanism of production, pathogenetic classification, clinical types and meaning in terms of signs.

Topic 74. Physical examination of the digestive apparatus I: inspection
Meaning in terms of signs of cutaneous manifestations of digestive pathology and of the different forms of the abdomen.

Topic 75. Physical examination of the digestive apparatus II: palpation, percussion and auscultation
Techniques and manoeuvres of abdominal palpation, percussion and auscultation, and the meaning of the findings in terms of signs.

Topic 76. Complementary examinations in digestive pathology I: digestive tract
Examination techniques in use today: laboratory tests, faeces analysis, endoscopy, radiology, oesophageal manometry and intestinal biopsy.

Topic 77. Complementary examinations in digestive pathology II: liver, biliary pathways and pancreas
Complementary examination techniques in use today: laboratory tests, tests of hepatic function, endoscopy, radiology, isotopic analysis, ultrasonography, computerized axial tomography, laparoscopy and biopsy.

Topic 78. Examination of the faeces
Meaning in terms of signs of the findings from macroscopic, microscopic and chemical analysis of faeces. Establishing the differential characteristics of findings from faeces analysis in the different digestive disorders.

Topic 79. Pyloric insufficiency and stenosis
General aetio-pathogeny, physiopathology and meaning in terms of signs of disorders of gastric tone, motility and evacuation.

Topic 80. Malabsorption disorders
General aetio-pathogeny, physiopathology and signs.

Topic 81. Exocrine pancreatic insufficiency disorder
General aetio-pathogeny, physiopathology and signs.

Topic 82. Acute abdomen I: mechanical ileus and adynamic ileus
Concept of acute abdomen, its pathogenetic classification with special reference to mechanical ileus and adynamic ileus, its general clinical expression and its differential characteristics.

Topic 83. Acute abdomen II: peritoneal irritation
General aetio-pathogeny and signs of peritonitis.

Topic 84. Portal hypertension
Concept, haemodynamic classification, general aetio-pathogeny, physiopathology and signs.

Topic 85. Hepatocellular insufficiency. Hepatic encephalopathy
Concept, general aetio-pathogeny, physiopathology and signs. Understanding the concept, clinical classification and manifestations of hepatic encephalopathy.

URINARY APPARATUS

Topic 86. Reasons for the visit I: pain
Mechanisms of pain production, its types, differential characteristics and meaning in terms of signs.
Topic 87. Reasons for the visit II: polyuria, oliguria, anuria and urinary retention
Concept, general aetiopathogeny and meaning in terms of signs of qualitative urine anomalies.

Topic 88. Reasons for the visit III: hematuria
General aetiopathogeny, topographical classification, differential characteristics and meaning in terms of signs.

Topic 89. Reasons for the visit IV: proteinuria and cylindruria
Concept, general aetiopathogeny, classification and meaning in terms of signs.

Topic 90. Physical examination of the kidneys and urinary tracts
General findings, their meaning in terms of signs, and techniques and manoeuvres of physical examination.

Topic 91. Complementary examinations in renal and urinary tract pathology
Complementary examination techniques in use today: laboratory tests, tests of renal function, isotopic analysis, cystoscopy, ultrasonography, computerized axial tomography and selective renal catheterization.

Topic 92. Glomerular disorders: nephritic syndrome and nephrotic syndrome
General aetiopathogeny and signs.

Topic 93. Tubular and vascular disorders
General aetiopathogeny, signs and differential characteristics of organic and functional renal insufficiency.

Topic 94. Acute renal insufficiency
Physiopathology, signs and differential characteristics of organic and functional renal insufficiency.

Topic 95. Chronic renal insufficiency: uremic disorder
Physiopathology and signs, concept and specific features of the signs of uremic disorder.

ENDOCRINE SYSTEM AND METABOLISM

Topic 96. Reasons for the visit
Most common symptoms of endocrine pathology such as abnormalities of sexual and psychomotor development, of height, weight, skin disorders, polyphagia, polydypsia and polyuria.

Topic 97. Physical examination of the endocrine system
Signs and exploratory findings in skin, mucosa, head, neck, chest, abdomen, genitals and extremities.

Topic 98. Complementary examinations of endocrine function
Method for examining endocrine function, with special reference to hypothalamic-pituitary, thyroid, parathyroid, suprarenal, gonadal and endocrine pancreas function.

Topic 99. Hypothalamic-pituitary disorders
Different disorders of hypothalamic-pituitary hyperfunction and hypofunction, their physiopathology and signs.

Topic 100. Thyroid disorders
Physiopathology and signs.

