



Degree in Medicine and Surgery

Integrated teaching: Specialist Disciplines
SSD: MEDS-16/A, MEDS-17/A, MEDS-18/A
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Module: Oral Diseases
SSD: MEDS-16/A
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CFU: 2

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Module: Visual Apparatus Diseases
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CFU: 2

Module: Otolaryngology
SSD: MEDS-18/A
CFU: 2
Professor: [Maria Patrizia Orlando](#) (1 CFU)
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PREREQUISITES

There are no prerequisites for Oral Diseases, Visual Apparatus Diseases and Otorinolaryngology. For the Oral Diseases course, however, skills and notions of the regional anatomy of the head and neck, the histology and physiology of the sensory organs, Pharmacology, General Pathology and Clinical Semeiotic must also be known to understand the pathologies of Odontostomatology relevance.

For the Visual Apparatus Diseases course, the course has no prerequisites. Knowledge of the general features of human eye Anatomy and Physiology is preferred, but not mandatory.

For the Otolaryngology course, the basic notions of the regional anatomy of the head and neck, the histology and physiology of the sensory organs are mandatory, and the elements of oncology and microbiology must also be known in order to understand the pathologies of otolaryngological relevance.

LEARNING OBJECTIVES

The integrated course of Specialist Disciplines provides elements of the diagnosis and therapy of head and neck pathologies frequently encountered in the clinical practice of general medicine. The course aims at providing useful elements of prevention, diagnosis in order to establish a correct multidisciplinary integration with the specialist.

The training objectives are the understanding of the pathophysiological and etiopathological mechanisms of Oral, ENT and Visual diseases, starting from the anatomical, physiological and etiological topics, to outline the correct diagnostic and therapeutic pathways useful in general

practice and in the interaction with specialists. The students will also be able to recognize and treat emergencies in all these specialist disciplines.

LEARNING OUTCOMES:

Knowledge and understanding

The integrated course aims to facilitate the acquisition of knowledge of pathophysiology, diagnostic criteria and principles of treatment of the main head and neck pathologies with attention to the aspects of clinical manifestations and to the most common symptomatological presentation in the clinical practice of general medicine. The student should know and understand the etiopathogenesis of oro-facial pathologies more frequently encountered. To know prevention strategies, to elaborate a correct diagnosis of those diseases. The student must be able to know and analyze the diagnostic examinations applied on the discipline. The student should demonstrate the comprehension of all the general concepts of the ocular anatomy and the visual mechanism and recognize the characteristics and the pathophysiologic mechanisms of the different ophthalmic disorders and visual defects, their diagnostic flow-chart and their therapeutic management. The Otorhinolaryngology part aims, beyond the study of the individual systems, to give a guide for a clinical approach to the patient, the possibility of deepening increasingly current topics in relation to the new data acquired from research on physio-pathological mechanisms, on the formulation of innovative drugs, advanced surgical techniques and the use of recent rehabilitation tools and methods.

Applying knowledge and understanding

Students need to acquire knowledge and skills at clinical-practice level. They will have to be able to make a diagnosis and demonstrate to know and understand the diagnostic examinations annexed.

Communication skills:

They also must be able to use a proper scientific language coherent with the topic of discussion. The learners must be able to explain in an organized and consistent manner the main topics of the course.

Making judgements:

Students will have to be able to independently analyze and process clinical data, to identify the fundamental role of proper theoretical knowledge of the subject in the clinical practice.

Learning skills:

Students will have to develop research and learning skills through textbooks, e-learning and interactive lessons in which they will be actively involved, as well as Identify the possible use of the acknowledged skills in the future career. Finally, students will be encouraged to acquire the basic skills of ENT physical examination, through practical exercises with the aid of tools used in the specialist field (eg. otoscopy, endoscopy and audiological and vestibular examination).

COURSE SYLLABUS

Oral Diseases

- Definitions of Odontostomatology
- Odontostomatology branches (parodontology, orthodontics, pediatric dentistry, gnathology, prosthodontics, endodontics, conservative dentistry, oral surgery)
- Anatomy of the oral cavity
 - The teeth
 - Dental formulae
 - Deciduous and permanent teeth
 - Anatomy and functions of the teeth
 - Anatomy and functions of supporting structures
- Dentition
 - Occlusion
 - Malocclusions
- Dental caries and complications (pulpopathies and periapical periodontitis, abscesses and phlegmons)
- Gingivitis e Parodontopathies
- First clinical examination (how, where, when and why)
 - Anamnesis (patient's medical history)
 - Clinical Chart
- Diagnostic Imaging:
 - Orthopantomography, Cephalogram, Periapical x-ray, CBCT
- Dental anomalies
 - Dental inclusions (canines, third molars) Dental agenesis
 - Supernumerary teeth
 - Ankylosis
- Obstructive Sleep Apnea (OSA) in adult and pediatric patients

