

COURSE OF STUDY IN MEDICINE AND SURGERY

COURSE OF STUDY: MEDICINE AND SURGERY – AK CHANNEL

ACADEMIC YEAR: 2023-2024

NAME OF THE COURSE: *MEDICAL AND SURGICAL METHODOLOGY AND SEMIOTICS (6 CFU)*

- *SURGICAL AND INSTRUMENTAL PATHOPHYSIOLOGY AND SEMEIOTICS (3 CFU)*
- *MEDICAL AND INSTRUMENTAL PATHOPHYSIOLOGY AND SEMEIOTICS (3 CFU)*

Main information on teaching	
Year of study	III YEAR
Disbursement period	SECOND SEMESTER
University training credits (CFU/ETCS):	Six credits
SSD	Internal Medicine (Med/09) General Surgery (MED/18)
Delivery language	Italian
Frequency mode	In Presence, mandatory

Professor	
Name and surname	Michele Vacca (Coordinator) Antonio Giovanni Solimando Francesco Tandoi Giuseppe Piccinni
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Telephone	/
Site	/
Virtual headquarters	/
Receipt	By appointment (to agree with the teacher via email)

Organization of teaching			
Hours			
Totals	Frontal teaching	Practice (laboratory, field, tutorial, other)	Individual study
150	48	24	78
CFU/ETCS			
6	4	2	/

Training objectives	Provide knowledge necessary to correctly apply the appropriate methodologies. To detect clinical, functional and laboratory findings, interpreting them for pathophysiological, diagnostic, and prognostic criteria. Knowledge of clinical methodology, medical and surgical semiotics.
Prerequisites	There are no specific prerequisites different from those required by the teaching regulations in terms of propaedeutics (Anatomy 1 and 2). To adequately address the contents of the course, preliminary knowledge of physiology and the principles of evidence-based medicine are recommended.

Teaching methods	Frontal teaching; professionalizing activities (practical sessions even at the patient's bedside); simulation/discussion of clinical cases.
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Expected learning outcomes.	
DD1 Knowledge and understanding.	<p>Dublin Descriptor 1: Knowledge and understanding.</p> <p>The frontal teaching is aimed at acquiring the skills for compiling the clinical record and diary:</p> <ul style="list-style-type: none"> • Collect the medical history correctly. • Perform physical examination. • Provide the principles of instrumental semiotics. • Interpret biological functions based on symptoms/signs. <p>During the course, practical tests may be conducted at the patient's bedside.</p> <p>At the end of the course the student should be able to:</p> <ul style="list-style-type: none"> • Collect medical history data correctly. • Perform a general physical examination. • Perform a physical examination of the various organs and systems (normal and pathological conditions).
DD2 Applied knowledge and understanding.	<p>Dublin Descriptor 2: Ability to apply knowledge and understanding.</p> <p>The teaching activities will aim at acquiring the following skills:</p> <ul style="list-style-type: none"> • Interpret biological functions and symptoms/signs. • Correlate clinical data with pathophysiological notions (principles of medical and surgical pathophysiology). <p>At the end of the course the student should be able to:</p> <ul style="list-style-type: none"> • Accurately fill out a “problems-oriented” medical record: <ul style="list-style-type: none"> ▪ Collecting an accurate medical history. ▪ Performing a general and specific physical examination for organs and systems. • Interpret common instrumental tests of internal and surgical relevance.
DD3-5 Transversal skills	<p>Dublin 3 descriptor: critical and judgment skills.</p> <p>Students should gain the ability to collect and interpret clinical data to demonstrate:</p>

