Master (MSC) Degree Program and Courses Specifications for Audiovestibular Medicine

(According to currently applied Credit points bylaws

Audiovestibular Medicine Unit – Otolaryngeal – Head – Neck Surgery Department

Faculty of medicine

Assiut University

2022/2023

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Master degree of Audiovestibular Medicine

A. Basic Information

- **Program Title:** Master degree of **Audiolvestibular Medicine**
- **Nature of the program: Single.**

Responsible Department: Department of Otolaryngology-Head and Neck Surgery, Audiovestibular medicine Unit

- ***Program Academic Director (Head of the Department):*** Prof. **Ahmed Aboelwafa**
- ***Head of the unit*: Prof. Enass Sayed Mohamed**
- ***Coordinator (s):***
  - **Principle coordinator:**
    - **Dr. Amira Eloseily**
  - **Assistant coordinator (s)**
    - **Dr. Maha Abdelgaber**
- ***Internal evaluators*:**
  - **Prof. Mohamed Salama Bakr**
  - **Prof. Amal Mohammad Alattar**
  - **Prof. Eman Abdelfattah Sayed**
- ***External evaluator* Professor Dr. Salah Soliman (Professor of Audiology Ain Shams University).**
- **Date of Approval by the Faculty of Medicine Council of Assiut University: : 23-9-2014**
- **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University: 27-11-2022**
- **Total number of courses:**
- **First Part: 6 Courses.**
- **Second part: 1 Course.**
- **Elective course: one course.**

B. Professional Information

1- Program aims

The purpose of this curriculum is to describe the training system in
Audiological Medicine. The training system ultimately aims to
1/1 provide the patient with a doctor trained as an attentive listener, a careful observer, an effective communicator and a knowledgeable and capable clinician.
1/2The curriculum describes the competencies required to be registered as a Specialist in Audiological Medicine. The specialist will be able to work as a consultant specialist within the National Health Service in Pediatric and Adult Audio logical (or Audio vestibular) Medicine.
1/3 The specialist will have the knowledge, skills and attitudes required to provide a high standard professional service in the speciality.
1/4 After completing audiological medicine training, the curriculum will have prepared the doctor to:
- Practice audiological medicine to a high level of competency
- Continue with their continuing professional development
- Engage with appraisal and revalidation
- Review their practice in the light of Good Medical Practice
- Identify their learning needs and goals to develop further specialized practice.

2- Intended learning outcomes (ILOs) *for the whole program*:

2/1Knowledge and understanding:

A. Explain the essential facts and principles of relevant basic sciences including, anatomy, physiology, genetics and medical statistics and acoustics related to audiovestibular medicine.

B. Mention essential facts of clinically supportive sciences including –principles of phoniatrics and Neurological and Psychiatric diseases related to audiovestibular medicine.

C. Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of common diseases and situations related to audiovestibular medicine.

D. Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment of common diseases related to audiovestibular medicine.

E. Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to the audiovestibular medicine.

F. Mention the basics of quality assurance and standards to ensure good clinical practice in the field of audiovestibular medicine.

G. Mention the ethical and scientific principles of medical research methodology.

H. State the impact of common health problems in the field of audiovestibular medicine on the society and how good clinical practice improves these problems.

2/2 Intellectual outcomes

A. Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of the audiovestibular medicine.
B. Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to audiovestibular medicine.
C. Design and present case for common problem related to audiovestibular medicine.
D. Formulate management plans and alternative decisions in different situations in the field of the audiovestibular medicine.

2/3 Skills

2/3/1 Practical skills (Patient Care)

A. Obtain proper history and examine patients in caring and respectful behaviors.
B. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to audiovestibular medicine.
C. Carry out patient management plans for common conditions related to audiovestibular medicine.
D. Use information technology to support patient care decisions and patient education in common clinical situations related to audiovestibular medicine.
E. Perform competently non invasive and invasive procedures considered essential for the audiovestibular medicine.
F. Provide health care services aimed at preventing health problems related to audiovestibular medicine.
G. Provide patient-focused care in common conditions related to Audiology, Medicine while working with health care professionals, including those from other disciplines
H. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records).

2/3/2 General skills

Including:

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

A. Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).
B. Appraises evidence from scientific studies.
C. Conduct epidemiological Studies and surveys.
D. Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.
E. Facilitate learning of students and other health care professionals including their evaluation and assessment.

Interpersonal and Communication Skills

F. Maintain therapeutic and ethically sound relationship with patients.

G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.

I. Work effectively with others as a member of a health care team or other professional group.

Professionalism

J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society

K. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices

L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Systems-Based Practice

M. Work effectively in relevant health care delivery settings and systems including good administrative and time management.

N. Practice cost-effective health care and resource allocation that does not compromise quality of care.

O. Assist patients in dealing with system complexities.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for master degree in Audiovestibular medicine

Assiut Faculty of Medicine developed master degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

These standards were approved by the Faculty Council on 17-6-2009. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.

These standards were revised and approved without changes by the Faculty Council on 27-11-2022.

4- Program External References (Annex 2)

1. ACGME (Accreditation Council for Graduate Medical Education).
http://www.acgme.org/acWebsite/navPages/nav_Public.ap

2. Speciality Training Curriculum For Audiological Medicine May 2007. Joint Royal Colleges Of Physicians Training Board www.gmcuk.org/Curriculum_Audiological_Med_3_Jul_07_v...
3. M.Sc in Audiology (Revised) Curriculum Rehabilitation Council Of India New Delhi 2006.

www.rehabcouncil.nic.in/pdf/mscaudio.pdf.

Comparison between program and external reference		
Item	**Assuit university audiovestibular medicine program**	Council Of India New Delhi, M.Sc in Audiology (Revised) Curriculum Rehabilitation **Program**
Goals	Matched	Matched
ILOS	Matched	Matched
Duration	3-5 years	3 years
Requirement	Different	different
Program structure	Different	different

5. Program Structure and Contents

A. Duration of program: 3 – 5 years

B. Structure of the program:

Total contact number of credit points 180 point (20 out of them for thesis)

Didactic# 40 (22.2 %), practical 120 (66.7%), thesis 20 (11.1%), total 180

First part

Didactic 14 (35 %), practical 24 (60 %), elective course 2 CP (5%), total 40

Second part

Didactic 24 (20%), practical 96 (80 %), total 120

 # Didactic (lectures, seminars, tutorial)

According the currently applied credit points bylaws:

Total courses 160 credit point

Compulsory courses: 98.9%

Elective course: 2 credit point =1.25%

	Credit points	% from total
Basic science courses	24	13.3%
Humanity and social courses	2	1.1%
Speciality courses	134	74.5%
Others (Computer, …)		
Field training	120	66.7%
Thesis	20	11.1%

C. Program Time Table

A. Duration of program 3 years maximally 5 years divided into

- **Part 1: (One year)**
  Program-related basic science courses and ILOs
  Students are allowed to sit the exams of these courses after 12 months from applying to the MSc degree.
  One elective course can be set during either the 1st or 2nd parts.
- **Thesis**
  For the M Sc thesis;
  MSc thesis subject should be officially registered within 6 months from application to the MSc degree,
  Discussion and acceptance of the thesis could be set after 12 months from registering the MSc subject;
  It should be discussed and accepted before passing the second part of examination)
- **Part 2 (2 years)**

Program –related specialty courses and ILOs
Students are not allowed to sit the exams of these courses before 3 years from applying to the MSc degree.
The students pass if they get 50% from the written exams and 60% from oral and clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical /practical exams of each course
Total degrees 1900 marks.
700 marks for first part
1200 for second part
Written exam 40% - 70%.
Clinical and oral exams 30% - 60%.

D. Curriculum Structure: (Courses):

- **courses of the program:**

Courses	Course Code	Core Credit points		
		Didactics	training	total
First Part				
Basic science courses (8CP) 1) Course 1: Acoustics 2) Course 2: Anatomy. 3) Course 3: Physiology. 4) Course 4: Medical Statistics & Genetics.	 AUD230A AUD201 AUD203 AUD230B#	 4 1 1 2(1+1)	 - - - -	 4 1 1 2
General clinical compulsory courses (6 points) Course 5: Neurological **and** Psychatric diseases **Course 6:** Principles of phonatrics	 AUD220 AUD230C	6 3(1.8+1.2) 3		6
Elective courses*	2CP			
- Elective course				
Clinical training and scientific activities:				
Clinical training and scientific activities:(10 CP) Course 5: Neurological **and** Psychatric diseases. **Course 6:**	 AUD220 AUD230C		10 6(4.75+1.25) 4	10

Principles of phonatrics				
Clinical training and scientific activities in Speciality course (14 CP) **Course 7:** Audiology	AUD230D		14	14
Total of the first part		**16**	**24**	**40**
Second Part	Speciality courses 24 CP Speciality Clinical Work (log Book) 96 CP			
Speciality Courses Course 7: Audiology	AUD230D	24		**24**
Training and practical activities in speciality (96 CP) (96 CP)	AUD230D		96	**120**
Total of the second part				
Thesis				
Total of the degree				

 # Didactic (lectures, seminars, tutorial)

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Medical statistics.
- Evidence based medicine.
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- Quality assurance of medical education
- Quality assurance of clinical practice.
- Hospital management

One of the above mentioned courses are prerequisites for fulfillment of the degree.

