



**UNIVERSITÀ
DI SIENA
1240**

General information

Denomination

Master's Degree (II Level): OTOLOGICAL, LATERAL SKULL BASE AND AUDITORY IMPLANT SURGERY

Learning objectives

The master's degree, aimed at doctors specialized in Otolaryngology, Audiology and Phoniatics and Neurosurgery, is aimed at acquiring advanced knowledge of human anatomy, physiology, pathophysiology, pathology, radiological anatomy and surgical anatomy of the mastoid districts, the outer, middle and inner ear and the lateral skull base. The master will include 5 teaching sessions, internship in the operating room with live surgery and 5 practical dissection exercises on fresh frozen preparation in order to provide the learner with the acquisition of theoretical and practical skills in the field of otological surgery, otoneurosurgery (lateral skull base) and auditory implants (bone, middle ear, cochlear and brainstem implants).

The master's degree is made possible entirely thanks to the contribution of the Andreotti & Brusone Philanthropy Fund and the Andreotti Brusone Foundation



Credits

60

Hours

1500

Duration in months

12

Deadline for applications

01/10/2025

Start date

November 2025

End date
November 2026
Absence percentage
10%
Website
https://masterotnsiena.unisi.it/
Expected languages
Italian, English
Department
Department of Medical, Surgical and Neuroscience Sciences (DSMCN)
Teaching Contacts
Prof. Marco Mandalà e-mail: mandala@unisi.it
Prof. Lorenzo Salerni e-mail: salerni2@unisi.it

Support and agreement

Support and agreement
No support or convention

Access qualifications

Class	Description	Type Degree
Class LM-41	Medicine and Surgery (new system pursuant to Ministerial Decree 270/04)	LM
Class LS46	Medicine and surgery	LS
-	Medicine and surgery	V.O.
Legend of degree classes - L: bachelor's degree - LS: specialist degree - LM: master's degree - O.V. degree under the old system - DU: university diploma		
Action on patient		
No		
Mannequin alternative		

No
Register registration Yes
Professional Register Surgeons
Professional qualification Yes
Type of professional qualification Surgeon
Specialization Yes
Type of specialization Otolaryngology, Audiology, Neurosurgery

Application for admission or enrolment

Admission procedures Admission
Documentation to be attached Curriculum vitae et studiorum Any publications Any other qualifications
Selection procedure Colloquy The interview will focus on the candidate's career, knowledge in the otoneurosurgical field and motivations.
Minimum number of participants 6
Maximum number of subscribers 6

Application fees

Total amount in €
0.00
First instalment amount in €
0.00
Notes
Donation from the Andreotti & Brusone Philanthropy Fund and the Andreotti Brusone Foundation

Training

Teaching methods
Blended (lessons are partly face-to-face and partly online under the guidance of the teacher)
Internal venue
University of Siena - Polo Scientifico di San Miniato

Title Area: Anatomo-physiology and radiology of otological districts and lateral skull base Total credits area: 4 Professors in charge: Agliano' Margherita - Bertelli Eugenio - Mandalà Marco - Salerni Lorenzo
<i>Didactic activity:</i> Anatomy of the temporal bone and lateral skull base CFU: 1 SSD code: BIO/16 (HUMAN ANATOMY)
<i>Educational activity:</i> Anatomy of the External, Middle and Internal Ear CFU: 1 SSD Code: BIO/16 (HUMAN ANATOMY)
<i>Didactic educational activity:</i> Radiological anatomy of the lateral skull base with radiological cases CFU: 1 SSD code: BIO/09 (PHYSIOLOGY)
<i>Educational activity:</i> Principles of Physiology of the external, middle and inner ear and of the auditory and central vestibular tracts CFU: 1 SSD code: BIO/09 (PHYSIOLOGY)
Title Area: Pathologies and principles of middle and external ear surgery Total credits area: 6 Professors in charge: Mandalà Marco - Monciatti Giovanni - Salerni Lorenzo

<i>Didactic training activity:</i> Tympanic perforation: diagnosis and treatment <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Otosclerosis and diseases of the ossicular chain. Surgical Techniques and Times stapedioplasty, stapedotomy, malleostapedotomy and oxyculoplasty <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Chronic Secretory Otitis Media: diagnosis and treatment. Transtympanic drainage application, transtympanic treatments <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Acute and Sub Acute Otitis Media <i>CFU:</i> 1 <i>SSD Code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Malformative, Neoplastic and traumatological pathology of the auricle and external ear canal <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Minimal Myringoplasty, Overlay and Underlay techniques. Materials for MPL (Autologous, Heterologous) <i>CFU:</i> 1 <i>SSD Code:</i> MED/31 (OTORHINOLARYNGOLOGY)
Area Title: Principles of dissector techniques, instrumentation and dissection station – focus on auricle and external ear canal and middle ear Total credits area: 4 Professors in charge: Mandalà Marco - Monciatti Giovanni - Salerni Lorenzo
<i>Didactic educational activity:</i> Myringoplasty dissection - overlay and underlay techniques <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic training activity:</i> Dissection - oxyculoplasty techniques <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Dissection - Otoplasty and canaloplasty techniques <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activities:</i> Preparation of fresh frozen anatomical preparation, surgical instruments for dissection, otomicroscope and image acquisition system <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)

