

**COURSE OF STUDY “MEDICINE AND SURGERY”**

**ACADEMIC YEAR: 2024/2025**

**INTEGRATE COURSE OF CLINICAL METHODOLOGY (10 CFU)**

**ACADEMIC SUBJECT:**

**SURGICAL SEMIOTICS (3 CFUf/ECTS, 1 CFUp/ECTS)**

**MEDICAL SEMIOTICS (3 CFUf/ECTS, 1 CFUp/ECTS)**

**ELEMENTS OF EMERGENCIES AND FIRST AID (1 CFUf/ECTS)**

**JOINT SEMIOLOGY (1 CFUf/ECTS)**

**CANALE LZ**

General Information	
Year of the course	Academic Year 2023/2024
Academic calendar (starting and ending date)	II YEAR, SECOND SEMESTER
Credits (CFU/ETCS)	10
SSD	General Surgery (MED/18) Internal Medicine MEDS 05/A (ex Med/09) Anesthesiology (MED/41) Disease of the locomotor system I (Med/33)
Language	Italian
Mode of attendance	In presence, mandatory
Language	

Professor / Lecturer	
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Telephone	/
Department and address	/
Virtual room	/
Office Hours (and modalities, e.g., by appointment, online, etc.)	By appointment (to agree with the teacher via email)

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
100	80	20	/

CFU/ETCS			
10	8	2	/

<b>Learning Objectives</b>	Provide knowledge necessary to correctly apply the appropriate methodologies. To detect clinical, functional and laboratory findings, interpreting them for pathophysiological, diagnostic, and prognostic criteria.
<b>Course prerequisites</b>	There are no specific prerequisites different from those required by the teaching regulations in terms of propaedeutics (Istology and Anatomy 1).

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



<p><b>Soft skills:</b></p>	<ul style="list-style-type: none"><li>• 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.</li></ul> <p>At the end of the course the students should be able to:</p> <ul style="list-style-type: none"><li>• Formulate diagnostic hypotheses based on critical thinking based on medical history and physical examination.</li><li>• Set up a diagnostic plan based on the diagnostic hypotheses.</li></ul> <p><b>Dublin 4 descriptor: ability to communicate learned topics.</b></p> <p>The students should acquire:</p> <ul style="list-style-type: none"><li>• Communication skills with specialist and non-specialist interlocutors.</li></ul> <p>At the end of the course the student should be able to:</p> <ul style="list-style-type: none"><li>• Argue using specific nomenclature (competence in the use of specialist vocabulary), or simple (but sufficiently appropriate) nomenclature in communicating with patients and relatives.</li></ul> <p><b>Dublin 5 descriptor: ability to continue studying independently throughout life.</b></p> <p>The students should acquire:</p> <ul style="list-style-type: none"><li>• Ability to learn independently.</li></ul> <p>At the end of the course, the students should be able of continuing professional development independently:</p> <ul style="list-style-type: none"><li>• Searching the scientific literature.</li><li>• Being able to critically read a scientific article.</li><li>• By consulting the Guidelines, the regional/national Notes, the Diagnostic and Therapeutic Paths (PDTA) of the hospitals, the drug information leaflets.</li></ul>
<p><b>Syllabus</b></p>	



<p>Content Knowledge</p>	<p>The course is organised into frontal teaching with cognitive objectives, and interactive teaching with theoretical-practical lessons in small groups (PTA = professional training activity). The program structure is the following:</p> <p><b><u>SURGICAL PATHOPHYSIOLOGY SEMEIOTICS</u></b></p> <p><b>The medical history</b> <b>General physical examination of the surgical patient</b> <b>Alterations of the digestive and urinary function:</b> alterations of digestive transit, basic clinical anatomy, pain in the main acute abdominal syndromes. <b>The local objective examination</b> of swelling, continuous solutions, neck and head, chest, abdomen and genitals, limbs.</p> <p><b>General clinical and instrumental semiotics of</b> <b>Oesophagus and diaphragm:</b> hiatal hernias; gastroesophageal reflux, malignant tumours, oesophageal dyskinesias and diverticula <b>Stomach and duodenum:</b> peptic disease, malignant tumours <b>Small intestine:</b> Meckel's diverticulum, intestinal obstruction <b>Appendix:</b> acute appendicitis <b>Large intestine:</b> colon diverticulosis, neoplasms <b>Anal canal and perineum:</b> haemorrhoids, rectal prolapse, fissures, abscesses, anorectal fistulas <b>Breast:</b> benign and malignant disease <b>Thyroid and parathyroid:</b> thyroid nodule, goiter, hyperthyroidisms, I, II, III iperparathyroidisms, MENs. <b>Liver and biliary tract:</b> cholecystitis, jaundice of surgical interest, malignant tumours. <b>Pancreas:</b> pancreatitis and malignant tumours.</p> <p><b>General and specific clinical and instrumental semiotics of:</b> <b>Hernias of the abdominal viscera and their complications:</b> Inguinal, crural, umbilical, epigastric or Linea alba hernia; ventral hernia. <b>Digestive haemorrhages</b> (Upper and Lower Digestive Tract) <b>Physical and instrumental semiotics of diverticulosis/diverticulitis</b> <b>Peritonitis</b> <b>Acute abdomen</b> <b>Shock</b> <b>Intestinal obstructions</b> <b>Portal hypertension</b></p> <p><b><u>INSTRUMENTAL SEMIOTICS</u></b></p> <p><i>Principles of diagnostic methods (Use of techniques and meaning of results)</i>• Muscle enzymes • Cardiac enzymes • blood gas analysis • Ultrasound • Doppler, Eco-Doppler • Chest X-ray • Abomen X-ray • CT • Digestive endoscopy • diagnostic laparoscopy.</p>
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## **MEDICAL PATHOPHYSIOLOGY SEMEIOTICS**

