



# UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Biomedicina, Neuroscienze e Diagnostica avanzata		
ACADEMIC YEAR	2022/2023		
BACHELOR'S DEGREE (BSC)	AUDIOPROTHESIC TECHNIQUES		
INTEGRATED COURSE	AUDIOLOGICAL SCIENCES II - INTEGRATED COURSE		
CODE	20397		
MODULES	Yes		
NUMBER OF MODULES	2		
SCIENTIFIC SECTOR(S)	MED/32, MED/31		
HEAD PROFESSOR(S)	MARTINES FRANCESCO Professore Associato	Univ. di PALERMO	
OTHER PROFESSOR(S)	FERRARA SERGIO Ricercatore	Univ. di PALERMO	
	MARTINES FRANCESCO Professore Associato	Univ. di PALERMO	
CREDITS	7		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	2		
TERM (SEMESTER)	1° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	FERRARA SERGIO		
	Monday 08:00 10:00	Clinica Otorinolaringoiatricasergio.ferrara@unipa.it	
	MARTINES FRANCESCO		
	Monday 10:00 12:00	Ambulatorio di Audiologia infantile - AOUP Paolo Giaccone	

**DOCENTE:** Prof. FRANCESCO MARTINES

<b>PREREQUISITES</b>	The student should know the main principles of Audiology and the anatomy and physiology of the hearing system.
<b>LEARNING OUTCOMES</b>	<p><b>KNOWLEDGE AND UNDERSTANDING:</b> Knowledge of children hearing loss' aetiology, clinical pictures, diagnostic testing and principles of rehabilitation. Knowledge of the main otorhinolaryngological disorders and their association with auditory symptoms.</p> <p>To achieve this goal, specific questions will be asked in the final examinations.</p> <p><b>CAPACITY TO APPLY KNOWLEDGE AND UNDERSTANDING:</b> Ability to collect an anamnesis in presence of a paediatric hearing loss. Ability to evaluate accuracy and relevance of audiometric tests in children audiometry. The student should acquire theory, scientific and professional skills in the field of semeiotic, clinical methodology and pharmacological treatment of otorhinolaryngological disorders.</p> <p><b>JUDGMENT SKILLS:</b> Be able to use the acquired knowledge to discriminate between different audiological and otolaryngological clinical pictures by choosing the most appropriate audiometric tests from time to time.</p> <p><b>COMMUNICATION SKILLS:</b> Students will develop the ability to communicate and disseminate with clarity and autonomy, both in their own professional and non-professional fields, the knowledge acquired during the course, as well as the ability to communicate ideas, problems and solutions related to this knowledge.</p> <p><b>LEARNING SKILLS:</b> Students will develop mastery of the knowledge learned in the course and the ability to update and deepen this knowledge in order to improve the global approach to their professional field.</p>
<b>ASSESSMENT METHODS</b>	<p>The oral exam is an interview, aimed at determining whether the candidate has developed the skills and the disciplinary knowledge provided by the course; the evaluation is expressed in thirtieths. The questions (input), both open and semi-structured and specifically designed to test the results of learning provided, will verify a) the acquired knowledge; b) the processing capabilities, c) the possess of an adequate capacity to discuss the topics of the exam.</p> <p>a) As regards to the verification of knowledge, the ability to make connections between contents (theories, models, tools, etc.) will be required.</p> <p>b) Concerning the verification of processing capacity, at least one of the following three objectives will be indicated:</p> <p>b1) to provide independent judgments regarding the disciplinary contents;</p> <p>b2) to understand the applications or implications of the aforementioned judgments within the discipline;</p> <p>b3) to place the disciplinary contents within the professional, technological or socio-cultural context of reference.</p> <p>The maximum score is obtained if the exam verifies the full possession of the following three skills: a capacity of judgment able to represent emerging and / or little explored aspects of the discipline; a marked ability to represent the impact of course's contents within the sector / discipline in which they are; finally, a mastery of the ability to represent innovative ideas and / or solutions within the professional, technological or socio-cultural context of reference.</p> <p>c) Regarding the verification of the ability to show the acquired knowledge, a minimum evaluation will be achieved when the examiner demonstrates that the candidate exhibits a language property appropriate to the professional context of reference but not sufficiently articulated, while the maximum evaluation can be achieved by candidates who demonstrate full mastery of the sectorial language.</p>
<b>TEACHING METHODS</b>	Lessons