Title Area: Pathology and surgical treatment of mastoid diseases (chronic otitis, cholesteatoma)

Total credits area: 4

Professors in charge: Mandalà Marco - Monciatti Giovanni - Salerno Lorenzo

Educational activity: Surgery of vestibular pathologies (Meniere's disease, perilymphatic fistula, dehiscence of the superior semicircular canal, BPPV)

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Educational activity: Chronic otitis: diagnosis and treatment

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Didactic training activity: Surgical techniques of mastoidectomy and tympanoplasty (open, closed, obliterative)

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Didactic training activity: Glomic tumors and other rare diseases of the mastoid

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Area Title: Dissection, focus on the mastoid

Total credits area: 4

Professors in charge: Mandalà Marco - Monciatti Giovanni - Salerno Lorenzo

Didactic training activity: Dissection – anastomosis of the facial nerve and resuscitation techniques

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Didactic training activity: Dissection of the ossicular chain and tympanic cavity

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Didactic training activity: Dissection of the temporal bone, mastoidectomy techniques

CFU: 1

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

Educational activity: Dissection – The Fallopian Canal, the Posterior Labyrinth, the Endolymphatic Sac

CFU: 1

SSD Code: MED/31 (OTORHINOLARYNGOLOGY)

Title Area: Surgical treatment of deafness

Total credits area: 5

Professors in charge: Mandalà Marco - Monciatti Giovanni - Salerno Lorenzo

Didactic training activity: Cochlear implants

CFU: 2

SSD code: MED/31 (OTORHINOLARYNGOLOGY)

<i>Educational activity:</i> Counseling and taking charge of the patient with hearing implant <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic training activity:</i> Indications for hearing implants <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic training activity:</i> Implantable prostheses for middle ear and bone <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
Title Area: Dissection - Focus on hearing implants Total credits area: 4 Professors in charge: Mandalà Marco - Monciatti Giovanni - Salerni Lorenzo
<i>Educational activity:</i> Dissection - bone and middle ear implants <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic training activity:</i> Temporal bone dissection, access to the round window, cochleotomy. <i>CFU:</i> 1 <i>SSD Code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic training activity:</i> Temporal bone dissection, cochlea exposure (anterior labyrinth) <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic training activity:</i> Temporal bone dissection, cochlear implant, simulation of electrode application and implant housing <i>CFU:</i> 1 <i>SSD code:</i> MED/31 (OTORHINOLARYNGOLOGY)
Title Area: Lateral Skull Base Pathology Total credits area: 4 Professors in charge: Chibbaro Salvatore - Mandalà Marco - Muzii Vitaliano Francesco - Salerni Lorenzo
<i>Didactic training activity:</i> Trans-labyrinthine, retrosigmoid, middle cranial fossa, infratemporal approach <i>CFU:</i> 1 <i>SSD code:</i> MED/27 (NEUROSURGERY)
<i>Educational activity:</i> Neuroma of the acoustic nerve and other cranial nerves <i>CFU:</i> 1 <i>SSD code:</i> MED/27 (NEUROSURGERY)
<i>Educational activity:</i> Meningiomas – Meningioma of the petrous fortress <i>CFU:</i> 1 <i>SSD code:</i> MED/37 (NEURORADIOLOGY)
<i>Didactic activity:</i> Facial nerve tumors <i>CFU:</i> 1 <i>SSD code:</i> MED/26 (NEUROLOGY)

Area Title: Dissection – Focus on the skull base Total credits area: 4 Responsible professors: Chibbaro Salvatore - Mandalà Marco - Muzii Vitaliano Francesco - Salerni Lorenzo
<i>Didactic training activity:</i> Dissection – approach to the middle and retrosigmoid cranial fossa CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
<i>Didactic activity:</i> Dissection - infratemporal approach CFU: 1 SSD code: MED/27 (NEUROSURGERY)
<i>Educational activity:</i> Dissection – translabyrinthine approach CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Dissection – transcanal - transcochlear approaches CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
Area Title: Free Dissection with Tutoring – Recap of Dissectoral Activities Total CFU Area: 4 Responsible Professors: Mandalà Marco - Monciatti Giovanni - Salerni Lorenzo
<i>Educational activity:</i> Free dissection with tutoring – Recap lateral skull base CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Free dissection with tutoring – Recap on auditory implants CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Free dissection with tutoring – Recap on external and middle ear CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
<i>Educational activity:</i> Free dissection with tutoring – Recap on inner ear and mastoid CFU: 1 SSD code: MED/31 (OTORHINOLARYNGOLOGY)
Choice of internship/traineeship TRAINING
Internship/traineeship procedures Live Surgery
Carrying out structures

University Hospital of Siena
Credits awarded internship/traineeship 12
Internship/Internship Hours 300
Internship/traineeship end date October 2026
Teachers in charge of internships/internships: Mandalà Marco - Monciatti Giovanni - Salerni Lorenzo

Intermediate verification tests (Modalities) none
Assessment methods Thesis or final paper, Interview aimed at verifying the knowledge acquired
Credits awarded to the final exam 5

Collegial bodies

Teaching Board Body composed of all area managers
Board of Directors No