

Degree Course in Dentistry and Dental Prosthetics 2022/2023

Course: Medical Sciences

CFU number: 9

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Module: Blood diseases

SSD: MED/15

CFU Number: 1

Professor: Prof. Mancini Marco; e-mail: marco.mancini@unicamillus.org

Module: Cardiovascular diseases

SSD: MED/11

CFU Number: 1

Professor: Prof. Prati Francesco; e-mail: francesco.prati@unicamillus.org

Module: Oncology

SSD: MED/06

CFU Number: 2

Professor: Prof. Francini Guido; e-mail: guido.francini@unicamillus.org

Module: Gastroenterology

SSD: MED/12

CFU Number: 3

Professors:

- Prof. Leonetti Giovanni (2 CFU); e-mail: giovanni.leonetti@unicamillus.org
- Prof.ssa Di Paolo Maria Carla (1 CFU); e-mail: mariacarla.dipaolo@unicamillus.org

Module: Endocrine diseases

SSD: MED/13

CFU Number: 1

Professor: Prof. Corsello Salvatore M.; e-mail: salvatoremaria.corsello@unicamillus.org

Module: Clinical pathology

SSD: MED/05

CFU Number: 1

Professor: Prof. Barillari Giovanni; e-mail: giovanni.barillari@unicamillus.org

PREREQUISITES

It is a fundamental requirement that students have acquired basic knowledge of biology, biochemistry, immunology, anatomy, physiology and pathophysiology including the histological structure and normal human anatomy. There are no prerequisites for the course of Medical Sciences.

LEARNING OBJECTIVES

The course of "Blood Diseases" aims to introduce students of the degree course in Dentistry and Dental Prosthetics to the main pathologies and syndromes of hematological and oncological interest, and their possible implications on the oral cavity.

Gastroenterology teaching aims to provide dentistry students with essential information on the most important pathologies of gastroenterological competence:

- To know the epidemiology and clinical manifestation of gastroesophageal reflux disease;
- To know the epidemiology and clinical manifestation of gastric and duodenal diseases;
- To provide students with a general understanding of irritable bowel syndrome by setting the correct diagnostic-therapeutic path;
- To understand the anatomical and functional foundations underlying the alterations present in the pathologies of the biliary tract;
- presentation, diagnosis and treatment of upper and lower digestive bleeding;
- To introduce the fundamentals of diagnostic and therapeutic digestive endoscopy, when to use it and the potential procedural complications;
- To know the epidemiology and clinical manifestation of the main cancers of the digestive system.

The aim of the course of cardiovascular diseases is to provide learners with a program that allows them to acquire adequate knowledge about epidemiology, etiology, pathogenesis, diagnosis, prognosis and treatment of cardiovascular diseases.

The educational objective of the oncology course is to provide the student with an integral view of the cancer problem, from its biological basis to the clinical consequences, from morphological characterization to surgical, radiotherapy and medical treatments and also skills in the field of palliative care. At the end, students must have acquired the tools to understand the genesis of the tumor and the risk factors.

The course of "Endocrinology" aims to introduce the pathophysiology of the endocrine-metabolic system. The causes and pathophysiological mechanisms of the main diseases of the endocrine system and metabolism will be analyzed. In particular, the acquired knowledge will include the physiological and pathophysiological bases, the clinical aspects and the gender differences of the main diseases of the endocrine system and metabolism.

The Clinical Pathology module aims to provide the student with knowledge relating to the role that the clinical laboratory has in: 1) the identification and counting of the figured elements of the blood; 2) ascertaining the patient's inflammatory state; 3) the study of jaundice; 4) monitoring of haemostatic capacities; 5) evaluation of renal function; 6) measuring the activity of enzymes in human biological fluids; 7) the determination of blood levels of lipids and glucose and the significance of their alterations.

LEARNING OUTCOMES

Knowledge and Understanding

At the end of this teaching, the student will be able to:

- To assess the clinical relevance of a patient with signs and symptoms affecting the digestive system.
- To assess critically the influence of the main environmental factors on the functionality of the constituent organs of the digestive system.
- To distinguish the clinical relevance of a patient with functional disorder versus organic-based pathology.
- To classify esophageal and gastric pathology, cholestatic diseases and inflammatory conditions of the colon.
- To explain digestive endoscopy techniques with reference to the appropriateness and / or prioritization of endoscopic examinations.
- To diagnose the signs and symptoms related to the main cancers of the digestive system: esophagus, stomach and colon.
- To know the pathophysiological basis of the main diseases of the endocrine system and metabolism.
- To use the appropriate terminology and have specific knowledge of the topics presented in the program and covered during the lessons.
- To know the epidemiological basis of cancer, risk factors, cancer prevention and hereditary cancers.
- To know the principles of cancer biology, carcinogenesis and new molecular targets.
- To know the epidemiological basis, the risk factors, and the clinical and therapeutic approach of specific neoplasms: breast cancers, lung cancers, colorectal cancers, esophageal, stomach and pancreatic cancers, prostate cancers, kidney and bladder cancers, ovarian and uterine cancers, melanoma, brain tumors, cervico-facial tumors and soft tissue sarcomas.
- To demonstrate that they have acquired adequate knowledge of the topics covered by the study program regarding the main clinical, diagnostic and therapeutic aspects of cardiovascular diseases.
- To know the logic of the clinical use of laboratory tests, the interpretation of their results and their integration into clinical reasoning.
- To know how to frame the biological marker in the context of evidence-based medicine.
- To know the methods used for counting and identifying the figured elements of the blood.
- To know the mechanisms underlying the haemostatic and fibrinolytic process, as well as the main laboratory investigations used to define the patient's hemorrhagic or thrombotic risk.
- To know the diagnostic tests useful to ascertain the presence of an inflammatory state in the patient, and their main clinical indications.
- To know laboratory investigations relating to the diagnosis of the most common forms of jaundice.