Topic 101. Parathyroid disorders
Classification of the different hyperfunction and hypofunction disorders, their physiopathology and signs.

Topic 102. Suprarenal disorders
Different hyperfunction and hypofunction disorders, their physiopathology and signs.

Topic 103. Endocrine pancreas disorders
Physiopathology and signs of diabetes.

Topic 104. Lipid metabolism disorders
Method for examining lipid metabolism, the classification of dyslipemias and lipoidosis, physiopathology and signs.

Topic 105. Hydromineral metabolism disorders
Method for examining the water balance, general aetiopathogeny, physiopathology and signs of hyperhydration and dehydration.
General signs and an introduction to clinical pathology

**Topic 106. Acid/base equilibrium disorders**
Method for examining the acid/base equilibrium, as well as general aetiopathogeny, compensation systems, physiopathology and signs of the different acidosis and alkalosis disorders.

**LOCOMOTOR APPARATUS**

**Topic 107. Reasons for the visit: pain, articular swelling and functional impotence**
Mechanisms of pain production, clinical types, differential characteristics and meaning in terms of signs, different signs and symptoms of articular swelling and functional impotence.

**Topic 108. Physical examination of the locomotor apparatus**
Method and techniques for examining joints, bone and muscles.

**Topic 109. Complementary examinations for locomotor pathology**
Complementary examination techniques in use today: laboratory tests, radiology, isotopic analysis, computerized axial tomography, nuclear magnetic resonance, arthroscopy and biopsy.

**Topic 110. Joint disorders**
Classification, physiopathology and signs.

**NERVOUS SYSTEM**

**Topic 111. Reasons for the visit I: headaches and convulsions**
General aetiopathogeny, classification and meaning of signs.

**Topic 112. Reasons for the visit II: pain, vertigo and nystagmus**
General aetiopathogeny, classification and meaning of signs.

**Topic 113. Reasons for the visit III: delusions, confusion and dementia**
Concept of dementia, general aetiopathogeny and meaning of signs, and its differential characteristics with respect to personality disorders.

**Topic 114. Reasons for the visit IV: altered consciousness. Coma**
General aetiopathogeny of states of lowered consciousness, their classification and meaning of signs.

**Topic 115. Examination of sensation**
Method and techniques for examining the different components of superficial and deep sensation, and the meaning of findings in terms of signs.

**Topic 116. Examination of voluntary motility and muscle tone**
Manoeuvres and techniques for examining voluntary motility and muscle tone, and the meaning of findings in terms of signs.

**Topic 117. Examination of motor coordination and gait**
Regulation of sensorimotor coordination, exploratory manoeuvres and techniques, types of gait, the meaning of findings in terms of signs and the classification of ataxias.

**Topic 118. Examination of reflexes**
Deep periosteal and osteotendinous reflexes, superficial reflexes of skin and mucosa, examination techniques and the meaning of findings in terms of signs.

**Topic 119. Examination of the cranial nerves**
Manoeuvres and techniques for examining the cranial nerves and the meaning of findings in terms of signs.

**Topic 120. Complementary examinations in neurological pathology**
Diagnostic value of complementary examination techniques in use today: examination of cerebrospinal fluid, electrophysiology, computerized axial tomography, nuclear magnetic resonance, isotopic analysis and biopsies.

**Topic 121. Disorders of the autonomic nervous system**
Clinical disorders and assessment techniques of the autonomic nervous system.

**Topic 122. Sleep disorders**
Normal rhythm of physiological sleep and its possible alterations.
Topic 123. Sensory disorders
Differential signs of sensory deficits and disturbances at different topographical levels: sensory fibre lesion, peripheral truncal lesion, posterior radicular lesion, medullary lesion, bulbar, protuberential, thalamic and cortical lesions.

Topic 124. Loss of muscle strength
Signs of this disorder and its clinical forms, with special reference to pyramidal disorder.

Topic 125. Syndromes that may accompany movement disorders. Extrapyramidal disorders
Signs of the main extrapyramidal disorders, with special reference to Parkinson’s disease and choreas, and the signs of tremors, myoclonia, spasms and tics.

Topic 126. Syndromes that may accompany gait disorders. Cerebellar disorder
Classification, physiopathology and signs of different gait disorders, with special reference to cerebellar disorder.

Topic 127. Cortical disorders. Focal cerebral disorders and language disorders
Signs of anomalies in higher cortical functions, with special reference to language disorders, aphasia, agnosia and apraxia.

Topic 128. Endocranial hypertension and meningitis
General aetiopathology and signs, with special reference to the evaluation of rigidity and contractions in meningitis.