	<ul style="list-style-type: none"> • Critical ability and independent judgment in interpreting the patient's symptoms and signs (simulated clinical cases) to formulate diagnostic hypotheses, and an appropriate diagnostic plan for the patient. <p>At the end of the course the students should be able to:</p> <ul style="list-style-type: none"> • Formulate diagnostic hypotheses based on critical thinking based on medical history and physical examination. • Set up a diagnostic plan based on the diagnostic hypotheses. <p>Dublin 4 descriptor: ability to communicate learned topics.</p> <p>The students should acquire:</p> <ul style="list-style-type: none"> • Communication skills with specialist and non-specialist interlocutors. <p>At the end of the course the student should be able to:</p> <ul style="list-style-type: none"> • Argue using specific nomenclature (competence in the use of specialist vocabulary), or simple (but sufficiently appropriate) nomenclature in communicating with patients and relatives. <p>Dublin 5 descriptor: ability to continue studying independently throughout life.</p> <p>The students should acquire:</p> <ul style="list-style-type: none"> • Ability to learn independently. <p>At the end of the course, the students should be able of continuing professional development independently:</p> <ul style="list-style-type: none"> • Searching the scientific literature. • Being able to critically read a scientific article. • By consulting the Guidelines, the regional/national Notes, the Diagnostic and Therapeutic Paths (PDTA) of the hospitals, the drug information leaflets.
Teaching contents (Programme)	<p>The course is organised into frontal teaching with cognitive objectives, and interactive teaching with theoretical-practical lessons in small groups (AFP = professional training activity). The program structure is the following:</p> <p><u>PATHOPHYSIOLOGY AND MEDICAL SEMEIOTICS</u></p> <p>GENERAL EXAM <i>Medical history:</i> • Familial • Physiological • Remote pathological • Proximal pathological • Voluptuary and food habits • Pharmacological • Allergies <i>Physical examination:</i> • Facies • Decubitus, Posture, standing, and walking • Level of consciousness • Body temperature • Breathing • Cardiac activity • Arterial pulse • Blood pressure • Constitutional type and somatic conformation • State of nutrition, hydration, • electrolyte and acid balance -base • psyche and sensorium • Sleep • Psyche and sensorium • degree of sexual differentiation • state of blood</p> <p>INTEGUMENTARY SYSTEM -Medical history and physical examination • Skin: colour and state • Oedema • Skin pigmentation • Jaundice • cyanosis • Skin secretions • Explorable mucous membranes • Skin appendages • Subcutaneous • Itching • Sweating</p>

LYMPHATIC SYSTEM - *Medical history and physical examination*

• Lymph nodes • Vessels • Relationships with other circulations

MUSCULOSKELETAL SYSTEM - *Medical history and physical examination*

• Head • Neck • Spine • Shoulder • Arm and forearm • Hand • Trunk • Hip • Thigh and leg • Foot • Joint stiffness • Arthralgia • Joint swelling • Muscle strength and exhaustion • Myalgia • Fasciculations • Muscle cramps • Tetany

RESPIRATORY SYSTEM - *Medical history and physical examination*

• Nose • Nasal secretions • Epistaxis • Paranasal sinuses • Larynx • Trachea • Physical examination of the chest (breathing characteristics, physical semiotics of the chest, functional exploration of breathing) • Dyspnoea • Orthopnoea • Tachypnoea/bradypnea • Apnoea/apneusis • Noisy breathing • Pharyngeal pain • Cough • Haemoptysis • Introduction on the semiotics of the main pathologies of the respiratory system

CIRCULATORY SYSTEM - *Medical history and physical examination*

• Peripheral pulses • Carotid bruit • Jugular pulsation/turgor • Abdominal aorta pulsation and bruit • Lower limb varicose veins • Collateral venous circulation • haemorrhages

CARDIOVASCULAR SYSTEM - *Medical history and physical examination*

• Inspection and palpation of the precordial region (Cardiac dimensions) • Percussion of the heart and great vessels • Auscultation of the heart (Heart rate; Heart tones; Clicks; Systolic/diastolic/continuous murmurs; pericardial rubs) • Thoracic pulsations • Precordial thrills • Sense of heaviness/retrosternal constriction • Precordial Pain • Syncope • Dyspnoea • Orthopnoea/paroxysmal nocturnal dyspnoea • Cyanosis • Haemoptysis • Asthenia • Sense of heaviness in the lower limbs • Intermittent claudication • Pain • Skin changes • Lymphedema • Embolism

DIGESTIVE SYSTEM - *Medical history and physical examination*

Oral cavity • Breath • Salivary glands • Physical examination of the abdomen (general and physical semiotics of the abdomen) • Treatability • Abdominal tenderness • Umbilical scar • Abdominal masses • Hernias • Ascitic effusion • Liver • Spleen • Inguinal canal • Rectum • Xerostomia • Sialorrhoea • Bad breath • Nausea/vomiting • Belching/meteorism/flatulence • Hematemesis • Dysphagia • Odynophagia • Dyspepsia • Heartburn • Epigastric pain • Bowel disorders • Tenesmus • Melena • Rectal bleeding