### **General information on semiological methodology**

- Role of medical semiotics in diagnostic reasoning
- Signs and Symptoms: definition
- Patient assessment (comprehensive and focused)

### **Medical history:**

- Initial information (date and time of history, identifying data, reliability)
- Definition and structuring of health history (family, personal and social, past and present)
- Compilation of the medical record
- Informed consent and professional secrecy
- Common or concerning symptoms (Asthenia, dizziness, fainting and syncope, convulsions, coma, fever, pain)

### **General physical examination:**

- Examination methodology (structured general objective examination)
- Cardinal techniques of examination: inspection, palpation, percussion and listening
- Measurement of vital parameters (blood pressure, respiratory rate, heart rate and rhythm, temperature)
- General objective findings (constitution, state of nutrition and hydration, acid-base and hydro-electrolyte equilibrium, face, posture, walking and gait, psyche and sensorium)

### **Integumentary system**

- Skin and skin appendages, skin color, skin hyperpigmentations (cyanosis, jaundice, melanosis), skin hypopigmentations (anemia), oedema, itching.
- Primary and secondary skin lesions
- Techniques of skin examination
- Main skin and related diseases (dermatitis of interest to internal medicine)

### **Respiratory system**

- Physical Examination of the chest
- Symptoms and signs of lung diseases (dyspnea, cough, sputum, emphysema)
- Main objective findings of pulmonary diseases (pneumonia, chronic obstructive and restrictive pulmonary disease, respiratory failure, pneumothorax, mediastinal syndrome)

### **Cardiovascular system**

- Physical Examination of the heart
- Symptoms and objective findings of cardiac diseases (arrhythmias, ischemic heart disease, heart failure, valvular defects, hypertension, hypotension, syncope and shock)
- General information on blood, hemostasis and coagulation
- Main blood disorders (anemia, thrombocytopenia, immunohematology)
- Main diseases affecting the blood vessels (vasculitis and thrombosis)

### **Gastrointestinal system**

- Physical Examination of the abdomen
- Symptoms of gastro-enteric diseases (dysphagia, dyspepsia, anorexia, vomiting, diarrhoea, constipation, intestinal occlusion)
- Main objective findings of gastro-enteric diseases (digestive hemorrhages,



jaundice, portal hypertension, liver failure, malabsorption syndrome)

**Genitourinary system**

- Physical Examination of the kidneys and urinary tract
- Qualitative and quantitative alterations of diuresis and urination
- Signs and symptoms of main urinary tract diseases: (nephritic syndrome and nephrotic syndrome, glomerulonephritis, urinary tract infections, kidney stones, renal failure)

**Musculoskeletal system**

- Physical Examination of articular and extra-articular structures
- Objective findings of the most important inflammatory and degenerative rheumatic syndromes.

**Lymphatic system**

- Physical Examination of the lymph node stations
- Main pathologies affecting the lymphatic system

**Semiotics of the head-neck region**

- Physical Examination of head, eyes, ears, mouth and throat
- Physical Examination of the thyroid gland, great vessels and lymph nodes
- Symptoms and signs of thyroid diseases

**Notes on neurological semiotics.**

**Instrumental semeiotics**

- Principles of laboratory and instrumental diagnostics in internal diseases

**FIRST AID**

**First aid** – definition, legislation, activation of the Territorial Emergency Service (2h)

• **Adult and pediatric BLS (3h)**

• **Clearance of adult and pediatric airways (1h)**

• **Main emergency situations: diagnosis and first aid interventions in an intra- and extra-hospital environment (6h)**

o Lipothymia and syncope

Shock

o Acute pulmonary edema

o Asthmatic crisis

o Acute chest pain

o Allergic reaction

o Seizures

o Bleeding wounds

o Musculoskeletal trauma

**ARTICULAR SEMIOTICS:**

Planes and axes of the body; joint movements and semiotics of the shoulder, elbow, wrist and hand. Joint semiotics and movement of the spine, hip, knee, ankle and foot.

