



Program Specification for Doctorate Degree **in AUDIOLOGY**

Program type: single

Program code: 07-007-AUD-MD

Department offering the program: Department of Ear, Nose, and Throat

Academic year: 2021/2022

Program Coordinators: Prof. Dr. GEHAN ELZAREA

External evaluators: : Prof. Dr.osama abdelhamid

Professor of Otolaryngology, Ain shams university

Program aims

By the end of the course, the post-graduate physician should have:

1. Scientific knowledge essential for practice of Audiology according to the international standards.
2. Skills necessary for proper diagnosis and management of patients in the field of Audiology including diagnostic, problem solving and decision making skills.
3. Ethical principles related to the practice in this specialty.
4. Active participation in community needs assessment and problem solving.
5. Maintenance of learning abilities necessary for continuous medical education
6. Maintenance of research interest and abilities.

Intended learning outcomes of program (ILOs)

A-Knowledge and Understanding

By the end of the study of DOCTORATE Program in Audiology the Graduate should be able to:

- a1. Mention the normal structure and function of the auditory system on the macro and micro level.
- a2. Mention the normal structure and function of the balance system on the macro and micro level.
- a3. List the normal growth and development of the auditory system.
- a4. Enumerate the normal growth and development of the vestibular system.
- a5. List the abnormal structure, function, growth and development of the auditory system.
- a6. List the abnormal structure, function, growth and development of the balance system.
- a7. Mention theories of hearing.
- a8. Enumerate nature and analysis of sounds.
- a9. List acoustics of different sounds.
- a10. Mention natural history of hearing and balance disorders.

- a11. List the causation of hearing and balance disorders and their pathogenesis.
- a12. List the clinical picture and differential diagnosis of hearing and balance disorders.
- a13. Enumerate the common diagnostic and laboratory techniques necessary to establish diagnosis of hearing and balance disorders
- a14. List the various therapeutic methods/alternatives used for hearing and balance disorders.
- a15. Describe the component, types, advantages, disadvantages, of hearing aids.
- a16. Describe the component, types, advantages, disadvantages, of cochlear implant.
- a17. Define rehabilitation of auditory disorders.
- a18. Define rehabilitation of vestibular disorders.
- a19. Define the sources of data and methods of collection
- a20. Mention types of data, construct tables and graphs
- a21. know measures of central tendency and measures of dispersion
- a22. Describe the normal curves and its uses
- a23. List tests of significance and the inferences obtained from such tests.
- a24. Define the screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests
- a25. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.
- a26. Enumerate natural history of otological disorders.
- a27. List the causation of otological disorders and their pathogenesis.
- a28. List the clinical picture and differential diagnosis of otological disorders.
- a29. Enumerate the common diagnostic and laboratory techniques necessary to establish diagnosis of otological disorders
- a30. Mention the various therapeutic methods/alternatives used for otological disorders.
- a31. List genetic causes of hearing loss.

- a32. Define some examples of genetic hearing loss and its inheritance.
- a33. List scientific developments in the field of Audiology.
- a34. Mention the mutual influence between professional practice and its impact on the environment.
- a35. Mention the ethical and legal principles of professional practice in the field of Audiology.
- a36. List the principles and fundamentals of quality in professional practice in the field of Audiology.
- a37. Enumerate the basics and ethics of scientific research.

B-Intellectual Skills

By the end of the study of Master Program in Audiology the Graduate should be able to:

- b1. Interpret data acquired through history taking to reach a provisional diagnosis for hearing and balance disorders.
- b2. Interpret data acquired through history taking to reach a provisional diagnosis for otological disorders.
- b3. Measure intensities of different sounds.
- b4. Compare anatomical data related to hearing and balance with anatomical specimens.
- b5. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for hearing and balance disorders.
- b6. Link between knowledge for Professional problems' solving.
- b7. Conduct a research study and / or write a scientific study on a research problem.
- b8. Assess risks in professional practices in the field of Audiology.
- b9. Plan to improve performance in the field of Audiology.
- b10. Identify hearing and balance problems and find solutions.
- b11. Analyze researches and issues related to the Audiology.