## MODULE CHILD AUDIOLOGY

*Prof. FRANCESCO MARTINES*

### SUGGESTED BIBLIOGRAPHY

- "Argomenti di Audiologia" Autori: S. Prosser e A. Martini Edizioni: Omega  
- Dispense fornite dal docente

<b>AMBIT</b>	10348-Scienze e tecniche audioprotesiche
<b>INDIVIDUAL STUDY (Hrs)</b>	60
<b>COURSE ACTIVITY (Hrs)</b>	40

### EDUCATIONAL OBJECTIVES OF THE MODULE

After completing the Children Audiology Course the student must have learnt:

- Aetiology, diagnosis and rehabilitation of children hearing loss;
- Main tests for hearing loss diagnosis;
- Main indications for hearing aids and cochlear implant among children.

## SYLLABUS

Hrs	Frontal teaching
3	Epidemiology and classification of paediatric hearing loss. Risk factors for hearing loss.
3	Syndromic and non syndromic hearing loss of genetic origin
3	Subjective audiometry: behavioural hearing tests.
3	Children audiometry: how to evaluate responses to acoustic stimuli and how to maintain a high level of attention
2	Otoacoustic emissions (TEOAEs, DPOAEs)
2	ABR (Auditory Brainstem responses)
3	Neonatal hearing screening. Definition, test, results and advantages. Screening strategies among well-babies and newborns with risk factors.
3	Diagnosis of paediatric hearing loss. Diagnostic work-up.
2	Language milestones
2	Principles of hearing aid fitting among children.
2	Diagnosis and rehabilitation of patients suffering from multiple disabilities
3	Audiologic follow-up of hearing impaired children
3	External, middle and inner ear malformations
3	Otitis among children. Complications and sequelae of otitis. Grommets and ventilation tubes.
3	Cleft palate. Adenoids and adenoiditis.

## MODULE OTORHINOLARYNGOLOGY

*Prof. SERGIO FERRARA*

### SUGGESTED BIBLIOGRAPHY

Dispense del Docente Manuale Di Otorinolaringoiatria- M.Rossi, S. Restivo, G. Cortesina- Ed.Grasso  
 Otorinolaringoiatria- R. Albera, G. Rossi- Ed. Minerva medica  
 Otorinolaringoiatria- E. De Campora, P. Pagnini- Ed Elsevier

<b>AMBIT</b>	10348-Scienze e tecniche audioprotesiche
<b>INDIVIDUAL STUDY (Hrs)</b>	45
<b>COURSE ACTIVITY (Hrs)</b>	30

### EDUCATIONAL OBJECTIVES OF THE MODULE

The student at the end of the teaching of otorinolaringoiatria module must be able to: - Possess the skills 'professional and the basic knowledge needed to recognize the symptoms and functional alterations of the ear nose and throat diseases more' frequently observed in clinical practice and in professional life - Know the main conventional ENT research methods and child and understand the clinical-diagnostic significance - Know the essential basics to run a ENT visit for a proper diagnosis.

## SYLLABUS

Hrs	Frontal teaching
3	Anatomy of districts and expertise equipment ENT (nose and sinuses, ear, oral cavity, pharynx and larynx)
3	Pathophysiology of the nose and paranasal sinuses (snoring, acute and chronic inflammatory processes, nasosinusale polyposis, sinusitis, adenoid vegetations, benign and malignant tumors)
3	Pathophysiology ear (hearing test - tone audiometry and impedance - acute and chronic otitis media, processes osteodistrophic processes-otosclerosis)
3	Cholesteatoma. Complications of chronics otitis media.
3	Benign and malignant tumors of the middle ear and skull base.
3	Pathophysiology of the oral cavity (birth defects - cleft lip and palate - glossitis and stomatitis, benign and malignant tumors).
3	Pathophysiology of the salivary glands (acute and chronic sialadenitis, Sialolithiasis, benign and malignant tumors)
3	Pathophysiology of the nasopharynx (acute and chronic pharyngitis, angine specific and non-specific, tonsillitis, OSAS)
3	Pathophysiology of the larynx (benign growths - nodules, polyps, Reinke's edema, papillomas - malignant tumors)
3	Head and neck principles of surgical oncology