Thesis:

20 CP are appointed to the completion and acceptance of the thesis.

Units of Specialty course

	%	Year level	Didactic CP	Training CP (1^{st} +2^{nd} part)	Total
Module (1) Pediatric audiovestibular medicine(disorders and audiometry)	20.15%	1,2,3	5	22(4+18)	27
Module (2)Adult audiovestibular medicine(disorders and audiometry)	20.15%	1,2,3	5	22(4+18)	27
Module (3) Vestibular medicine	14.18%	1,2,3	4	22(2+20)	26
Module (4) Audiological Rehabilitative medicine	17.91%	1,2,3	4	20(2+18)	24
Module (5) hearing aids	17.91%	1,2,3	4	20(2+18)	24
Module (6) Ear-Nose and Throat surgery	9.7%	1,2	2	4(2+2)	6
Total 6 units (modules)	100%	1,2,3	24	110(14 + 96)	134

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module

7-Admission requirements

- **Admission Requirements (prerequisites) if any:**
  - **I. General Requirements:**
    a. MBBCh Degree form any Egyptian Faculties of Medicine
    b. Equivalent Degree from medical schools abroad approved by the Ministry of Higher Education
    c. One-year appointment within responsible department (for non Assiut University based registrars)
  - **II. Specific Requirements:**
    - Fluent in English (study language)

VACATIONS AND STUDY LEAVE

The current departmental policy is 2 weeks minimum

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- Examinations of the first part could be set at 12 months from registering to the MSc degree.
- Examination of the second part cannot be set before 3 years from registering to the degree.
- Discussion of the MSc thesis could be set after 1 year from officially registering the MSc subject before setting the second part exams.
- The minimum duration of the program is 3 years.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and specialty courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MSc thesis.

9- Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: **Structured essay questions** **Objective questions:** **MCQ** **Problem solving**	**K & I**
Clinical: **Long/short cases** **OSCE**	**K ,I, P &G skills**
Structured oral	**K ,I &G skills**
Logbook assessment	**All**
Research assignment	**I &G skills**

Weighting of assessments:

Courses		Degrees			
First Part	Course code	Written Exam	Degree		Total
			Oral Exam *	Practical / Clinical Exam	
First part					
Basic academic Courses:					
Course 1: Acoustics	AUD230A	100	100	-	200
Course 2: Anatomy	AUD201	25	25	-	50
Course 3: Physiology	AUD203	25	25	-	50
Course 4: Medical Statistics & Genetics	AUD230B #	50(25+25)	50(25+25)	-	100
General clinical courses					
Course 5: Neurological **and** Psychatric diseases.	AUD220	70 (50+20)	40	40	150
Course 6: Principles of phonatrics	AUD230C	75	75	-	150
Total		145	105	40	300
Total of the first part					700

Second Part					
Speciality Courses:					
Course 7: Audiology **6 units**	AUD230D	600 (5 Papers) 150 150 150 100 50	**200**	400	1200
		600	**200**	400	1200
Total of the degree					1900
Elective course		**50**			100

* 25% of the oral exam for assessment of logbook

Total degree 1900

700 marks for first part

1200 for second part

Written exam 50 % (600 marks).

Clinical /practical and oral exams 50% (600 marks).

100 marks for elective course.

Examination system:

First part:

- Written exam 3 hours in Acoustics + Oral exam
- Written exam 1 hour in Anatomy + Oral exam
- Written exam 1 hour in physiology + Oral exam
- Written exam 2 hours in Medical Statistics &Genetics + Oral exam
- Written exam 3 hours in Neurological **and** Psychatric diseases + Oral exam+ Clinical exam
- Written exam 3 hours in Principles of Phonatrics + Oral exam+ Clinical exam.

Second part:

- Written exam four papers 5 hours for each in audiology + Oral exam+ Clinical & Practical exam

Elective courses

- Written exam one paper 1 hour in Elective course + Oral & Practical exam

10-Program evaluation

By whom	Method	Sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits Questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

#Annex 5 contains evaluation templates and reports(joined in departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.
All course specifications for this program are in place.

Contributor	Name	Signature	Date
Program Principle Coordinator:	**Dr. Amira Eloseily**		
Head of the responsible unit	**Prof. Enass Sayed Mohamed**		
Head of the Responsible Department (Program Academic Director):	**Prof. Ahmed Aboelwaf**		

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses/ / Modules

Course (1): Acoustics

Name of department: Department of Otolaryngology- Audiovestibular medicine Unit
Faculty of Medicine
Assiut University
2022/2023

I. Course data

- **Course Title: Acoustics**
- **Course code: AUD230A**
- **Speciality Audiovestibular medicine**
- **Number of credit point: 4 credit point, didactic 4 credit point (100%), and practical 0 CP(0%).**
- **Department (s) delivering the course: Department of Otolaryngology- Audiology Unit.**
- **Coordinator (s):**
- **Course coordinator: Staff members of Department of Otolaryngology- Audiology Unit as annually approved by department council.**
- Date last reviewed: 5-2022.
- **Coordinator (s):**
    - **Principle coordinator: Dr. Amira Eloseily**
        - **Assistant coordinator: Dr. Maha Abdelgaber**
    -

- **Date last reviewed: 5-2022.**
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims

1. The candidate acquires the acoustic facts which are appropriate and necessary to audiovestibular medicine.

3. Course intended learning outcomes (ILOs)

A-Knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A. Demonstrate acoustic details of the following: - first and second order algebraic equations – logs, exponential, trigonometric functions and also the decibel – Newton's Laws of Motion and Ohm's Laws for electrical circuits – concepts of inertia, stiffness and friction – basic calculations with kinetic and potential energy - wavelength in relation to sound. – standing waves – the way sound waves and transverse waves propagate –Absorption of sound. – room acoustics - physical characteristics of	Lectures and tutorial	Written and oral examination Log book (attendance of at least 80% of lectures in different basic sciences and audio logical medicine)

sound – common waveform types –frequency scale & its relation to pitch: the octave, half tone & tone. -The Hertz, the power scale and its relationship to intensity: definition of the bel and decibel -sound pressure level (SPL) and hearing level (HL) –The theory of Fourier transformation –Principles of acoustic calibration –sound field measurement -Equal loudness -Binaural hearing -Masking release		
B–illustrate the acoustic principles of: -Loudness / Pitch / Timbre –Frequency selectivity –Loudness recruitment. Types of filters. Types of microphones. -Stimuli used in Auditory Evoked Potentials		

B-Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
A. Design seminars in common problem.	Didactics Seminar	written& oral logbook
B-Formulate management plans and alternative decisions in different situations in the field of the **acoustics.**		

C-Practical skills
Practical skills =0 credit points.

D-General Skills
Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	**Intellectual**	**Practical skill**	**General Skills**
first and second order algebraic equations	**A**	**A,B**	**-**	**A-E**
□ logs, exponential, trigonometric functions and also the decibel	**A**	**A,B**	**-**	**A-E**
□ Newton's Laws of Motion and Ohm's Laws for electrical circuits	**A**	**A,B**	**-**	**A-E**
concepts of inertia, stiffness and friction	**A**	**A,B**	**-**	**A-E**
wavelength in relation to sound.	**A**	**A,B**	**-**	**A-E**
basic calculations with kinetic and potential energy	**A**	**A,B**	**-**	**A-E**
standing waves	**A**	**A,B**	**-**	**A-E**
□ the way sound waves and transverse waves propagate	**A**	**A,B**	**-**	**A-E**
Absorption of sounds	**A**	**A,B**	**-**	**A-E**
Room acoustics	**A**	**A,B**	**-**	**A-E**
Physical characteristics of sound	**A**	**A,B**	**-**	**A-E**
Common waveform types	**A**	**A,B**	**-**	**A-E**

Frequency scale its relation to pitch, the octave, half tone,tone	**A**	**A,B**	**-**	**A-E**
The hertz, the power, the scale, its relationship to intensity, definition of the bel and decibel	**A**	**A,B**	**-**	**A-E**
sound pressure level (SPL) and hearing level (HL)	**A**	**A,B**	**-**	**A-E**
The theory of Fourier transformation	**A**	**A,B**	**-**	**A-E**
Principles of acoustic calibration	**A**	**A,B**	**-**	**A-E**
sound field measurement	**B**	**A,B**	**-**	**A-E**
Equal loudness	**B**	**A,B**	**-**	**A-E**
Binaural hearing	**B**	**A,B**	**-**	**A-E**
Masking release	**B**	**A,B**	**-**	**A-E**
Loudness/pitch/timbre	**B**	**A,B**	**-**	**A-E**
Frequency selectivity	**B**	**A,B**	**-**	**A-E**
Loudness recruitment	**B**	**A,B**	**-**	**A-E**
Types of filters.	**B**	**A,B**	**-**	**A-E**
Types of microphones.	**B**	**A,B**	**-**	**A-E**
-Stimuli used in Auditory Evoked Potentials	**B**	**A,B**	**-**	**A-E**

5. Course Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Laboratory work
3. Observation and supervision
4. Written & oral communication
5. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools: i. Assessment tools:

1- Written and oral examination

2- Assessment of practical skills)

3- Log book.

ii. Time schedule: At the end of the first part

iii. Marks: 200(100+100)

8. List of references

List of references

i. Audiological literature
   - o Course notes
   - o Staff members print out of lectures and/or CD copies

ii. Essential books (text books)

iii. Recommended books

- Handbook of Clinical Audiology “Jack Katz”
- Audiology 2000 (Diagnosis and treatment)

iv. Periodicals, Web sites, … etc

- www.pubmed.com
- www.sciencedirect.com
- www.audiologyonline.com

9. Signatures

Course Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Course (2) Anatomy

I. Course data

Course Title: Anatomy.
Course code: AUD201

- **Speciality: Audiovestibular medicine.**
- **Number of credit point: 1 credit point, didactic 1 credit point (100%), and practical 0 CP(0%).**
- **Department (s) delivering the course: Anatomy in conjunction with Department of Otolaryngology-Audiology Unit.**
- **Coordinator (s):**
- **Course coordinator: Staff members of Anatomy Department in conjunction with Department of Otolaryngology- Audiovestibular Medicine Unit**
- **as annually approved by both departments councils**
  Date last reviewed: 5-2022.
- **Requirements (prerequisites) if any:**
  None-

2. Course Aims

2/1. The candidate applies the anatomical and embryological facts which are appropriate to audiovestibular medicine.