URINARY SYSTEM - *Medical history and physical examination*

• Physical and functional semiotics of the kidney and urinary tract • Renal and ureteral landmarks • Bladder • Polyuria • Pollakiuria • Dysuria • Oligo-anuria • Nocturia • Enuresis • Haematuria • Tenesmus and incontinence • Urinary dyschromia and examination of urine

ENDOCRINE SYSTEM - *Medical history and physical examination*

• Thyroid • Adrenal • Pituitary • Parathyroid • Endocrine pancreas • Testis • Ovary • Polydipsia/polyuria • Hirsutism/hypertrichosis

NERVOUS SYSTEM - *Medical history and physical examination*

• Trigeminal • Facial • Glossopharyngeal • Vagus • Accessory • Hypoglossal • Alterations of deep and superficial reflexes • Muscle tone and strength • Paresis • Paralysis • Posture • Gait • Cerebellar functions • Involuntary movements •

Meningism • Headache • Syncope • Cloudiness of the sensorium and coma • Neuralgia • Tremors

PATHOPHYSIOLOGY AND SURGICAL SEMEIOTICS

The medical history

General physical examination of the surgical patient and operated patient

Alterations of the digestive and urinary function: alterations of digestive transit, basic clinical anatomy, pain in the main acute abdominal syndromes.

The local objective examination of swelling, continuous solutions, neck and head, chest, abdomen and genitals, limbs.

General clinical and instrumental semiotics of diaphragm pathology. Non-traumatic diaphragmatic hernias: hiatal, sliding, paraesophageal hernias; gastroesophageal reflux. Traumatic diaphragmatic hernias.

General and specific clinical and instrumental semiotics of the breast

General and specific clinical and instrumental semiotics of hernias of the abdominal viscera and their complications: Inguinal, crural, umbilical, epigastric or Linea alba hernia, internal hernias.

General and specific clinical and instrumental semiotics of oesophageal and gastric pathology: Gastric Ulcer, Zollinger-Ellison Syndrome. Malignant tumours. Gastroesophageal reflux.

General and specific clinical and instrumental semiotics of the duodenum and small intestine: Duodenal ulcer. Intestinal infarction, intussusception, proportions and rates, incidence, prevalence, mortality. Meckel diverticulum, lethality.

General and specific clinical and instrumental semiotics of the large intestine: Acute appendicitis, Colon diverticulosis, Haemorrhoids, Rectal prolapse, Fissures, Abscesses, Anorectal fistulas, Benign and malignant tumours.

Clinical and instrumental semiotics of digestive haemorrhages (Upper and Lower Digestive Tract)

Physical and instrumental semiotics of diverticulosis/diverticulitis

Pathophysiology bases of semiotics, clinical and instrumental semiotics of peritonitis: Acute diffuse, chronic, localized peritonitis. Clinical forms of peritonitis. Subphrenic Abscesses. Pelvic-peritonitis.

General and specific clinical and instrumental semiotics of intestinal occlusion: definition, etiopathogenetic classification, pathophysiology.

Differential semiotics of several types of ileus, and with other syndromes abdominal muscles.

Physical and instrumental semiotics of constipation of surgical interest

Physical and instrumental semiotics of faecal incontinence

Physical and instrumental semiotics of proctological pathology (haemorrhoids, fissures, perianal fistulas)

General and specific clinical and instrumental semiotics of the liver and biliary tract: Acute and chronic cholecystitis, common bile duct stones, jaundice of surgical interest and their classification, biliary-digestive fistulas, tumours of the biliary tract.

General and specific clinical and instrumental semiotics of pancreatic pathology: Tumours, acute and chronic pancreatitis.

Physical and instrumental semiotics of portal hypertension

The physical and instrumental semiotics of surgical pathologies of the Kidney, urinary and genital system: Urination alterations, lexicon of urinary qualitative and quantitative alterations. Renal, ureteral, bladder pain and differential semiotics.