Topic 129. Cranial nerve disorder I: optic, olfactory, common oculomotor (COM), external oculomotor (EOM), trochlear, trigeminal and facial nerves
Physiopathology and signs of isolated disorders of the abovementioned cranial nerves.

Topic 130. Cranial nerve disorder II: vestibulocochlear, glossopharyngeal, vagus, spinal and hypoglossal
Physiopathology and signs of isolated disorders of the abovementioned cranial nerves. Understanding the signs of syndromes characterized by simultaneous disorders in different cranial nerves, such as those affecting the sphenoideal fissure, the cavernous sinus, the cerebellopontine angle, the jugular foramen and the posterior lacerated foramen.

CONTENT OF THE DIFFERENT TYPES OF TEACHING

1. CLINICAL TEACHING
The teaching of the skills required by students in order to identify and recognize the main symptoms reported by the patient during history taking, as well as the signs revealed by the physical examination, with the aim of making a diagnosis based on the complete set of information provided by the history, the physical examination and basic complementary tests will be offered in the form of 28 practical classes, to be scheduled daily on the ward during the seven-week period of clinical teaching.

1. The clinical history (Topic 8)
2. The case history: the current illness and its background (Topic 9)
3. The case history: case history by systems (Topic 10)
4. The case history of pain (Topic 11)
5. The physical examination (Topic 12)
6. The general inspection I: general information (Topic 13)
7. The general inspection II: static and dynamic aspects (Topic 14)
8. Palpation, percussion and auscultation (Topic 15)
9. Topographical examination I: cranium, facies and cheeks (Topic 17)
10. Topographical examination II: eyes and ears (Topic 18)
11. Topographical examination III: nose and mouth (Topic 19)
12. Topographical examination IV: neck, upper and lower limbs (Topic 20)
13. Topographical examination V: chest and abdomen (Topic 21)
14. Physical examination of the respiratory apparatus I: inspection and palpation (Topic 25)
15. Physical examination of the respiratory apparatus II: percussion and auscultation (Topic 26)
16. Physical examination of the cardiocirculatory apparatus I: inspection and palpation (Topic 41)
17. Physical examination of the cardiocirculatory apparatus II: examination of arteries and veins (Topic 42)
18. Physical examination of the cardiocirculatory apparatus III: auscultation (Topics 43-44)
19. Chest x-ray. Basic concepts of thoracic radiology (Topic 45)
20. Physical examination of the haematic system (Topics 57-58)
21. Physical examination of the digestive apparatus (Topic 75)
22. Physical examination of the kidneys and urinary tracts (Topic 90)
23. Physical examination of the endocrine system (Topics 96-97)
24. Physical examination of the locomotor apparatus (Topics 107-108)
25. Examination of sensation (Topic 115)
26. Examination of voluntary motility and muscle tone, of motor coordination and of gait (Topics 116-117)
27. Examination of the reflexes (Topic 118)
28. Examination of the cranial nerves (Topic 119)
29. Complementary examinations in neurological pathology (Topic 120)

2. PLANNED PRACTICAL TEACHING (SEMINARS)
The knowledge included in the Subject guide and which students must assimilate during this type of teaching comprises the following program topics:

Seminars 1, 2 and 3. The clinical history I, II, III: history of the current illness and its background
Objective: To deepen students’ understanding of the general theory of the patient interview, its methods and approaches to gathering information, the reasons for the visit, prodromes, the real onset of symptomatology and its evolution over time, current problems, family history, personal physiological history, toxic habits and the patient’s history of pathology (Topic 9).

Seminars 4, 5, and 6. The clinical history IV, V, VI: the case history by systems
Objective: To deepen students’ understanding of approaches to gathering information via the case history by systems (Topic 10).

Seminars 7 and 8. The clinical history VII and VIII: case history of pain
Objective: To deepen students’ understanding of how to interview patients about spontaneous pain in order to establish when and where it occurs, its qualitative and quantitative aspects, the accompanying circumstances that modify it and any associated symptoms (Topic 11).

Seminar 9. The general inspection: General information
Objective: To deepen students’ understanding of methods and techniques of general inspection, as well as of approaches to gathering general information about temperature, height, weight, muscular and skeletal development and constitutional type (Topic 13).

Seminar 10. The general inspection: General information; static and dynamic aspects
Objective: To deepen students’ understanding of the meaning in terms of signs of static information (such as changes in colour or basic skin lesions) and dynamic information (such as spontaneous posture, general state and state of awareness (Topic 14).