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A-. Demonstrate - Anatomic details of the following: Embryology of the ear Anatomy of the ear Auditory pathway Neural connection of the vestibular pathway -Cranial nerves -Mastoid antrum -Palate -Blood supply of the brain	Lectures didactics.	-Written and oral examination -Assessment of practical skills - Log book

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of anatomy with clinical reasoning, diagnosis and management of common diseases related to audiological and vestibular diseases.	Didactic (lectures, seminars, tutorial	-Written and oral examination -Log book

C-Practical skills

Practical skills =0 CP

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Anatomy of the ear and vestibular system	A	A	-	A-E
the embryology of the ear and vestibular system	A	A	-	A-E
Auditory pathway	A	A	-	A-E
Neural connection of the vestibular pathway	A	A	-	A-E
Cranial nerves	A	A	-	A-E
Mastoid antrum	A	A	-	A-E
Palate	A	A	-	A-E
-Blood supply of the brain	A	A	-	A-E

5. Course Methods of teaching/learning:

1 Didactic (lectures, seminars, tutorial)

2 Laboratory work

3 Observation and supervision

4 Written & oral communication

5 Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools:

- Written and oral examination
- Assessment of practical skills)
- Log book

ii. Time schedule: At the end of the first part

iii. Marks: 50marks= **25 for written+25 for oral.**

8. List of references

i. Lectures notes

ii. Essential books

Departmental notes.

iii. Recommended books

None.

9. Signatures

Course Coordinator:	**Head of the Department:**
Date:	**Date:**

Course (3): Physiology

- **Course Title: Physiology.**
  - **Course code: AUD203**

- **Speciality: Audiovestibular medicine.**

- **Number of credit point: 1 credit point, didactic 1 credit point (100%), and practical 0 CP (0%).**

- **Department (s) delivering the course: Physiology in conjunction with Department of Otolaryngology-Audiology Unit**
- **Coordinator (s):**
- **Course coordinator: Staff members of Physiology Department in conjunction with Department of Otolaryngology- Audiovestibular medicine Unit**
- **as annually approved by both departments councils Date last reviewed: 5-2022.**
- **Requirements (prerequisites) if any :**
  None

2. Course Aims

2/1-The student should acquire the principals of physiology necessary for clinical reasoning, diagnosis and management of Audio- vestibular diseases.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate physiological details of the following: - Physiology of hearing. - Theories of hearing. -Physiological aspects of Central Auditory Processing. - Physiology of central and peripheral vestibular system -Cellular organization of the inner ear □□Cochlear and vestibular system - Structural and functional relationships in the cochlea and vestibular system □-Cell physiology -The auditory pathway - efferent and afferent pathways -Repair and regeneration in the inner ear -Physiology of the vestibular system	Lectures Didactics, tutorial	-Written and oral examination -Assessment of practical skills - Log book

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of physiology with clinical reasoning, diagnosis and management of common audiological and vestibular diseases	Didactic (lectures, seminars tutorial)	-Written and oral examination -Log book

C-Practical skills

Practical skills =0 CP.

-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Physiology of hearing.	A	A,B	-	A-D
- Theories of hearing.	A	A,B	-	A-D
-Physiological aspects of Central Auditory Processing.	A	A,B	-	A-D
- Physiology of central and peripheral vestibular system	A	A,B	-	A-D
Cellular organization of the inner ear	A	A,B	-	A-D
- Cochlear and vestibular system	A	A,B	-	A-D
- Structural and functional relationships in the cochlea and vestibular system	A	A,B	-	A-D
- Cell physiology	A	A,B	-	A-D
The auditory pathway - efferent and afferent pathways	A	A,B	-	A-D
Repair and regeneration in the inner ear	A	A,B	-	A-D
Physiology of the vestibular system	A-	A,B	-	A-D

5. Course Methods of teaching/learning:

- Didactic (lectures, seminars, tutorial)
- Laboratory work
- Observation and supervision
- Written & oral communication
- Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- Extra Didactic (lectures, seminars, tutorial) according to their needs

- Extra Laboratory work according to their needs

7. Course assessment methods:

i. Assessment tools:

- Written and oral examination
- Assessment of practical skills)
- Log book

ii. Time schedule: At the end of the first part

iii. Marks: 50= 25 for written+25 for oral.

8. List of references

i. Lectures notes

prepared by the staff members of the physiology department

ii. Staff members print out of lectures and/or CD copies

ii. Essential books

- Guyton AC, Hall JE: Textbook of Medical Physiology, 11th ed. Saunders, 2006.

Periodicals, Web sites, … etc

- Journal of applied physiology
- www.Pubmed.com

9. Signatures

Course Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Course (4) : Medical statistics & & Genetics

I. Course data

- Course Title: Medical statistics & Genetics
- Course code: AUD230B#
- Speciality Audiovestibular medicine
- Number of credit point: 2 credit point, didactic 2 credit point (100%), and practical 0 CP (0%).
- It is divided into 2 units

Unit 1: Medical statistics
Unit 2: Genetics.

- Department (s) delivering the course: Public Health in conjunction with Department of Otolaryngology- Audiovestibular medicine Unit
- Coordinator (s):
- Course coordinator: Staff members of Public health in conjunction with Department of Otolaryngology- Audiovestibular medicine Unit
- as annually approved by both departments councils Date last reviewed: 5-2022.
- Requirements (prerequisites) if any :
- None

2. Course Aims

2/1-The student should demonstrate the genetics and medical stastics facts of basic sciences which are appropriate to Audiology in clinical reasoning, diagnosis and management of Audio- vestibular diseases including medical statistics and medical genetics

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	**Methods of teaching/ learning**	***Methods of Evaluation***
A. Demonstrate details of the following: medical statistics(unit 1) -Introduction to statistics and study design; -Reliability and validity; presenting data -Measures of centre and spread. -The normal distribution -Confidence intervals; one sample t-tests;2 sample tests, Non parametrics; more than 2 groups -Analysing proportions; -Sample size -Regression I /Regression -Overview of statistics -Correlation; more than 2 groups Genetics (unit 2) Basic models of inheritance Non-syndromic genetic hearing loss Syndromes including hearing loss Clinical approach to genetic hearing loss, including family history and pitfalls -Genetic counselling	-Lectures	-Written and oral examination - Log book

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of medical genetics and statistics with clinical reasoning, diagnosis and management of common diseases related to audiological and vestibular diseases	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common syndromes with audiological and vestibular manifestations		

C- Practical skills

Practical skills =0 CP

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Medical statistics				
-Introduction to statistics and study design	**A**	**A-B**	**-**	**A-E**
Reliability and validity; presenting data	**A**	**A-B**	**-**	**A--E**
Measures of centre and spread.	**A**	**A-B**	**-**	**A-E**
The normal distribution	**A**	**A-B**	**-**	**A-E**
Confidence intervals; one sample t-tests;2 sample tests, Non parametrics; more than 2 groups	**A**	**A-B**		**A--E**
Analysing proportions	**A**	**A-B**	**-**	**A-E**
- Sample size	**A**	**A-B**	**-**	**A--E**
Regression I /Regression	**A**	**A-B**		**A-E**
Overview of statistics	**A**	**A-B**	**-**	**A--E**
Correlation; more than 2 groups	**A**	**A-B**	**-**	**A-E**
Genetics				
Basic models of inheritance	**A**	**A-B**		**A-E**
Non-syndromic genetic hearing loss	**A**	**A-B**	**-**	**A--E**
Syndromes including hearing loss	**A**	**A-B**	**-**	**A-E**
-Genetic counselling	**A**	**A-B**		**A--E**
Clinical approach to genetic hearing loss, including family history and pitfalls	**A**	**A-B**	**-**	**A-E**

5. Course Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation
3. Written & oral communication
4. Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs

7. Course assessment methods:

i. Assessment tools:

1- Written and oral examination

2- Log book

ii. Time schedule: At the end of the first part

iii. Marks: 100= 50 for each unit

Written =50 marks =25 for medical stastics+25 for medical genetics.

Oral=50 marks =25 for medical stastics+25 for medical genetics.