	<p>Clinical, instrumental, and differential semiotics of vascular pathology: Acute and chronic ischemic syndromes. Aneurysms. Arteriovenous fistulas. Thrombophlebitis. Varicose veins.</p> <p>Physical and instrumental semiotics of thyroid diseases</p> <p>Physical and instrumental semiotics of adrenal diseases</p> <p>Physical and instrumental semiotics of shock</p> <p><u>INSTRUMENTAL SEMIOTICS</u></p> <p><i>Principles of diagnostic methods (Use of techniques and meaning of results)</i> • Muscle enzymes • Cardiac enzymes • blood gas analysis • Bone densitometry • Thoracentesis and pleural fluid examination • Ultrasound • Doppler, Eco-Doppler, Laser-Doppler • Bioimpedance measurement • Anthro-plicometry • Radial tonometry • Ambulatory blood pressure monitoring • ECG • Echocardiography • Cardiac Catheterization • Chest X-ray • Sputum examination • Bronchoscopy • Digestive endoscopy • Radiology in Medicine and Surgery • Catheterizations • temporary and definitive vascular access • needle aspiration • biopsies • surveys • diagnostic laparoscopy.</p> <p><u>MEDICAL-SURGICAL PATHOPHYSIOLOGY</u></p> <ul style="list-style-type: none"> • Obesity and Metabolic Syndrome and Traveling Companions • Chronic liver disease, ascites, jaundice, cholelithiasis • Introduction to other disease of medical and surgical interest, used to describe specific semiology presentations.
Reference texts	<ul style="list-style-type: none"> • <i>Fradà et al, Semeiotica medica nell'adulto e nell'anziano. Metodologia clinica di esplorazione morfofunzionale. Ed Piccin – Nuova Libreria</i> • <i>Sesti et al. Manuale di Semeiotica Medica. Il metodo clinico passo dopo passo. Ed. Edra</i> • <i>Douglas et al. MacLeod - Manuale di semeiotica e metodologia medica - Ed. Edra</i> • <i>Thomas et al. Oxford Handbook of Clinical Examination and Practical Skills</i> • <i>De Franciscis et al. Metodologia medica e chirurgica - Idelson-Gnocchi editore</i> • <i>Talley - O'Connor. Clinical examination. Elsevier</i>
Notes to reference texts	<p><i>Wilkinson et Al. Oxford. Manuale di medicina clinica. Ed Edra</i></p> <p><i>Schwartz et al "La diagnosi clinica", Ed. EDISES.</i></p> <p><i>Harrison. "Principi di Medicina Interna", Ed. McGraw-Hill</i></p>
Teaching materials	<i>Teams class</i>
Assessment	
Learning assessment methods	<p><i>Method of delivery: oral (at the end of the course)</i></p> <p><i>Type: interview (open question, critical discussion of a clinical case)</i></p> <p>The interview is aimed at verifying that the student has adequate knowledge of the study program, that he is able to proceed with an accurate anamnesis and physical examination, formulating diagnostic hypotheses on the basis of the symptoms and signs, and setting up a diagnostic plan (instrumental semeiotics) that he or she knows how to interpret in the light of an accurate contextual analysis aimed at resolving common clinical problems.</p>
Evaluation criteria	<p>The student should be able to demonstrate during the assessment:</p> <ul style="list-style-type: none"> • <i>Ability to learn, knowledge and understanding:</i>

	<ul style="list-style-type: none"> ○ Complete educational program (physiopathology, symptoms, and signs of the main pathologies of internal and surgical interest) ● <i>Applied knowledge and understanding:</i> <ul style="list-style-type: none"> ○ Accurately fill out the problem-oriented medical record. ○ Collect an accurate medical history. ○ Perform a general physical examination. ● <i>Autonomy of judgement:</i> <ul style="list-style-type: none"> ○ Formulate diagnostic hypotheses based on critical reasoning on the medical history and physical examination. ○ Set up a diagnostic plan based on the diagnostic hypotheses. ● <i>Communication skills:</i> <ul style="list-style-type: none"> ○ Argue using specific and appropriate nomenclature (competence in the use of specialist vocabulary). ○ Quality of exposure;
Measurement criteria of learning and attribution of the final grade	The final grade is expressed as fraction of thirty. The exam is considered passed when the grade is greater than or equal to 18 for each of the courses of the integrated course. A high rating is awarded when the student demonstrates having developed independent judgment and adequate argumentation and exposition skills.
Other	/