<p><b>Texts and readings</b></p>	<p><b>REFERENCE TEXTS</b></p> <ul style="list-style-type: none"> <li>- G. e C. <i>Fradà</i>: Semeiotica medica nell'adulto e nell'anziano. Metodologia clinica di esplorazione morfofunzionale. Edizione Piccin.</li> <li>- N. <i>Dioguardi e G.P. Sanna</i>: Moderni aspetti di semeiotica medica. Interpretazione clinica di segni e sintomi ed elementi di diagnosi differenziale. Società Editrice Universo.</li> <li>- Lynn S. <i>Bickley</i>: BATES Esame obiettivo e anamnesi. Edizione Piccin</li> <li>- Carolyn <i>Jarvis</i>: Esame obiettivo e valutazione clinica. Edizione Piccin</li> <li>- <i>Ranuccio Nuti</i>: Minerva Semeiotica medica. Metodologia clinica. Ed. Minerva medica.</li> <li>- <i>Douglas et al. MacLeod</i>: Manuale di semeiotica e metodologia medica. Ed. Edra</li> <li>- V. Marco Ranieri, Luciana Mascia, Luigi Tritapepe. Manuale di anestesia rianimazione e terapia intensiva. EDRA, 2018</li> <li>- Balzanelli M. G. Medicina di Emergenza e di Pronto Soccorso, approccio clinico essenziale. Edra 2022</li> <li>- Kapandji A. D.- The physiology of the joints - Lower Extremities Kapandji I. A. - Physiology of the Joints (Upper Extremities) Kapandji I. A. - The Physiology of the Joints_ The Trunk and the Vertebral Column Elsevier Limited.</li> <li>- Bruce Reider, THE ORTHOPAEDIC PHYSICAL EXAMINATION, 2/e 0-7216-0264-9 Copyright 2005, Elsevier, Inc.</li> </ul> <p><b>FURTHER TEXTS</b></p> <ul style="list-style-type: none"> <li>- Goldman-Cecil Internal Medicine. Lee Goldman and Andrew I Schafer. Edra edition.</li> <li>- Rugarli Internal Medicine. Carlo Rugarli. Edra edition.</li> <li>- Harrison. "Principi di Medicina Interna", Ed. McGraw-Hill</li> </ul>
<p><b>Notes, additional materials</b></p>	<p><i>Wilkinson et Al. Oxford. Manuale di medicina clinica. Ed Edra</i> <i>Schwartz et al "La diagnosi clinica", Ed. EDISES.</i> PubMed – SCOPUS – WOS - Google Scholar</p>
<p><b>Repository</b></p>	
<p><b>Assessment</b></p>	
<p><b>Assessment methods</b></p>	<p><i>Method of delivery: oral (at the end of the course), practical exercise on a dummy (first aid)</i> <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>



<b>Assessment criteria</b>	The student should be able to demonstrate during the assessment: <ul style="list-style-type: none"><li>• <i>Ability to learn, knowledge and understanding:</i><ul style="list-style-type: none"><li>○ Complete educational program (physiopathology, symptoms, and signs of the main pathologies of internal and surgical interest)</li></ul></li><li>• <i>Applied knowledge and understanding:</i><ul style="list-style-type: none"><li>○ Accurately fill out the problem-oriented medical record.</li><li>○ Collect an accurate medical history.</li><li>○ Perform a general physical examination.</li></ul></li><li>• <i>Autonomy of judgement:</i><ul style="list-style-type: none"><li>○ Formulate diagnostic hypotheses based on critical reasoning on the medical history and physical examination.</li><li>○ Set up a diagnostic plan based on the diagnostic hypotheses.</li></ul></li><li>• <i>Communication skills:</i><ul style="list-style-type: none"><li>○ Argue using specific and appropriate nomenclature (competence in the use of specialist vocabulary).</li><li>○ Quality of exposure;</li></ul></li></ul>
<b>Final exam and grading criteria</b>	The grade is expressed over 30, and the exam is considered passed if the score is greater than or equal to 18. Honors will be assigned in case of demonstration of particular skills in exposition, in-depth analysis and application of the concepts learned during the course. This score, through a weighted average together with the scores of the other modules, will contribute to determining the overall grade of the course.
<b>Further information</b>	