8. List of references

i. Lectures notes

- Staff members print out of lectures and/or CD copies

ii. Essential books

- Text books

iv. Periodicals, Web sites, … etc

- American Journal of medical genetics
- Medical statistics journal

9. Signatures

Course Coordinator	
Unit 1 Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……
Unit 2 Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Course (5) Neurological and Psychiatric disease

I. Course data

- **Course Title: Internal medicine & Neurology and Psychiatry**
- **Course code: AUD220**
- **Speciality: Audiovestibular medicine**
- **Number of credit point: 9 credit point, didactic 3 credit point (33.3%)**[1.8 CP for neurological disorders (60%) & 1.2CP for psychiatric disorders(40%)]**, and practical 6 CP (67.7%)[**4.75CP for neurology training and 1.25 cp for psychiatry training]**.**
- **It is divided into 2 units**
- **Unit 1:Neurological diseases.**
- **Unit 2: psychiatric diseases**
- **Department (s) delivering the course: Neurology and psychiatry departments in conjunction with Department of Otolaryngology- Audiology Unit**
- **Coordinator (s):**
- **Course coordinator: Staff members of Neurology and psychiatry Departments in conjunction with Department of Otolaryngology- Audiology Unit**
- **as annually approved by both departments councils Date last reviewed: 5-2022.**
- **Requirements (prerequisites) if any : none**

2- Course Aims:

2/1. Acquire the neuropsychiatric principles and the facts which are appropriate to Audio-vestibular medicine in clinical reasoning, diagnosis and management of Audiological and vestibular diseases associated with neuropsychiatry disorders

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	**Methods of teaching/ learning**	***Methods of Evaluation***
A. Describe neuropychiatric and medical details related to Audio-vestibular medicine including the following : • **<u>Neurological diseases(unit 1):</u>** -Neurological examination. -Cerebrovascular stroke -Hemiplegia -Demylinating diseases -Headache and migraine. -Epilepsy including Temporal lobe epilepsy. -Increase Intracranial tension -Space occupying lesion: (Brain tumors) -Cerebellopontine angle tumor CPA Lesions) -CNS infection (Meningitis& Encephalitis) -Speech and Articulation. -Gait disorders. - **<u>Psychiatric disorders(unit 2)</u>** *Perception and its disorders *Sensory deprivation (including auditory hallucination). *Somatoform disorders. *Dissociative disorders. *Circadian rhythms.	-Lectures Didactics. Tutorial.	-Written and oral examination - Log book

*Schizophrenia. *Mood disorders. *Psychological manifestations and complications of hearing loss in children and adult *Child psychiatry* -Autism -Mental retardation. -A.D.H.D. - conduct disorders		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of neurology and psychiatry with clinical reasoning, diagnosis and management of common diseases related to audiological and vestibular diseases	Didactic (lectures, seminars, tutorial)	-Written and oral examination Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common neuropsychiatric disorders with audiological and vestibular manifestations		

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Master neuropsychiatric practical and clinical skills of hearing and vestibular system for management of common audio vestibular conditions.	Practical work	-Assessment of practical skills -Logbook

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook clinical case examination

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Neurological disorders (unit 1)	**A**	**A,B**	**A**	**A-E**
- Neurological examination. -Cerebrovascular stroke -Hemiplegia -Demylinating diseases -Headache and migraine. -Epilepsy including Temporal lobe epilepsy. -Increase Intracranial tension -Space occupying lesion: (Brain tumors) -Cerebellopontine angle tumor CPA Lesions) -CNS infection (Meningitis& Encephalitis) -Speech and Articulation. -Gait disorders.	**A**	**A,B**	**A**	**A-E**
Psychiatric diseases(unit2)	**A**	**A,B**	**A**	**A-E**
*Perception and its disorders	**A**	**A,B**	**A**	**A-E**

*Sensory deprivation (including auditory hallucination). *Somatoform disorders. *Dissociative disorders . *Circadian rhythms. *Schizophrenia. *Mood disorders. *Psychological manifestations and complications of hearing loss in children and adult *Child psychiatry* -Autism -Mental retardation. -A.D.H.D. - conduct disorders				

5. Course Methods of teaching/learning:

-Didactic (lectures, seminars, tutorial)

- Clinical training.
- Observation
- Written & oral communication
- Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- Extra Didactic (lectures, seminars, tutorial) and training hours according to their needs

7. Course assessment methods:

i. Assessment tools:

- Written and oral examination
- Log book

ii. Time schedule: At the end of the first part

iii. Marks: 150 :70 written(50+20)+40 oral for psychiatry+40 clinical for neurology.

8. List of references

i. Lectures notes

- Staff members print out of lectures and/or CD copies

. Course notes

o Staff members print out of lectures and/or CD copies

- Clinical neurology notes of neurology and psychiatry department

ii. Essential books

- Text books

iv. Periodicals, Web sites, … etc

Neurology India

Journal of Neurology, Neurosurgery and Psychiatry o

9. Signatures

Course Coordinator	
Unit 1 Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……
Unit 2 Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Course 6: Principles of Phoniatrics

Name of department: Phoniatric Unit
Faculty of medicine
Assiut University
2022/2023

1. Course data

- **Course Title: Principles of Phoniatrics**
- **Course code: AUD 230C**
- **Speciality*: Principles of phoniatrics.***
- **Number of credit points: 7 credit point, didactic 3 credit point (11.5%) and Practical 4CP(88.5%)**
- **Department (s) delivering the course:** ENT Department, **Phoniatric** unit, Faculty of Medicine- Assiut University.
- **Coordinator (s):**

  -Course coordinator:
  Pr. Dr. Eman Sayed
  -Assistant coordinator (s)
  Dr. Reham Abdelwakeel

  Date last reviewed: 5-2022.
- **Requirements (prerequisites) if any: none**

2- Course Aims:

2/1. Acquire the principles and the facts of phoniatrics which are appropriate to Audio-vestibular medicine in clinical reasoning, diagnosis and management of Audiological and vestibular diseases.

3. Course intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	**Methods of teaching/ learning**	***Methods of Evaluation***
A. Describe the etiology, clinical picture, diagnosis and management of the following diseases and clinical conditions: related to Delayed language development.	Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	-OSCE at the end of each year -log book & portfolio - MCQ examination -Oral and written exam
B. OUTLINE the principles of the following: • **Introduction:** i.e. definition of communication, Language, Speech and voice. • Language structure: - Articulatory phonetics - Acoustics of speech sounds: *Vowels *Consonants. • Prerequisites of language development. • Delayed language development *Causes *Diagnosis *Management: especially rehabilitation of hearing impairment.		

C. State update and evidence based Knowledge of **- Delayed language development** • Hearing impairment • Autism		
D. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to language development.		
E. Mention the basic ethical and medicolegal principles relevant to language disorders.		
F. Mention the basics of quality assurance to ensure good clinical care in language disorders.		
G. Mention the ethical and scientific principles of medical research.		
H. State the impact of common health problems in the field of language acquisition on the society.		

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common phoniatric diseases related to **audiology.**	-Clinical case presentation -Senior staff experience	Procedure/case presentation Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to phoniatric diseases and audiology.		
C. Design and present cases , seminars in common problem		
D-Formulate management plans and alternative decisions in different situations in the field of language disorders.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year
B. Order the following noninvasive diagnostic procedures related to delayed language development: • Psychometric test • Arabic language test	Clinical round with senior staff Observation Post graduate teaching Hand on workshops	-Procedure presentation - Log book - Chick list
C. Interpret the following non invasive diagnostic procedures related to delayed language development: • Psychometric test • Arabic language test	Clinical round with senior staff	Procedure presentation - Log book - Chick list

D. Perform the following non invasive Diagnostic and therapeutic procedures for delayed language development and autism. • Family counseling • Active language intervention • Behavior modification therapy	Clinical round with senior staff -Perform under supervision of senior staff	Procedure presentation - Log book - Chick list
E. Prescribe the following non invasive therapeutic procedures: -Prescribe proper treatment for conditions in A.A • Family counseling • Active language intervention • 3- Behavior modification therapy	Clinical round with senior staff	- Procedure presentation - Log book - Chick list
F. Carry out patient management plans for common conditions related to delayed language development in audiology.	Clinical round with senior staff	
G. Use information technology to support patient care decisions and patient education in common clinical situations related to delayed language development and audiology.		
H-Provide health care services aimed at preventing health problems related to delayed language development and audiology like:. - Delayed diagnosis of hearing impairment. - Delayed diagnosis of autism.		
I-Provide patient-focused care in common conditions related to delayed language development and audiology , while working with health care professionals, including those from other disciplines like: Conditions mentioned in A.A.		
J. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology(audit, log book)	-Case log -Observation and supervision -Written & oral communication	Procedure/case presentation -Log book and Portfolios
B. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
C. Conduct epidemiological Studies and surveys.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.	Clinical rounds Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain therapeutic and ethically sound relationship with patients.	Simulations Clinical round Seminars Lectures Case presentation Hand on workshops	Global rating Procedure/case presentation Log book Portfolios Chick list and
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal,		

explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in common problems related to delayed language development and audiology.	Clinical round Seminars	Clinical Exam
K. Write a report : -Patients communicative assessment report who presented with delayed language development in audiology. -Psychometric report	Senior staff experience	Chick list
L. Council patients and families about: **1- Delayed language development and its causes which include** • Hearing impairment. • Autism.	Clinical round with senior staff	
M. Council families about how to improve cognitive abilities of their children and how to encourage them to communicate.		

