

Degree Course in Dentistry and Dental Prosthetics 2022/2023

Course: Surgical Sciences

CFU number: 12

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Module: Visual Apparatus Diseases

SSD: MED/30

CFU Number: 2

Professor: Prof. Edoardo Sordi; e-mail: edoardo.sordi@unicamillus.org

Module: General Surgery

SSD: MED/18

CFU Number: 5

Professor: Prof. Tommaso Brancato; e-mail: tommaso.brancato@unicamillus.org

Module: Anesthesiology and Emergency Treatment

SSD: MED/41

CFU Number: 5

Professor: Prof. Diego Fiume; e-mail: diego.fiume@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 Surgical Sciences.

LEARNING OBJECTIVES

The course of visual apparatus diseases aims to introduce students of the degree course in Dentistry and Dental Prosthetics to the main pathologies and syndromes of ophthalmological interest. The teaching of general surgery aims to: a) give the student of dentistry the basics of the most frequent surgical treatment pathologies, starting with terminology; b) deepen the possible relationships between the above pathologies and those of the teeth and the oral cavity. The aim of the anaesthesiology course is consistent with the general provisions of the Bologna Process and the specific provisions of Directive 2005/36/EC. They are located within the European Qualifications Framework (Dublin descriptors).

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 visual system;

- define the importance and severity of the various symptoms (e.g., alarm symptoms);
- understand the basic pathophysiologic mechanisms of diseases of the eye;
- perform a thorough anamnesis and discuss the appropriate diagnostic flow-chart;
- name the most relevant therapeutic strategies;
- recognize clinical manifestations of the main pathologies of surgical interest;
- know the clinical presentation of traumatic injuries and evaluation of patients with multi-district trauma and in shock;
- choose the most appropriate diagnostic procedure;
- make differential diagnosis;
- recognize the need for multidisciplinary evaluation;
- know the indications and principles of surgical treatment;
- know the physiopathological changes induced by surgical trauma;
- recognize the predictive clinical severity indices and possible complications following surgery;
- know how to apply and read the main methods of perioperative monitoring;
- know the basic anesthesiological drugs and appreciate their pharmacological characteristics;
- assess and know local anesthetics and the correct use, and management of complications;
- know the techniques of locoregional anesthesia;
- know how to manage a patient with an allergic history;
- managing emergencies in the medical office;
- knows diagnosis and treatment of organ failure;
- know and interpret the specific guidelines of interest;

Applying Knowledge and Understanding

- applying regulatory knowledge to identify areas of expertise and other professionals
- applying knowledge specific to clinical practice

Communication Skills

- presenting arguments orally in an organized and coherent manner
- use appropriate language consistent with the topic of the debate

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: Visual Apparatus Diseases

Elements of anatomy and physiology

Fibrous tunics: Sclera - Cornea

Vascular tunics: Choroid - Ciliary body - Iris

Nerve tunics: Retina

Crystalline lens and vitreous

Anterior chamber, posterior chamber, aqueous humor

Optic Nerve and Optic Pathways

Eyelids and Conjunctiva

Lacrimal system: Gland and Lacrimal Tracts

Extrinsic Ocular Muscles

Orbit

Pathophysiological optics

The eye from an optical point of view

Elements of optics, prisms and lenses

Vision defects (myopia, hyperopia, astigmatism, presbyopia)

Visual acuity measurement (charts, decimals, diopters, retinoscopy (schiascopy), refractometer)

Pathology and Clinic

Eyelid diseases (chalazion, hordeolum, ectropion, entropion, ptosis)

Diseases of the lacrimal drainage system (occlusion, dacryocystitis)

Diseases of the conjunctiva (conjunctivitis, pinguecula, pterygium)

Diseases of the cornea (keratitis, corneal ulcers, keratoconus)

Diseases of the sclera (scleritis)

Diseases of the lens (cataracts)

Diseases of the vitreous

Diseases of the uvea (uveitis, tumors)

Diseases of the retina (angiomatosis, diabetic retinopathy, Hypertensive retinopathy, venous and arterial occlusions, inherited retinal degeneration, age-related macular degenerations, retinal detachment, retinoblastoma.

Neuro-ophthalmology (papilledema, optic neuritis, chiasmatic and retrochiasmatic syndrome).

Glaucoma (humor aqueous circulation, tonometry, visual field, optic nerve alterations)

Concomitant and paralytic strabismus (amblyopia, esotropia, exotropia)

Semeiotics and instrumental examinations

Physical examination (biomicroscopy, ophthalmoscopy)

Corneal evaluation (ophthalmometry, topography, endothelial microsc.)