Seminar 11. Topographical examination I: cranium, facies, cheeks
Objective: To deepen students’ understanding of how to apply physical examination techniques to the cranium, facies and cheeks, as well as of the meaning of findings in terms of signs (Topic 17).

Seminar 12. Topographical examination II: eyes and ears
Objective: To deepen students’ understanding of how to apply physical examination techniques to the eyes and ears, as well as of the meaning of findings in terms of signs (Topic 18).

Seminar 13. Topographical examination III: nose and mouth
Objective: To deepen students’ understanding of how to apply physical examination techniques to the nose and mouth, as well as of the meaning of findings in terms of signs (Topic 19).
Seminar 14. Topographical examination IV: neck
Objective: To deepen students’ understanding of how to apply physical examination techniques to the neck, as well as of the meaning of findings in terms of signs (Topic 20).

Seminar 15. Topographical examination IV: upper and lower limbs
Objective: To deepen students’ understanding of how to apply physical examination techniques to the upper and lower limbs, as well as of the meaning of findings in terms of signs (Topic 20).

Seminar 16. Topographical examination VI: chest and abdomen
Objective: To deepen students’ understanding of how to apply physical examination techniques to the chest and abdomen, as well as of the meaning of findings in terms of signs (Topic 21).

Seminar 17. Palpation, percussion and auscultation
Objective: To deepen students’ understanding of the general theory, method and techniques of superficial and deep palpation, as well as of the concepts of fluctuation, resistance, thrill and painful points. To explore general theory, method and techniques of percussion, the theoretical sounds and their meaning in terms of signs, as well as the general theory, method and techniques of auscultation (Topic 15).

Seminar 18. Complementary examinations of the respiratory apparatus: functional respiratory tests
Objective: To deepen students’ understanding of functional exploratory techniques for the airways, as well of as the meaning of findings in terms of signs (Topic 28).

Seminars 19, 20, 21 and 22. Complementary examinations of the circulatory apparatus: electrocardiography I, II, III and IV
Objective: To deepen students’ understanding of the diagnostic value of electrocardiography, with special reference to basic pathological features (Topics 45, 46 and 47).

Seminar 23. Complementary examinations for the circulatory apparatus:
Objective: To deepen students’ understanding of the basic principles of complementary examination techniques, with special reference to stress tests, isotopic analysis, echocardiography and cardiac catheterization, their diagnostic value, their indications and limitations (Topic 45).

Seminar 24. Complementary tests for the haematic system: haemogram
Objective: To deepen students’ understanding of the diagnostic value of information provided by Schilling’s haemogram with respect to the red series (Topic 59).

Seminar 25. Complementary tests for the haematic system: myelogram
Objective: To introduce the basic principles of examination by aspiration of bone marrow, its indications and the meaning of findings (Topic 59).

Seminar 26. Complementary examinations for the digestive apparatus: digestive endoscopy, abdominal ultrasound, CAT, laparoscopy and biopsy
Objective: To deepen students’ understanding of the diagnostic value of these complementary examinations, their indications and the meaning of findings (Topics 76 and 77).

Seminar 27. The role of the laboratory in diagnosing digestive disorders I: digestive tract
Objective: To deepen students’ understanding of the signs revealed by different laboratory tests used in diagnosing digestive tract disorders (Topic 76).

Seminar 28. The role of the laboratory in diagnosing digestive disorders II: liver and pancreas
Objective: To deepen students’ understanding of the signs revealed by different laboratory tests used in diagnosing liver and pancreatic disorders (Topic 77).

Seminar 29. Complementary tests in the diagnosis of urinary apparatus disorders
Objective: To deepen students’ understanding of the signs revealed by complementary tests used in diagnosing kidney and urinary tract disorders (Topic 91).
Seminar 30. The role of the laboratory in diagnosing endocrine disorders
Objective: To deepen students’ understanding of the signs revealed by different laboratory tests used in diagnosing endocrine disorders (Topic 98).

Seminar 31. Acid/base equilibrium disorders
Objective: To deepen students’ understanding of the main disorders associated with the acid/base equilibrium (Topics 105 and 106).

Seminar 32: The role of the laboratory in diagnosing oncology disorders
Objective: To introduce the main laboratory tests used in diagnosing and monitoring solid malign tumours.

Seminar 33. The role of the laboratory in diagnosing locomotor disorders
Objective: To introduce the main laboratory tests used in diagnosing locomotor disorders (Topic 109).

Seminar 34. Complementary examinations for neurological disorders I: laboratory and neuroimaging tests such as CAT, NMR, PET and SPECT
Objective: To introduce the main laboratory tests used in diagnosing disorders of the nervous system, as well as neuroimaging tests, their diagnostic value, and their indications and limitations (Topic 120).