- To know how to interpret the results of the macroscopic, microscopic and chemical-physical examination of the urinary sample.
- To understand the results of diagnostic tests aimed at determining the activity of key enzymes for organ function.
- To know the level of glucose and the concentration of lipids in the blood, and understand the reasons behind their pathological variations.

The aim of this module is to provide students with up-to-date knowledge of the fundamentals of Internal Medicine and Medical Emergencies: the student will acquire theoretical and practical notions for the classification and correct management of patient with multi-system disease processes in the dental setting.

Applying Knowledge and Understanding

Students must develop analytical methodological skills. They must know the principles of evidence-based medicine, relate them to each specific clinical situation. To this end, they will have to develop the capacity for continuous updating and research through the major in-depth Web systems.

Communication Skills

Students must have learned an adequate technical-scientific language; they will also have to develop communication skills with the patient starting from the collection of the anamnesis up to the communication of the diagnosis and related prognosis and therapy.

Making Judgements

- To recognize the importance of in-depth knowledge of the topics in accordance with adequate dental training
- To identify the importance of theoretical knowledge of the subject for the dental profession

Learning skills

The student will have acquired skills and learning methods suitable for the deepening and improvement of their competences in the field of biology. At the end of the course the student will have developed the ability to deepen the topics also through the consultation of scientific literature

COURSE SYLLABUS

Module: Blood diseases

Hematopoiesis, Anemias, Medullary aplasia, Acute and chronic leukemias, Myeloproliferative syndromes, Myelodysplastic syndromes, Gammopathies, Hodgkin's lymphomas and non-hodgkin's lymphomas, platelet and platelet disorders, general overview of haemorrhagic diseases: haemophilia and von Willebrand's disease, venous and arterial thromboembolism: prophylaxis and therapy

Module: Cardiovascular diseases

- Ischemic heart disease;



- Atherosclerosis: Pathophysiology of acute coronary syndromes and chronic ischemia, conventional risk factors; research of subclinical atherosclerosis (Echodoppler carotid - femoral arteries, Calcium Score, ABI index, ergometric test);
- Acute coronary syndromes: Unstable angina and NSTEMI and STEMI infarction; diagnosis: symptoms, laboratory, ECG, coronary angiography, coronary CT, coronary imaging, echocardiogram, MRI; Treatment: Medical, PTCA, CABG;
- Chronic Ischemia: Symptoms; Tests: ergometric test, nuclear medicine, Echo-stress, coronal CT; Treatment: Medical, PTCA, CABG;
- Vasospastic angina: Symptoms; Test: Holter monitoring, coronary CT scan, Coronarography, invasive test; Treatment: Medical, PTCA;
- Heart failure: Etiology and pathophysiology; symptoms and signs, Lab. Tests, Ecg, Echocardiogram;
- Chest x-ray, ergometric test catheterization, MRI; Medical therapy;
- Cardiomyopathies: Dilated, ischemic, hypertrophic, restrictive and arrhythmogenic; Symptoms and signs, Lab. Tests, Ecg, Echocardiogram, chest x-ray, catheterization, ergometric test, MRI; Medical therapy;
- Myocarditis and pericarditis: Etiology and pathophysiology; Symptoms and signs, Lab. Tests, Ecg, Echocardiogram, chest x-ray, ergometric test catheterization, MRI; Medical therapy.
- Arrhythmias; Sinus node, normal and abnormal rhythms, bradyarrhythmias, supraventricular tachycardia, atrial fi-brillation, ventricular tachyarrhythmias; Diagnosis; Symptoms, ECG, Holter, electrophysiology; Therapy: Medical, Ablation;
- Valve diseases, congenital heart disease, dissection and aneurysms of the aorta, pulmonary embolism and pulmonary hypertension

Module: Oncology

- Cancer epidemiology, risk factors, cancer prevention, hereditary cancers;
- Principles of tumor biology, carcinogenesis and new molecular targets;
- Oncological diagnostics and staging of neoplastic disease;
- Prognostic and predictive factors in oncology;
- Principles of medical oncology therapy: chemotherapy, hormone therapy, biological therapies, immunotherapy. Concept of neoadjuvant, adjuvant therapy for advanced and metastatic disease, supportive and palliative. Criteria for evaluating the response to treatment;
- Toxicity from antineoplastic, biological and immunotherapeutic drugs;
- Oncological emergencies;
- Epidemiology, risk factors, clinical and therapeutic approach to specific neoplasms: breast cancers, lung cancers, colorectal cancers, esophageal, stomach and pancreatic cancers, prostate cancers, kidney and bladder cancers, ovarian and uterine neoplasms, melanoma, brain tumors, cervico-facial tumors and soft tissue sarcomas;
- Paraneoplastic syndromes.