Professionalism

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
N. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	1. Objective structured clinical examination 2. Patient survey
O. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		1. 360o global rating
P. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		1. Objective structured clinical examination 2. 360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
Q. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating
R. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance
S. Assist patients in dealing with system complexities.		1. 360o global rating 2. Patient survey

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First part

Topic	Covered ILOs			
	Knowledge	**Intellectual**	**Practical skill**	**General Skills**
Delayed language development				
• **Introduction:** i.e. definition of communication, Language, Speech and voice.	**B,D**	**A**	**-**	**D,E**
Language structure: - Articulatory phonetics - Acoustics of speech sounds *Vowels *Consonants	**B,D**	**A**	**-**	**D,E**
Prerequisites of language development.	**B,D**	**A**	**-**	**D,E**
Delayed language development *Causes *Diagnosis *Management: especially rehabilitation of hearing impairment	**A-H**	**A-D**	**A-J**	**A-S**

5. Course Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Outpatient
3. Case presentation
4. Direct observation
5. journal club
6. Critically appraised topic.
7. Educational prescription
8. Senior staff experience
9. Case log
10. Observation and supervision
11. Written & oral communications
12. Hand on work shop
13. Service teaching
14. Perform under supervision of senior staff
15. Postgraduate teaching

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

1. Oral examination
2. Clinical examination
3. Written examination
4. Objective structure clinical examination (OSCE)
5. Procedure/case Log book and Portfolios
6. Simulation
7. Record review (report)
8. Patient survey
9. 360o global rating
10. Check list evaluation of live or recorded performance

11. MCQ Exam

ii. Time schedule: first part

iii. Marks: 150 (75 for written+ 75 for oral).

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

- **Motor Speech Disorders** Joseh R **2005**
- **Phonology "Assessment and Intervention applications in speech pathology"** Robert J. Lowe 1994

iii. Recommended books Rehabilitative Audiology children and Adult Jerome G. Alpiner and Patricin A. McCarthy 1987

iv. Periodicals, Web sites, … etc

- Acta of Otorhinolaryngology
- Journal of Speech and Hearing Research
- Journal of Speech and Hearing Disorders

v. Others

None

9. Signatures

Course Coordinator: ……	**Head of the Department:** ……
Date: ……..	**Date:** …… …… ……..

Speciality course

Course 7: Audiology

- **Course Title: Audiology.(audiovestibular medicine and rehabilitation).**
- **Course code: AUD230D.**
- **Number of credit points: 134 credit point, didactic 24 credit point (17.9%) and Practical 110 CP(82.1%)**
- **Speciality: Audiovestibular medicine**
- **Department (s) delivering the course: Otolaryngology- Audiovestibular medicine Unit**

- **Coordinator (s):**
- **Course coordinator: Dr. Amira Eloseily**
  Assistant coordinators: Dr. Maha Abdelgaber

- **Date last reviewed: 5-2022.**
- **Requirements (prerequisites) if any :none**
- **It is divided into 6 units:**
  - **Module (1) Pediatric audiology medicine(disorders and audiometry)**
  - **Module (2) Adult audiology medicine(disorders and audiometry)**
  - **Module (3) Vestibular medicine**
  - **Module (4) Audiological Rehabilitative medicine**
  - **Module (5) hearing aids and cochlear implant**
  - **Module (6) Ear- Nose and Throat surgery**

	%	Year level	Didactic CP	Training CP (1^{st} +2^{nd} part)	Total
Module (1) Pediatric audiology medicine(disorders and audiometry)	20.15%	1,2,3	5	22(4+18)	27
Module (2)Adult audiology medicine(disorders and audiometry)	20.15%	1,2,3	5	22(4+18)	27
Module (3) Vestibular medicine	14.18%	1,2,3	4	22(2+20)	26
Module (4) Audiological Rehabilitative medicine	17.91%	1,2,3	4	20(2+18)	24
Module (5) hearing aids	17.91%	1,2,3	4	20(2+18)	24
Module (6) Ear-Nose and Throat surgery	9.7%	1,2	2	4(2+2)	6
Total 6 units (modules)	100%	1,2,3	24	110(14 + 96)	134

NB: There is overlap between didactics topics and required achieved in training skills as unit 1&2 and unit 4&5.

*- The required practical skills log & case log and procedures related to different units of specialized course for each year study that are mentioned in logbook.

2- Course Aims:

2/1- The training system ultimately aims to provide the patient with the following:

- a trained doctor as an attentive listener, a careful observer, an effective communicator and a knowledgeable and capable clinician.

-The curriculum describes the competencies required to be registered as a Specialist in Audiological Medicine.

- The specialist will be able to work as a consultant specialist within the National Health Service in Pediatric and Adult Audiological (or Audiovestibular) Medicine and will have the knowledge, skills and attitudes required to provide a high standard professional service in the practice of common conditions.

After completing audiological medicine training, the curriculum will have prepared the doctor to:

- Practice audiological medicine to a high level of competency
- Continue with their continuing professional development
- Engage with appraisal and revalidation
- Review their practice in the light of Good Medical Practice

2/2. The candidate acquire the basic skills of Otolaryngeal head and neck surgery which are necessary and appropriate for audiology and rehabilitation medicine

3. Intended learning outcomes (ILOs):

Module 1,2: Pediatric and Adult audiology medicine (audiology disorders and audiometry)

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
a- Describe the etiology , clinical picture diagnosis and treatment of the following conditions related audiovestibular medicine in adult and children including the following: - hearing loss in child - Central Auditory processing& Management of Central Auditory Processing Disorders. - Noise exposure and Hearing Conservation. - Non organic hearing loss - Hearing loss in the elderly. - Tinnitus and Hyperacusis	-Lectures Didactics, tutorial	-Written and oral examination - Log book
B. Outline the principles of : -History taking& Calibration. -Pure tone evaluation& Bone conduction threshold assessment. -Special test battery?? -Speech Audiometry. -Clinical masking. -Tympanometry.		

-Acoustic reflex. -Free field audiometry. -play audiometry. -hearing loss in child. -Introduction to auditory evoked potential. -Electrocochleography. -Auditory brainstem response -Auditory Steady State Response -Middle Latency Auditory Evoked Potential -Cortical Event-related Potential to Auditory stimuli -Central Auditory processing& Management of Central Auditory Processing Disorders.		
C. State update and evidence based Knowledge of :CONDITIONS mentioned in AA,AB.		
D. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to Audiology, vestibular and rehabilitation medicine		
E. Mention the basic ethical and medicolegal principles relevant to Audiology, vestibular and rehabilitation.		
F. Mention the basics of quality assurance to ensure good clinical care in. Audiology, vestibular and rehabilitation medicine..		
G. Mention the ethical and scientific principles of medical research.		
H. State the impact of common health problems in the field of Audiology, vestibular and rehabilitation on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlate the facts of basic sciences which are appropriate to audiological diseases in clinical reasoning, diagnosis and management of Audiology. **B- Apply clinically supportive sciences which are appropriate to the following areas of** Audiology,. **C. Demonstrate an investigatory and analytic thinking (problem solving) approach to clinical situations of** Audiology. D-Formulate management plans and alternative decisions in different situations in the field of Audiology,.	Didactic (lectures, seminars, tutorial)	-Written and oral examination - Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	-OSCE -log book & portfolio -Clinical exam in
B. Order the following non invasive & invasive diagnostic procedures: -Routine appropriate Lab investigations related to conditions mentioned in A.A. -Basics audiological testing.		-Assessment of practical skills clinical case examination -Logbook
C. Interpret the following non invasive & invasive diagnostic procedures: -Routine appropriate Lab investigations related to conditions mentioned in A.A		

-Basics audiological testing.(Audiogram, ABR). - Otoacoustic emissions (transient, distortion product, spontaneous,contra-lateral suppression		
D. Perform the following non invasive & invasive Diagnostic and therapeutic procedures. • Pure tone audiograms • Tympanograms • speech audiograms • Auditory brain stem response. • -Central Auditory processing& Management of Central Auditory Processing Disorders.		
E. Prescribe the following non invasive & invasive therapeutic procedures : Hearing aids application. Audiology rehabilitation therapy.		
F. Carry out patient management plans for common conditions related to the audiology and vestibular medicine.		
G. Use information technology to support patient care decisions and patient education in common clinical situations related to the audiovestibular medicine.		
H-Provide health care services aimed at preventing health problems related to Otolaryngology head & neck surgery and audiology like: -Occupitional hearing loss. -Ototoxic drugs.		
I-Provide patient-focused care in common conditions related to audiology and vestibular medicine. while working with health care professionals, including those from other disciplines like: Conditions mentioned in A.A.		
J. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records).		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology(audit, logbook)	-Case log -Observation and supervision -Written & oral communication	Procedure/case presentation -Log book and Portfolios
B. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
C. Conduct epidemiological Studies and surveys.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.	Clinical rounds Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain therapeutic and ethically sound relationship with patients.	Simulations Clinical round Seminars Lectures Case presentation Hand on workshops	Global rating Procedure/case presentation Log book Portfolios Chick list and
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		

H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in common problems related to the audiology.	Clinical round Seminars	Clinical Exam
K. Write a report on: 1.Pure tone audiograms 2. Tympanograms 3. speech audiograms 4. Auditory brain stem response.	Senior staff experience	Chick list
L. Council patients and families about: -Occupitional hearing loss. -Ototoxic drugs. -Familial hearing loss.	Clinical round with senior staff	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	1. Objective structured clinical examination 2. Patient survey
N. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
O. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		Objective structured clinical examination