C-Professional and Practical Skills

By the end of the study of Master Program in Audiology the Graduate should be able to:

- c1. Master the basic and modern professional clinical skills in the area of Audiology.
- c2. Perform otological evaluation.
- c3. Dissect stigmata characteristic for syndromic hearing loss.
- c4. Write and evaluate medical reports.
- c5. Assess methods and tools existing in the area of Audiology.
- c6. Conduct researches.

D-General and Transferable Skills

By the end of the study of Master Program in Audiology the Graduate should be able to:

- d1. Communicate effectively by all types of effective communication
- d2. Use information technology to serve the development of professional practice.
- d3. Use standard computer programs for statistical analysis effectively.
- d4. Utilize computers in conducting researches.
- d5. Manage a group of data entry.
- d6. Analyze and interpret data.
- d7. Assess himself and identify personal learning needs.
- d8. Use different sources to obtain information and knowledge.
- d9. Develop rules and indicators for assessing the performance of others.

d10. Work in a team and team's leadership in various professional contexts.

d11. Manage time efficiently.

d12. Learn himself continuously.

4- Course content:

examination of the ear

Disorders of the external ear

Conductive deafness

Acute inflammation of the middle ear cleft

Management of chronic suppurative otitis media

Complications of infections of middle ear

Tumours of the middle ear cleft and temporal bone

Diseases of the otic capsule

The deaf child

lesions of the inner ear

Inflammatory lesions of the vestibular and auditory nerve

vestibular neuroma

lesion of the inner ear

Meniere's disease

Vertigo

Facial paralysis

Basic evaluation: Principles and objectives (Pure-tone audiometry, speech audiometry and immittanceometry).

Special test battery: Rationale and candidates.

High level of testing: Objectives and principles (Auditory evoked potentials, otoacoustic emission, central auditory testing).

Audiological evaluation of hearing impaired infants and young children.

Amplification (Hearing aids, cochlear implants..) and rehabilitation (introduction).

Acoustics:

- The disturbance caused sound.
- Fundamental properties of sound.
- Sound wave phenomena.
- Sound field.

Measurements of sounds:

- Root mean square.
- Decibel notation.
- Decibel equation.
- Octave notation.
- Measurement of complex sounds.
- Spectrum analysis.
- Distortion.
- Resonance.

Advance of psychoacoustics:

- The concept of threshold.
- The auditory response area.
- Measurement of hearing.
- Differential sensitivity.

- Loudness.
- The power low.
- Pitch.
- Perception of complex sounds.
- Masking.
- Frequency resolving power of the auditory system.
- Temporal aspects of hearing.
- Binaural hearing.

Methods of examination of the mouth and pharynx

Diseases of the mouth

diseases of the salivary glands

Diseases of the tonsils and adenoid

Tumours of the pharynx

Oesophageal conditions in the practice of ear, nose and throat surgery

Methods of examining the larynx and trachea-bronchial tree

Congenital diseases of the larynx and pharynx

Academic standards.

a-Academic reference standards:

- ** The academic standards of anatomy program is adopted and accredited by the departmental council .
- ** The Board of Department of Otorhinolaryngology, Faculty of Medicine, Al-Azhar University.
- ** Postgraduate Education&Research committee, Faculty of Medicine, Al-Azhar University.
- ** The Council of the Faculty of Medicine, Al-Azhar University.
- ** The Council of Al-Azhar University.
- ** Egyptian ORL Association (EORLA).

b-External References for Standards:

- ** Resident Training Program Handbook of Otolaryngology - Head & Neck Surgery of Kentucky University.
www.mc.uky.edu/surgery/ENT/handbook07-08.pdf
- ** Otolaryngology, Head and Neck Surgery residency program of Toronto University.
www.otolaryngology.utoronto.ca/postgrad/fellowship/
- ** Scott-Brown's Otorhinolaryngology, Head and Neck Surgery. Edited by Michael Gleeson et al, 7th edition. Hodder Arnold, London, 2008. www.hoddereducation.com

- ** Saudi Board of ORL .
- ** Pan Arab Association of ORL .
- ** Pan African Association of ORL .
- ** European Association of ORL(EUORLA).
- ** American Academy of ORL (AAORL).
- ** Medical Sector of Ministry of High Education,ARE.