Visual Apparatus Diseases

- Elements of anatomy and physiology
 - Fibrous tunics: Sclera - Cornea
 - Vascular tunics: Choroid - Ciliary body - Iris
 - Nerve tunics: Retina, Crystalline lens, 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 (angiomas, 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, OCT-Angiography, Ultrasound)

Otolaryngology

EAR

- Notes on acoustic physics
- Embryology, Anatomy-physiology of hearing
- External, middle, internal ear
- Subjective audiometry (audiometric examination)
- objective (Otoacoustic emissions, ABR)
- Hearing loss: diagnosis, prognosis, medical, prosthetic, surgical and rehabilitation therapy
- Hearing loss of genetic, transmissive, sensorineural origin
- Tinnitus
- Infant audiological screening
- Hearing aids
- Cochlear implant
- External ear infections, secretory, Acute Otitis Media
- Chronic otitis
- Otosclerosis
- Meniere's disease
- Acoustic neuroma
- Facial nerve paralysis
- Notes on ear surgery
- Otological emergencies



- Objective and subjective dizziness
- Benign paroxysmal positioning vertigo (VPBP)
- Vestibular examination
- Vestibular evoked myogenic potentials (VEMPs)

NOSE and SINUSPARANASALS

- Anatomy and physiology of the nose and paranasal sinuses
- Medical history and physical examination
- Malformations of the nose and paranasal sinuses
- Acute, allergic, vasomotor, chronic rhinitis
- Epistaxis
- Nose trauma
- Acute and chronic sinusitis
- Instrumental investigations and imaging techniques

SALIVARY GLANDS

- Anatomy and Physiology: Parotid, Submandibular, Sublingual
- Sialadenitis, Chronic sialadenitis, Sialolithiasis, Tumors
- Clinic, Diagnostics and Therapy

PHARYNX

- Anatomy and Physiology of the Pharynx
- Pharyngeal semiotics, subjective symptoms, physical examination
- Acute catarrhal tonsillitis
- Streptococcal tonsillitis
- Tonsillar, peritonsillar, retropharyngeal abscess
- Chronic tonsillitis

NASOPHARYNX

- Medical history and physical examination
- Malformations
- Nasopharyngitis
- Acute and chronic adenoiditis
- Tumors of the nasopharynx

LARYNX

- Topographic and microscopic anatomy of the Larynx
- Physiology of the Larynx
- Medical history and physical examination
- Acute laryngitis
- Dysphonia
- dysfunctional laryngopathies
- Edema of the larynx



- Precancerous lesions and tumors
- Microlaryngoscopy
- Tracheotomy

THYROID and PARATYROIDS

- Notes on anatomy and physiology
- Nodular and diffuse pathology and neoplastic pathology of the thyroid
- Investigations and diagnostic procedures
- Surgical therapy
- Primary, secondary and tertiary hyperparathyroidism

INTERNSHIP OBJECTIVES EYE DISEASES

The student must have seen:

Objective ophthalmological examination;

Examination of visual acuity;

Prescription of lenses;

Tonometry;

Examination of the fundus oculi and interpretation of the main findings;

Campimetry;

Semeiotics of conjunctivitis;

Semeiotics of cataracts;

Semeiotics of glaucoma;

Semeiotics of the lacrimal tract.

INTERNSHIP OBJECTIVES OTOLARYNGOLOGY

At the end of the clinical internship in an ENT department, medical students should have achieved a number of goals that reflect their professional growth and their ability to provide assistance to patients with otolaryngological disorders. Here are some of the goals students should achieve:

1. **Thorough knowledge of Anatomy and Otolaryngology Physiology:** Students should demonstrate a sound understanding of the anatomy and physiology of the ears, nose, throat and related structures;
2. **Competence in assessment and diagnosis:** Students should be able to evaluate patients after observing a wide range of ENT disorders, including the medical history of each individual patient, following the performance of appropriate physical examinations and interpreting the results of relevant diagnostic tests;
3. **To be familiar with the clinical instrumentation necessary for the performance of an ENT outpatient examination and to know the diagnostic instrumentation:** To have the opportunity to assist the performance of the liminar tonal audiometric examination,