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
P. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating
Q. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance
R. Assist patients in dealing with system complexities.		1. 360o global rating 2. Patient survey

Module 3: Vestibular Medicine

A-Knowledge and understanding

ILOs	**Methods of teaching/ learning**	***Methods of Evaluation***
A- Describe the etiology , clinical picture diagnosis and treatment of the following conditions related audio-vestibular medicine including the following: - Causes and diagnosis of vestibular disorders. -Central versus peripheral vertigo -Repositioning Techniques - Nystagmus -Meniers Disease -Benign Paroxysmal positional vertigo -Acute vertigo -Recurrent disequilibrium -Chronic imbalance -Dizziness and imbalance in children.	-Lectures Didactics, tutorial	-Written and oral examination - Log book
B. Outline the principles of : -Clinical neurophysiology of the vestibular system (Anatomy &Physiology) -Evaluation of patients with dizziness and balance disorders. -Electronystagmography -Video nystagmograghy -Causes and diagnosis of vestibular disorders. -Central versus peripheral vertigo -Repositioning Techniques. Nystagmus -Meniers Disease -Benign Paroxysmal positional vertigo -Office Balance Tests -Vestibular rehabilitation Therapy -Intratympanic Injection		

-Rotational chair testing -Management of Dizzy Patients.		
C. State update and evidence based Knowledge of :CONDITIONS mentioned in AA,AB.		
D. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to vestibular and rehabilitation medicine		
E. Mention the basic ethical and medicolegal principles relevant to vestibular and rehabilitation.		
F. Mention the basics of quality assurance to ensure good clinical care in vestibular and rehabilitation medicine..		
G. Mention the ethical and scientific principles of medical research.		
H. State the impact of common health problems in the field of vestibular and rehabilitation on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlate the facts of basic sciences which are appropriate to audiological diseases in clinical reasoning, diagnosis and management of vestibular disorders and rehabilitation. **B- Apply clinically supportive sciences which are appropriate to the following areas of** , vestibular disorders and rehabilitation. **C. Demonstrate an investigatory and analytic thinking (problem solving) approach to clinical situations of** vestibular disorders and rehabilitation. D-Formulate management plans and alternative decisions in different situations in the field of vestibular disorders and rehabilitation.	Didactic (lectures, seminars, tutorial)	-Written and oral examination Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	-OSCE -log book & portfolio -Clinical exam in
B. Order the following non invasive & invasive diagnostic procedures: -Routine appropriate Lab investigations related to conditions mentioned in A.A. -X ray Chest. -CT& MRI head and neck. -Basics audiological testing.		-Assessment of practical skills clinical case examination -Logbook
C. Interpret the following non invasive & invasive diagnostic procedures: -Routine appropriate Lab investigations related to conditions mentioned in A.A -X ray Chest. -CT& MRI head and neck. -Basics audiological testing.(Audiogram, ABR) -electronystagmography		
D. Perform the following non invasive & invasive Diagnostic and therapeutic procedures. 1. Office Balance Tests 2. Intratympanic Injection 3. Rotational chair testing 4. Auditory brain stem response. 5. Electronystagmography		
E. Prescribe the following non invasive & invasive therapeutic procedures : • Eply's maneuver in the treatment of begin paroxysmal vertigo.. • Vestibular rehabilitation therapy.		
F. Carry out patient management plans for common conditions related to the vestibular medicine.		
G. Use information technology to support patient care decisions and patient education in common clinical		

situations related to the vestibular medicine.		
H-Provide health care services aimed at preventing health problems related to Otolaryngology head & neck surgery and vestibular medicine like:condition mentioned in AA.		
I-Provide patient-focused care in common conditions related to audiology and vestibular medicine. while working with health care professionals, including those from other disciplines like:Conditions mentioned in A.A.		
J. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records).		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology(audit, logbook)	-Case log -Observation and supervision -Written & oral communication	Procedure/case presentation -Log book and Portfolios
B. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
C. Conduct epidemiological Studies and surveys.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.	Clinical rounds Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain therapeutic and ethically sound relationship with patients.	Simulations Clinical round Seminars Lectures Case presentation Hand on workshops	Global rating Procedure/case presentation Log book Portfolios Chick list and
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in common problems related to the Vestibular medicine.	Clinical round Seminars	Clinical Exam
K. Write a report on: -Electronystagmography	Senior staff experience	Chick list
L. Council patients and families about: -recognize the psychological sequelae of vertigo -assess the impact of vestibular problems on the individual -explain to the patient the likely cause and outcome of vertigo -identify those patients for whom the attack affects their fitness to drive -the psychological impact of recurrent disequilibrium	Clinical round with senior staff	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	1. Objective structured clinical examination 2. Patient survey
N. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
O. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		Objective structured clinical examination

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
P. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating
Q. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance
R. Assist patients in dealing with system complexities.		1. 360o global rating 2. Patient survey

Module (4,5): Audiological Rehabilitation medicine and hearing aid

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A- Describe the general principles of primary, secondary and tertiary prevention of hearing disorders including the following conditions: • Troubleshooting Hearing aids • Hearing aid fitting and verification in adults • -Hearing aid fitting and verification in children • -Counseling patients with hearing loss • -Room Acoustics and Auditory rehabilitation Technology • -Cochlear Implantation _ Noise and its effect on the audio-vestibular system. - Ototoxicity - The epidemiology of hearing loss and its prevention **B-Gain a comprehensive knowledge of the following related condition to Audio logical rehabilitation:** • Troubleshooting Hearing aids • Hearing aid fitting and verification in adults • -Hearing aid fitting and verification in children • -Counseling patients with hearing loss • -Room Acoustics and Auditory rehabilitation Technology	-Lectures Didactics, tutorial	-Written and oral examination - Log book

• -Cochlear Implantation -> noise and its effect on the audio-vestibular system _ > ototoxicity _ >the epidemiology of hearing loss and its prevention _ >screening for hearing loss C- **Describe in details related to hearing aids including the followin**g: • analogue and digital hearing aids, including body worn, post aural, in the ear, in the-canal, complete-in-the-canal aids, vibrotactile aids, cochlear implants, bone -anchored hearing aids (BAHA), frequency transposition aids, implantable hearing aids, CROS and BICROS aids		
• **Types of** hearing aid fitting formulae and real ear measurements in both adult and paediatric practice • the “plumbing system” (hooks, moulds, tubing etc) and its effect on the sound amplification • the assistive devices available including the radio aid and FM soundfield systems, alarm systems, loop systems • methods of assessing benefit of amplification in children and adults**.** • Amplification for adults and children including assistive listening Devices**.**		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Correlate the facts of basic sciences which are appropriate to audiological diseases in clinical reasoning, diagnosis and management of audiological diseases including • Audiological rehabilitative medicine **.B- Apply clinically supportive sciences which are appropriate to the following areas of** • Audiological rehabilitative medicine **.C- Demonstrate an investigatory and analytic thinking (problem solving) approach to clinical situations of** • Audiological rehabilitative medicine	Didactic (lectures, seminars, tutorial)	-Written and oral examination - Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-**Take proper history with respect to diagnose the common conditions related to rehabilitation medicine and hearing aids in practice.** B—Interpret the results of different screening methods of conditions related to conditions mentioned in AA. C- Perform different screening methods, and D--Manage appropriately those who "fail" the screen E-Determine appropriateness and type of amplification (including cochlear implant) through discussion with audiological colleagues, patient and parents in the case of children	Training work	-Assessment of practical skills clinical case examination -Logbook

F-Discuss the current best technology with both patients, their families, and other professionals G-refer appropriately for amplification H-To have practical experience of: • Selecting, testing and fitting of • hearing aids including BAHA and cochlear implant in both • children and adults • Measuring benefit of amplification • Use of hearing aid test box for testing hearing aids and measuring insertion gain and real ear to coupler difference **I-Prescribe the following non invasive &invasive therapeutic procedures** : Hearing aids and other assistive listening devices and its application. J- Perform efficiently the Management of the following: ototoxicity, noise induced hearing loss		
K- Counsel patients and their family about Problems of consanguinity.		

D- General Skills

Practice-Based Learning and Improvement

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook clinical case examination

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

Module 6 : Ear – Nose –Throat Surgery (ENT)

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A-Describe in details the anatomy, pphysiology, pathology, diagnosis, appropriate investigations (including imaging) and management of congenital, acquired and other conditions related to ear surgery and audiology including indications, risks, outcomes and complications of surgery. -Anatomy of the ear - Functions of the ear - Diseases of the auricle - Diseases of the external ear canal - Acute otitis media - Chronic non suppurative otitis media - Chronic suppurative otitis media - Complications of suppurative otitis media -Trauma to the middle ear -Otosclerosis -Tumours of the middle ear -Meniers disease -Acoustic Neuroma -Facial nerve -Hearing loss,types and causes -Otalgia and otorrhea - Vestibular disorders - Tinnitus --Ear Operations -Adenoid and Adenoidectomy	-Lectures, Didactics, Tutorial.	-Written and oral examination - Log book
B- Describe the following ENT Surgical circumstances related to the head and neck		

conditions that may produce aural symptoms including conductive hearing loss, and their appropriate management**.** C- **Outline the following ENT problems related to audiology:** e.g. a very premature or sick neonate or infant may encounter which could affect hearing, balance or speech & language development and its inheritance patterns of hearing loss.		