Seminar 35. Complementary examinations for neurological disorders II: electroencephalography, electromyography and biopsies
Objective: To introduce the basic principles of electroencephalography, electromyography and biopsies, their diagnostic value, and their indications and limitations (Topic 120).

3. THEORETICAL TEACHING
The knowledge included in the Subject guide given to students during this type of teaching comprises the following program topics:

Topic 1. The patient and the illness
Topics 2-3. Concept of aetiology, pathogeny, evolution of pathology over time, physiopathology, signs and techniques for identifying them, and nosology. Clinical judgement, diagnosis and prognosis of disease and illness
Topic 4. Inherited diseases
Topics 5-6. Immunity: basic types of immune reaction. Autoimmunity and immune deficiency
Topic 7. Fever: physiopathological mechanisms and the different signs. Fever of unknown origin

RESPIRATORY APPARATUS
Topics 22-23. Reasons for the visit: dyspnoea, chest pain, cyanosis and acropachy
Topic 24. Reasons for the visit: coughing, expectoration and haemoptisis
Topic 29. Airway obstruction disorders I: acute obstruction disorders
Topic 30. Airway obstruction disorders II: chronic obstruction syndromes
Topic 31. Condensation disorders, athelectasis and pulmonary cavitation
Topics 32-33. Pulmonary hypertension syndrome. Pulmonary interstitial syndromes
Topics 34-35. Pleural disorders: pleural haemorrhage, fibrothorax and pneumothorax
Topic 36. Mediastinitis
Topic 37. Respiratory insufficiency

CARDIOVASCULAR APPARATUS
Topic 38. Reasons for the visit: pain in cardiocirculatory pathology
Topic 39. Reasons for the visit: dyspnoea, syncope, lipothymia and palpitations
Topic 40. Reasons for the visit: oedemas
Topic 46. Arrhythmias
Topic 48. Cardiac valve disorders
Topics 49-50. Coronary insufficiency and pericardial disorder
Topics 51-52. Cardiac insufficiency
Topics 53-54. Arterial hypertension
Topic 55. Arterial hypotension and shock
Topic 56. Arterial and venous disorders

**HAEMATIC SYSTEM**
Topic 60. Anaemia
Topic 61. Polyglobulia
Topic 62. Leukocytosis and leukopenia
Topics 63-64. Adenopathy; splenomegaly
Topics 65-66. Disorders of coagulation and dysglobulinemia

**DIGESTIVE APPARATUS**
Topic 67. Reasons for the visit: abdominal pain
Topics 68-69. Reasons for the visit: ptialism, asialia, dysphagia, nausea and vomiting
Topic 70. Reasons for the visit: diarrhoea and constipation
Topic 71. Digestive haemorrhage
Topic 72. Ascites
Topic 73. Jaundice
Topics 79-81. Malabsorption disorders
Topics 82-83. Acute abdomen
Topic 84. Portal hypertension syndrome
Topic 85. Hepatocellular insufficiency; hepatic encephalopathy

**URINARY APPARATUS**
Topics 86-87. Reasons for the visit: pain, polyuria, oliguria, anuria, urinary retention
Topics 88-89. Reasons for the visit: hematuria, proteinuria and cylindruria
Topic 92. Glomerular disorders: nephritic syndrome and nephritic syndrome
Topic 93. Urinary tract and vasculorenal disorders
Topics 94-95. Acute and chronic renal insufficiency; uremic disorder

**ENDOCRINE SYSTEM AND METABOLISM**
Topic 99. Hypothalamic and pituitary disorders
Topics 100-101. Thyroid and parathyroid disorders
Topic 102. Suprarenal disorders
Topic 103. Endocrine pancreas disorders
Topics 104-106. Metabolic disorders

**LOCOMOTOR APPARATUS**
Topic 110. Joint disorders

**NERVOUS SYSTEM**
Topics 111-112. Reasons for the visit: headaches, convulsions, pain, vertigo and nystagmus
Topics 113-114. Reasons for the visit: delusions, confusion, dementia and coma
Topics 121-122. Disorders of the autonomic nervous system; sleep disorders
Topic 123. Sensory disorders
Topic 124. Loss of muscle strength
Topic 125. Syndromes that may accompany movement disorders: Extrapyramidal disorders
Topic 126. Syndromes that may accompany gait disorders: Cerebellar disorder
Topic 127. Cortical disorders. Focal cerebral disorders and language disorders
Topic 128. Endocranial hypertension and meningitis
Topics 129-130. Cranial nerve disorders