Module: Gastroenterology

Prof. Leonetti Giovanni

- Gastro-oesophageal reflux disease: to know the epidemiology and pathophysiology, to know the clinical presentation, the elements for making the diagnosis and the main



therapeutic directions.

- Gastritis and duodenitis: to provide a nosological diagnostic framework for gastritis with particular regard to the histological one that plays a prominent role in the diagnosis and indication of the aspects that may evolve towards carcinoma. To Highlight some repercussions that gastritis can induce on the absorption of some trace elements such as iron and vitamin B12.
- To know the mechanisms that lead to the formation of peptic ulcer analyzing in particular the role of Helicobacter Pylori.
- Irritable bowel syndrome: natural history, symptoms, differential diagnosis, therapeutic strategy.
- Calculosis biliary tract: main forms of biliary lithiasis, epidemiology and pathogenesis, diagnostic and therapeutic pathway for lithiasis of the gallbladder and the main biliary tract.
- Digestive bleeding: management of the patient with digestive bleeding, describe the main causes of bleeding in terms of epidemiology, diagnosis and therapy as well as the main methods useful in the diagnosis and treatment of digestive bleeding.
- Tumors of the esophagus, stomach and colon: from symptom to therapy.

Prof. Di Paolo Maria Carla

Gastrointestinal symptoms, emergency endoscopy for foreign bodies, celiac disease, inflammatory bowel diseases, colonic diverticulosis, colonic polyps and colon neoplasms, esophagus, stomach, pancreas, small intestine neoplasms.

Module Endocrinological diseases

Endocrine physiology, hormone-receptor mechanism, type of hormones, pituitary adenomas, prolactinomas, acromegaly, growth disorders, gonads and sex hormones, hirsutism, thyroid nodule, hypothyroidism, hyperthyroidism, thyroid carcinoma, endocrine hypertension, hyperaldosteronism, pheochromocytoma, Cushing syndrome, MEN, autoimmune polyglandular syndromes, neuroendocrine tumors, calcium metabolism disorders, metabolic syndrome, diabetes mellitus, micro- and macro-vascular complications of diabetes.

Module Clinical Pathology

Clinical value of the laboratory; blood count; assessment of haemostatic abilities; markers of inflammatory and immune reactions; diagnosis of jaundice; outline of clinical enzymology; glycemia and lipemia; urinalysis.

COURSE STRUCTURE

The course is divided into lectures for a total of 80 hours divided into 10 hours of blood diseases, 10 hours of cardiovascular disease, 20 hours of oncology, 30 hours of gastroenterology, 10 hours of endocrinological diseases and 10 hours of clinical pathology. The teachers use educational tools such as presentations organized in Power Point files with explanatory diagrams, illustrations and images to describe the various topics. Attendance is compulsory.

COURSE GRADE DETERMINATION

The exam includes a written test consisting of multiple choice questions, with only one correct answer. A final average of the marks obtained in the various disciplines will then be performed. The criteria for evaluating the acquisition of knowledge are: evaluation of the learning of the course program; ability to connect and compare the different aspects and contents of the program; ability to reason and apply contents in the different areas of clinical intervention. It will also be assessed: judgment autonomy, communication skills and learning skills as indicated in the Dublin descriptors.

SUPPORT ACTIVITIES / OPTIONAL ACTIVITIES

Students can request optional workshops to explore some specific topics of interest.

READING MATERIALS

- Manuale di Endocrinologia F. Lombardo, A. Lenzi Edises – 2017
- Corso di malattie del sangue e degli organi emolinfopoietici - Sante Tura, Michele Cavo, Pier Luigi Zinzani- Società editrice Esculapio
- Ematologia di Mandelli - Seconda edizione - a cura di Giuseppe Avvisati- Società editrice Piccin
- Malattie dell'apparato digerente, UNIGASTRO, edizione 2022-2025 , Editrice Gastroenterologica Italiana
- Malattie apparato digerente 2019-2022- Editore Edra.
- Sleisenger e Fordtran. Malattie gastrointestinali ed epatiche. Fisiopatologia, diagnosi e trattamento (Vol. I e Vol. II)- Editore Edra.
- Italo Antonozzi, Elio Gulletta. Medicina di Laboratorio : logica e Patologia Clinica. PICCIN editore.
- Manuale di ONCOLOGIA MEDICA A cura del COMU-Collegio degli Oncologi Medici Italiani Edizioni Minerva Medica, 2018
- Hurst's. Il cuore, 14 edizione.
- ESC Textbook of Cardiovascular Medicine.

Teachers can provide learning materials or suggest specific readings.