B-Intellectual outcomes

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
A**-** Apply the facts of basic sciences which are appropriate to ENT conditions related to audiological diseases in clinical reasoning, diagnosis and management of audiological diseases . B.- Apply clinically supportive sciences which are appropriate to ENT related to audiological diseases C -Demonstrate an investigatory and analytic thinking (problem solving) approach to clinical situations of ENT related to audiological diseases.	Didactic (lectures, seminars, tutorial)	-Written and oral examination - Log book

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Obtain proper history and examine patients in caring and respectful behaviors in conditions below.	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations (service teaching)	-OSCE -log book & portfolio -Clinical exam in internal medicine
B-Perform the following procedures: • An accurate and comprehensive examination of the ear, nose, oral cavity, pharynx	Practical work	Assessment of practical skills

and head & neck including use of otoscope, operating microscope, head mirror • Removal of wax and debris from the external auditory canal using appropriate instruments and /or suction either under direct vision or using the operating microscope as appropriate • Ear syringing • Full neurological examination competently.		clinical case examination -Logbook

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform data management including data entry and analysis.	-Observation and supervision -Written and oral communication	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.	-Observation and supervision -Written and oral communication	Log book
C. Write a report in common condition mentioned in A.A		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Logbook clinical case examination

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
E. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Logbook

Course contents (topic s/modules/rotation)
Course Matrix

Time Schedule: second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Module 1 ,2 pediatric and adult Audiological MEDICINE	**A-H**	**A-D**	**A-J**	**A-R**
History taking& Calibration. -Pure tone evaluation& Bone conduction threshold assessment. -Special test battery. -Speech Audiometry. -Clinical masking. -Tympanometry. -Acoustic reflex. -Free field audiometry. -play audiometry. -hearing loss in child. -Introduction to auditory evoked potential. -Electrocochleography. -Auditory brainstem response -Auditory Steady State Response -Middle Latency Auditory Evoked Potential -Cortical Event-related Potential to Auditory stimuli -Central Auditory processing& Management of Central Auditory Processing Disorders. -Noise exposure and -Hearing Conservation. - Non organic hearing loss - Hearing loss in the elderly. - Tinnitus and Hyperacusis				

Module 3 : Vestibular Medicine

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Vestibular Medicine	**A-H**	**A-D**	**A-J**	**A-R**
Causes and diagnosis of vestibular disorders. -Central versus peripheral vertigo -Repositioning Techniques - Nystagmus -Meniers Disease -Benign Paroxysmal positional vertigo -Acute vertigo -Recurrent disequilibrium -Chronic imbalance -Dizziness and imbalance in children. Electronystagmography -Video nystagmograghy -Causes and diagnosis of vestibular disorders. -Central versus peripheral vertigo -Repositioning Techniques. Nystagmus -Office Balance Tests -Vestibular rehabilitation Therapy -Intratympanic Injection -Rotational chair testing -Management of Dizzy Patients				

Module 4,5: Audiological Rehabilitation medicine and hearing aids

Topic	Covered ILOs			
	Knowledge	**Intellectual**	**Practical skill**	**General Skills**
Audiological Rehabilitation medicine and hearing aids	**A-C**	**A-C**	**A-K**	**A-E**
- Troubleshooting Hearing aids - Hearing aid fitting and verification in adults -Hearing aid fitting and verification in children -Counseling patients with hearing loss -Room Acoustics and Auditory rehabilitation Technology -Cochlear Implantation _ Noise and its effect on the audio-vestibular system. - Ototoxicity - The epidemiology of hearing loss and its prevention				
the effects of general ageing process on the auditory system *the different conditions which can cause or trigger tinnitus *current pathophysiological theories about tinnitus generation	**A-**	**A.,B**	**A-F**	**A-E**

Module 6: ENT

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
ENT Surgery	**A-C**	**A-C**	**A,B**	**A-E**
Anatomy of the ear -Functions of the ear - Diseases of the auricle - Diseases of the external ear canal - Acute otitis media - Chronic non suppurative otitis media - Chronic suppurative otitis media - Complications of suppurative otitis media -Trauma to the middle ear -Otosclerosis -Tumours of the middle ear -Meniers disease -Acoustic Neuroma -Facial nerve -Hearing loss,types and causes -Otalgia and otorrhea - Vestibular - Tinnitus --Ear Operations -Adenoid and Adenoidectomy				

5. Course Methods of teaching/learning:

- Didactic (lectures, seminars, tutorial)
- Observation & clinical and practical training
- Written & oral communication
- Senior staff experience

6. Course Methods of teaching/learning: for students with poor achievements

- Extra Didactic and training (lectures, seminars, tutorial) according to their needs

7. Course assessment methods:

i. Assessment tools:

- Written and oral examination
- Log book

ii. Time schedule: At the end of the second part

iii. Marks: 1200marks(600 for written+200 for oral +400 for clinical).

8. List of references

i. Lectures notes

- Staff members print out of lectures and/or CD copies

. Course notes

-Staff members print out of lectures and/or CD copies

ii. Essential books

-Handbook of clinical audiology :Authors:Jack Katz (Editor), Marshall Chasin (Editor), Kristina M. English (Editor), Linda J. Hood (Editor), Kim L. Tillery (Editor), 7th edition .Publisher:Wolters Kluwer Health, Philadelphia, 2015.

-Current Medical Diagnosis & Treatment 2023 : Revised by Stephen J. McPhee((Editor) (Editor), Maxine A. Papadakis

Periodicals, Web sites, … etc

- www.pubmed.com
- www.sciencedirect.com
- www.audiologyonline.com

Japan **Journal** of Logopedics and **Phoniatrics**

9. Signatures

Course Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

ANNEX 2

Program Academic Reference Standards (ARS)

.

1- Graduate attributes for master degree in audiovestibular medicine

***The Graduate (after residence training and master degree years of study) must*:**

1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and clinical audit ***in*** *audiovestibular medicine.*

2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in related *audiovestibular medicine*.

3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in the field of *audiovestibular medicine*.

4- Provide patient care that is appropriate, effective and compassionate for dealing with common health problems and health promotion using evidence-based and updated information.

5- Identify and share to solve health problems in his speciality.

6- Acquire all competencies –including the use of recent technologies- that enable him to provide safe, scientific, and ethical and evidence based clinical care including update use of new technology in *audiovestibular medicine* **.**

7- Demonstrate interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.

8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.

9- Acquire decision making capabilities in different situations related to *audiovestibular medicine.*

10- Show responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.

11- Be aware of public health and health policy issues and share in system-based improvement of health care.

12- Show appropriate attitudes and professionalism.

13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in *audiovestibular medicine* or one of its subspecialties.

2- Competency based Standards for clinical master degree graduates, audiovestibular medicine

2.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problem and topics.

2-1-B- The relation between good clinical care of common health problems in the speciality and the welfare of society.

2-1-C- Up to date and recent developments in common problems related to *Audiology medicin.*

e **2-1-D-** Ethical and medicolegal principles relevant to practice in *audiovestibular medicine***.**

2-1-E -Quality assurance principles related to the good medical practice in *audiovestibular medicine*.

2-1-F- Ethical and scientific basics of medical research.

2.2- Intellectual skills:

By the end of the program, the graduate should be able to demonstrate the following:

2-2-A- Correlation of different relevant sciences in the problem solving and management of common diseases of *audiovestibular medicine***.**

2-2-B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to *audiovestibular medicine***.**

2.2- C- Demonstrating systematic approach in studying clinical problems relevant to *audiovestibular medicine*.

2-2-D- Making alternative decisions in different situations in *audiovestibular medicine*..

2.3- Clinical skills

By the end of the program, the graduate should be able to

2-3-A - Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

2-3-B- Demonstrate patient care skills relevant to *audiovestibular medicine* for patients with common diseases and problems.

2-3- C- Write and evaluate reports for situations related to the field of *audiovestibular medicine*.

2.4- General skills

By the end of the program, the graduate should be able to

- ***Competency-based outcomes for Practice-based Learning and Improvement***

2-4-A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence,, improvements in patient care and risk management.

2-4-B- Use all information sources and technology to improve his practice.

2-4-C- Demonstrate skills of teaching and evaluating others.

- ***Competency-based objectives for Interpersonal and Communication Skills***

2-4-D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

- ***Competency-based objectives for Professionalism***

2-4-E- Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

- ***Competency-based objectives for Systems-based Practice***

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to

effectively use system resources to provide care that is of optimal value.

2-4-g- Demonstrate skills of effective time management.

2-4-H- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient care	**Medical knowledge**	**Practice-based learning/ Improvement**	**Interpersonal and communication skills**	**Professionalism**	**Systems-based practice**
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- ❖ Didactic (lectures, seminars, tutorial)
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

Teaching methods for patient care

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job" training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for Master Degree students.

Method	**Practical skills**	**K**	**Intellectual**	**General skills**			
	Patient care	**K**	**I**	**Practice-based learning/ Improvement**	**Interpersonal and communication skills**	**Professionalism**	**Systems-based practice**
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/ case log	X	X					
OSCE	X	X	X	X	X	X	X

Annex 4, Glossary of Master Degree doctors assessment methods

- Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- Chart Stimulated Recall – Uses the MSc doctor's patient records in an oral examination to assess clinical decision-making.
- Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MSc doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MSc doctor's performance.
- Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MSc doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MSc doctors.
- Procedure or Case Logs – MSc doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by a MSc doctors.
- Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- Models: are simulations using mannequins or various anatomic structures to assess procedural skills and

interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.