- vestibular examination, of the impedance test and possibly assist the performance of the oto-acoustic emissions and auditory evoked potentials;
4. **Competence in diagnostic and therapeutic procedures:** Each student should have acquired practical skills in the execution of common diagnostic and therapeutic procedures, such as otoscopy, pharyngoscopy, observing the execution of rhino fibro laryngoscopy, removal of foreign bodies from the ear or nose, and airway management. Have the opportunity to observe surgeries of otolaryngological competence;
 5. **Understanding the principles of treatment:** Students should be able to develop appropriate treatment plans for patients with ENT disorders, including the use of medication, rehabilitation therapies and surgery when necessary;
 1. **Communication skills:** Under the guidance of the Tutor they should demonstrate effective communication skills with patients and their families, clearly explaining diagnoses, treatment plans and answering questions and concerns in an understandable manner;
 2. **Interprofessional collaboration:** Students should be able to collaborate effectively with other members of the healthcare team, including nurses, audiologists, speech therapists and other specialists, to ensure comprehensive and coordinated patients care.
 3. **Ethics and professionalism:** They should demonstrate impeccable ethical and professional conduct in dealing with patients, respecting their privacy, maintaining the confidentiality of medical information and respecting patients' rights and preferences.
 4. **Self-reflection and continuous improvement:** Students should be able to critically evaluate and carry out a kind of "self-analysis" of their own performance, identifying strengths and areas for improvement, and engage in overcoming "Professional criticalities" through the continuous progression of their clinical practice.

Achieving these goals during the clinical internship in otolaryngology prepares students for a successful future career as doctors specialising in this discipline.

COURSE STRUCTURE

The course is divided into lectures for Oral Diseases, Otolaryngology, Visual Apparatus Disease. The lectures will take place using educational tools such as computer presentations organized in powerpoint files with explanatory diagrams, illustrations and images to describe the clinical pictures and the anatomical and pathophysiological conditions. Films and animations will be used to integrate the processes described in class. Attendance is mandatory.

COURSE GRADE DETERMINATION

The final evaluation will be carried out through a written exam, a multiple-choice test and eventually an oral examination, using 30/30. Through the written, students must be able to demonstrate their preparation about the topics of the course and about issues related to the specific

disciplines demonstrating that they have acquired the ability. For every correct answer, 1 point will be assigned. No penalties are considered for a wrong answer.

Hence, the whole examination will be evaluated as it follows:

- For score less than 18 points, the exam will be considered not passed.
- For score comprised between 18 and 23, the exam will be considered passed, but the students are not admitted to the oral examination.
- For score between 24 and 30, the exam will be considered passed and the students can voluntarily apply for the oral examination with the full commission to increase their final vote.

The whole examination will be evaluated as it follows:

- Insufficient: severe poor knowledge of the subject, very limited skill in the analysis of specific items.
- 18-20: knowledge of the subjects of sufficient quality characterized by frequent imperfections. Analysis and reasoning skills of sufficient quality.
- 21-23: standard knowledge of the specific subject; analysis and reasoning skill of acceptable quality.
- 24-26: good knowledge of the subjects and good analysis and reasoning skills; arguments are expressed in a rigorous way.
- 27-29: very good knowledge of the specific scientific subjects, valid analysis and reasoning skills, significant skill in making judgements.
- 30-30L: outstanding knowledge of the specific knowledge of the scientific tasks. Exceptional analysis, reasoning and making judgments skills.

OPTIONAL ACTIVITIES

For Oral Diseases, practical session will be provided in order to allow the student to acquire the skills of clinical and instrumental evaluation, with the aid of video material and with practical execution (to be confirmed) during hands on session. Optional activities are not included in the Visual Apparatus Diseases and Otolaryngology course. However, student reception would be available during the provided office hours.

READING MATERIALS

Oral Diseases

- L. Fonzi: “Anatomia funzionale e clinica dello splancnocranio”
- M. Chiapasco: “Manuale Illustrato di Chirurgia Orale”
- F. Gombos, R. Serpico: “Clinica odontoiatrica e stomatologica. Testo-atlante a colori di patologia e medicina orale per medici ed odontoiatri”

Visual Apparatus Diseases

- Handouts. (for a quick review)
- Suggested textbooks (not mandatory):



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The Wills Eye Manual - Office and Emergency Room Diagnosis and Treatment of Eye Disease

Kanski Clinical Ophthalmology ,Elsevier. (to go more into detail)

Otolaryngology

- Handbook of Otolaryngology – Head and neck Surgery – Second edition - Bradley Goldstein, David Goldenberg – Thieme Medical Publishers Inc 2017
- Basic Otolaringology A Step-by-Step Learning Guide – Second edition – Probst, Grevers, Iro - Thieme Medical Publishers Inc 2010
- Disease of the Ear,Nose and Throat- Ray Clarke -Wiley 2013
- Organi di Senso Manuale per l'approccio integrato alla patologia testa-collo -A. Polimeni et al-EDRA 2019