Glaucoma and optical pathways (perimetry, ERG, VEP)

Color sense tests (Ishihara plates, Farnsworth test)

Retina imaging (Fluorescein angiography + ICGA, OCT, Ultrasound)

Module: General Surgery

1. Surgical risk. Shock and trauma
2. Infections in surgery and antimicrobial prophylaxis.
3. Embolisms of surgical interest and their prophylaxis.
4. Neck swelling, pathology and surgical thyroid therapy: hypo- and hyperthyroidism; tumors
5. Pathology and surgical therapy of parathyroids, adrenal glands and related endocrine syndromes. Neuroendocrine tumors.
6. Pathology and surgical breast therapy.
7. Pathology and pleuro-broncho-pulmonary and mediastinal surgical therapy: pneumothorax, bronchial and pulmonary tumors, Tuberculosis.
8. Pathology and surgical therapy of the esophagus: hiatal hernias, gastro-esophageal reflux disease, achalasia and other functional diseases of the esophagus, tumors of the esophagus.
9. Digestive haemorrhages of the digestive system (with particular reference to the upper).
10. Pathology and surgical therapy of the stomach and duodenum: peptic ulcer and complications, stomach tumors, complications of gastric surgery.
11. Abdominal and laparoceli wall hernias.
12. Pathology and surgical therapy of the peritoneum and retroperitoneal space.
13. Acute abdomen: peritonitis; mechanical and adinamic ileum, hemoperitoneum and hemoretroperitoneum.
14. Pathology and surgical therapy of the small intestine, Meckel's diverticulum.
15. Pathology and surgical therapy of the colon and anus: appendicitis, Crohn's disease, ulcerative rettocolitis, diverticular bowel disease and its complications, colorectal neoplasms, hemorrhoids, anal fissure, abscesses and perianal fistulae.
16. Pathology and surgical therapy of the liver, biliary tract and pancreas: gallbladder calculosis, cholecystitis, liver tumors, bile duct tumors, obstructive jaundice, portal hypertension, acute pancreatitis, chronic pancreatitis, endocrine pancreatic tumors, exocrine pancreatic tumors, pancreatic pseudocysts.
17. Pathology and surgical therapy of the spleen and lymphatic system. Splenectomies of surgical interest.
18. Pathology and surgical therapy of arteries, veins and lymphatics. aneurysm of the abdominal aorta, varicose veins of the lower limbs, thrombophlebitis and phlebotobos, arterial embolism of the limbs.

19. Pathology and surgical therapy of the urinary tract: generality, rhenium-ureteral calculus, neoplasms of the kidney, bladder, prostate and testicle.
20. Trauma: initial assessment of severe trauma, chest trauma, trauma of the abdomen and pelvis, head trauma, trauma of the musculoskeletal system burns.
21. General reconstructive and plastic surgery: generality.
22. Cardiosurgery: generality.
23. Traditional surgery and minimally invasive surgery.
24. Overview of organ transplant surgery.

Module: Anesthesiology and Emergency Treatment

Historical hints of Anesthesiology
 Intra and post-operative monitoring
 Anesthesia drugs, principles of clinical pharmacology
 Local anesthetics
 Techniques of Locoregional Anesthesia
 Preparation and management of the allergic patient
 Patient and environment preparation for surgery
 Emergency Management
 Insufficiencies of organs
 Application of the most important specific guidelines

COURSE STRUCTURE

The course is divided into lectures for a total 120 hours divided into 20 hours of Visual Apparatus Diseases, 50 hours of general surgery, 50 hours of Anesthesiology and Emergency Treatment. 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 final assessment will be oral and the modality will be illustrated at the beginning of the lessons together with the teaching material necessary for the preparation of the final exam. The oral exam will focus on the program of the lessons. The basic knowledge of/or student and the mastery of scientific language will be evaluated in a clear and systematic way.

The evaluation criteria considered will be: acquired knowledge, independent judgement, communication skills and learning skills.

The examination tests will be evaluated according to the following criteria:

< 18 insufficient	Fragmentary and superficial knowledge of content, errors in applying concepts, insufficient exposure.
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18-20	Sufficient but general content knowledge, simple exposure, uncertainties in the application of theoretical concepts.
21-23:	Knowledge of appropriate but not in-depth content, ability to apply only partially theoretical concepts, acceptable content presentation.
24-26	Knowledge of appropriate content, discrete ability to apply theoretical concepts, articulated content presentation.
27-29	Precise and complete content knowledge, good ability to apply theoretical concepts, analytical and synthesis skills, safe and correct exposure.
30-30L	Very broad, comprehensive and in-depth knowledge of the contents, well-established ability to apply theoretical concepts and excellent expository mastery, as well as excellent ability for analysis, synthesis and elaboration of interdisciplinary links.

SUPPORT ACTIVITIES / OPTIONAL ACTIVITIES

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

READING MATERIALS

Visual Apparatus Diseases

- Handouts
- Recommended books:
 - "Oftalmologia", autore Aldo Caporossi, Piccin Editore

General Surgery

- R. Bellantone, G. De Toma, M. Montorsi (Eds) "Chirurgia Generale", Ed. Minerva Medica, Torino - I Edizione 2008
- Olivero G, Mao P, Musso A, Rossetti M. American College of Surgeons - Committee on Trauma: Advanced Trauma Life Support – Programma per Medici. IV Ed. italiana, Chicago: American College of Surgeons - Committee on Trauma, 2013.
- Dionigi R: Chirurgia. IV Ed. Masson, 2006.

Anesthesiology and Emergency Treatment

- Guida al monitoraggio in area critica. GD Giusti, Maggioli Editore