NB. Some modifications have been made on the program to be applicable in our institution.

Program structure and contents.

.a- Programme duration: (3.5)years

.b- Programme structure.

No. of hours per week:

Subject	No of hours/week		
	Lectures	Practical/ surgical	clinical
First Part:			
Anatomy&embryology	4	4	
Pathology	2	2	
AUDIOLOGY& PHONIATRIC PLUS BASIC OF OTORHINOLARYNGOLOGICAL DISEASE	18	12	12

1-Program courses:

Course Title	Total No. of hours	No. of hours/ week			Program ILOs covered (by No.)
		Lectures	Practical	Clinical	
Surgical anatomy and Embryology of the ear, nose and throat and head and neck and ches	8	4	4	---	a1,a2,b7,c4,d5
Pathology of the E.N.T diseases and head and neck swellings and Neoplasms	4	2	2	---	a3,a4,a7,b1,b7,c2,c3,d2

Course Title	Total No. of hours	No. of hours/weeks			Programme ILOs covered (By No.)
		Lect.	Practical/ surgical	clinical	
AUDIOLOGY& PHONIATRIC PLUS BASIC OF OTORHINOLARYNGOLOGICAL DISEASE	42	18	12	12	a4,a5,a6,a7,a8,a9,a12, b1,b2,b5, b6,b7,b8,c1, c3,c4,c5,c6,d1,d3,d4, d6,d7

2-Program Admission Requirements

I- General Requirements.

- Candidate should have either MBBch degree from any Egyptian Faculty of Medicine or Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.
- Candidate should know how to speak & write English well
- Candidate should have computer skills.
- Follow postgraduate bylaw Regulatory rules of AL-Azhar Faculty of Medicine.

II- Specific Requirements

- Master degree in AUDIOLOGY with at least "Good Rank".

Activity per time	
Grand rounds	6
Training courses	12
Conference attendance	12
Thesis discussion	6
Workshops	12
Journal club	6
Seminars	6
Morbidity and Mortality Conference	6
Self education program	6

- Two sets of exams: 1st in november - 2nd in April.
- At least 60% of the written exam is needed to be admitted to the oral and practical exams.
- 4 times of oral and practical exams are allowed before the student has to re- attend the written exam.

(Thesis)

Documentation of the subject should not be delayed for > 1.5 years after registration.

- Could start after registration and should be completed, defended and accepted after passing the 2nd part final examination, after passing of at least 24 months after documentation of the subject of the thesis and after publishing of at least one paper from the thesis in a specialized peer-reviewed journal.

- Accepting the thesis is enough to pass this part.

3-Methods of student assessments:

Method of assessment	weight	The assessed ILOs
1-Research assignment		- General transferable skills, intellectual skills
2-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	50%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
3-OSCE/ OSPE	50%	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exams		- Knowledge, Intellectual skills, General transferable skills

Assessment schedule:

Part I:

- Human Anatomy & Embryology: Written Exam (2 hour) + structured oral Exam.
- Pathology: Written Exam (2 hour) + structured oral Exam.

Part II:

- AUDIOLOGY & ENT: Two Written Exams (3 hours for each),
- Written exam containing commentary (1.5 hours) Structured oral Exam + OSCE .

Evaluation of program intended learning outcomes:

Evaluator	Tool	Sample
1. Senior Students	Questionnaire at the end of the program	All the PG students
2. Alumni	The faculty is currently developing an Alumni office for postgraduates	Not yet determined
3. Stakeholders	A meeting will be arranged during annual conference of the department	Available representatives from: <ul style="list-style-type: none"> - Army hospitals - National medical insurance - Medical syndicate - Ministry of health
4. External Evaluators	Review program and courses Attending the final exam	Once before implementation Bi-annual report
5. College Quality Assurance committee	Annual program reviewer	

Date of approval by department council: 8th October, 2021

Program Coordinator

Prof.GEHAN ELZAREA

Head of Department

Prof.Ali Mahrous