- 360 Global Rating Evaluations – MSc doctors, faculty, nurses, clerks, and other clinical staff evaluate MSc doctors from different perspectives using similar rating forms.
- Portfolios – A portfolio is a set of project reports that are prepared by the MSc doctors to document projects completed during the MSc study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- Procedure or Case Logs – MSc doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MSc doctors.

Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

Annex 6, Program Correlations:

□

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الماجستير مع المعايير الأكاديمية المعتمدة من كلية الطب □ جامعة أسيوط لدرجة ماجستير طب السمع والإتزان □

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and clinical audit in *audiovestibular medicine*.	1- إجادة تطبيق أساسيات و منهجيات البحث العلمي واستخدام أدواته المختلفة
2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in *audiovestibular medicine*	2-تطبيق المنهج التحليلي واستخدامه في مجال التخصص
3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in *audiovestibular medicine*	3-تطبيق المعارف المتخصصة و دمجها مع المعارف ذات العلاقة في ممارسته المهنية
4- Provide patient care that is appropriate, effective and compassionate for dealing with common health problems and health promotion using evidence-based and update information.	4-إظهار وعيا بالمشاكل الجارية و الرؤى الحديثة في مجال التخصص
5- Identify and share to solve health problems in *audiovestibular medicine*	5-تحديد المشكلات المهنية و إيجاد حلولا لها
6- Acquire all competencies that enable him to provide safe, scientific, ethical and evidence based clinical care including update use of new technology in *audiovestibular medicine*	6-إتقان نطاق مناسب من المهارات المهنية المتخصصة، واستخدام الوسائل التكنولوجيةالمناسبة بما يخدم ممارسته المهنية

7- Demonstrate interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public. 8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.	7–التواصل بفاعلية و القدرة على قيادة فرق العمل
9- Acquire decision making capabilities in different situations related to *audiovestibular medicine*	8–اتخاذ القرار في سياقات مهنية مختلفة
10- Show responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.	9– توظيف الموارد المتاحة بما يحقق أعلي استفادة و الحفاظ عليها
11- Be aware of public health and health policy issues and share in system-based improvement of health care.	10–إظهار الوعي بدوره في تنمية المجتمع و الحفاظ على البيئة في ضوء المتغيرات العالمية و الإقليمية
12- Show appropriate attitudes and professionalism.	11–التصرف بما يعكس الالتزام بالنزاهة و المصداقية و الالتزام بقواعد المهنة
13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in *audiovestibular medicine* or one of its subspecialties.	12–تنمية ذاته أكاديميا و مهنيا و قادرا علي التعلم المستمر

2. **Academic standard**

Faculty ARS	**NAQAAE General ARS for Postgraduate Programs**
2.1.A -Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problems and topics.	2-1-أ-النظريات و الأساسيات المتعلقة بمجال التعلم وكذا في المجالات ذات العلاقة.
2.1.B- The relation between good clinical care of common health problems in *audiovestibular medicine* and the welfare of society.	2-1-ب-التأثير المتبادل بين الممارسة المهنية وانعكاسها علي البيئة.
2.1. C- Up to date and recent developments in common problems related to *audiovestibular medicine.*	2-1-ج-التطورات العلمية في مجال التخصص.
2.1. D- Ethical and medicolegal principles relevant to practice in the *audiovestibular medicine.*	2-1-د-المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص.
2.1. E-Quality assurance principles related to the good medical practice in *audiovestibular medicine*	2-1-هـ- مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. F- Ethical and scientific basics of medical research.	2-1-و- أساسيات وأخلاقيات البحث العلمي
2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of *audiovestibular*	2-2-أ- تحليل و تقييم المعلومات في مجال التخصص والقياس عليها لحل المشاكل

medicine 2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to *audiovestibular medicine*	
2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to *audiovestibular medicine*	2-2-ب- حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of *audiovestibular medicine*	2-2-ج- الربط بين المعارف المختلفة لحل المشاكل المهنية
2.2. C- Demonstrating systematic approach in studying clinical problems relevant to the *audiovestibular medicine*	2-2-د- إجراء دراسة بحثية و /أو كتابة دراسة علمية منهجية حول مشكلة بحثية
2.4.A-Demonstrate practice-based learning and Improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-2هـ- تقييم المخاطر في الممارسات المهنية في مجال التخصص
2.4.A-Demonstrate practice-based learning and	2-2-و- التخطيط لتطوير الأداء في مجال التخصص

Improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	
2.2.D- Making alternative decisions in different situations in the field of *audiovestibular medicine*	2-2-ز- اتخاذ القرارات المهنية في سياقات مهنية متنوعة
2.3.A- provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. 2.3.B- Demonstrate patient care skills relevant to *audiovestibular medicine* for patients with common diseases and problems.	2-3-أ- إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص
2.3.C- Write and evaluate reports for Situation related to *audiovestibular medicine.*	2-3-ب- كتابة و تقييم التقارير المهنية
2.3.A- provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.	2-3-ج- تقييم الطرق و الأدوات القائمة في مجال التخصص

2.3.B- Demonstrate patient care skills relevant to that speciality for patients with common diseases and problems.	
2.4.D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	2-4-أ-التواصل الفعال بأنواعه المختلفة
2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.B- Use all information sources and technology to improve his practice.	2-4-ب- استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية
2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.B- Use all information sources	2-4-ج- التقييم الذاتي وتحديد احتياجاته التعلمية الشخصية

and technology to improve his practice. 2.4.E-Demonstrate professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	
2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, , improvements in patient care and risk management.	2-4-د- استخدام المصادر المختلفة للحصول على المعلومات و المعارف
2.4. C- Demonstrate skills of teaching and evaluating others.	2-4-هـ- وضع قواعد ومؤشرات تقييم أداء الآخرين
2.4. F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.	2-4-و- العمل في فريق ، وقيادة فرق في سياقات مهنية مختلفة
2.4.G- Demonstrate skills of effective time management.	2-4-ز- إدارة الوقت بكفاءة
2.4.H- Demonstrate skills of self and continuous learning.	2-4-ح- التعلم الذاتي و المستمر

Comparison between ARS and ILOS for master degree in *Audiovestibular medicine.*

(ARS)	(ILOs)
2-1- Knowledge and understanding **2-1-A**- Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problem and topics.	**2-1- Knowledge and understanding** **2-1-A-** Explain the essential facts and principles of relevant basic sciences including, anatomy , physiology , genetics and medical statistics and acoustics related to audiovestibular medicine. **2-1-B-** Mention essential facts of clinically supportive sciences including principles of phoniatrics and Neurological and Psychiatric diseases related to audiovestibular medicine. **2-1-C-** Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to audiovestibular medicine.
2-1-B The relation between good clinical care of common health problem in audiovestibular medicine and the welfare of society.	**2-1-H**- State the impact of common health problems in audiovestibular medicine on the society and how good clinical practice improve these problems.
2-1-C- Up to date and recent developments in common Problems related to audiovestibular medicine.	**2-1-C**- Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to audiovestibular medicine. **2-1-D-** Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment

	of common diseases related to audiovestibular medicine.
2-1-D- Ethical and medico legal Principles relevant to practice in audiovestibular medicine.	**2-1-E-** Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to audiovestibular medicine.
2-1-E-Quality assurance principles related to the good medical practice in audiovestibular medicine	**2-1-F**- Mention the basics and standards of quality assurance to ensure good clinical practice in audiovestibular medicine
2-1-F- Ethical and scientific basics of medical research.	**2-1-G**- Mention the ethical and scientific principles of medical research methodology.
2-2- Intellectual skills:	**2-2- Intellectual skills:**
2-2-A-Correlation of different relevant sciences in the problem solving and management of common diseases of the audiovestibular medicine.	**2-2-A-** Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of the audiovestibular medicine .
2-2-B-Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to audiovestibular medicine.	**2-2-B-** Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to audiovestibular medicine.
2-2-C- Demonstrating systematic approach in studding clinical problems relevant to the audiovestibular medicine field.	**2-2-C**- Design and /or present a case or review (through seminars/journal clubs.) in one or more of common clinical problems relevant to the audiovestibular medicine field.
2-2-D Making alternative decisions in different situations in the field of the audiovestibular medicine.	**2-2-D**- Formulate management plans and alternative decisions in different situations in the field of the audiovestibular medicine.

continuous (ARS)	continuous (ILOs)
2-3- Clinical skills:	***2/3/1/Practical skills (Patient Care :)***
2-3-A- Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.	**2-3-1-A-** Obtain proper history and examine patients in caring and respectful behaviors.
	2-3-1-B- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to audiovestibular medicine.
2-3-B- Demonstrate patient care skills relevant to that *audiovestibular medicine* for patients with common diseases and problems.	**2-3-1-C-** Carry out patient management plans for common conditions related to audiovestibular medicine.
	2-3-1-D- Use information technology to support patient care decisions and patient education in common clinical situations related to *audiovestibular medicine*.
	2-3-1-E- Perform competently non invasive and invasive procedures considered essential for the *audiovestibular medicine*.
	2-3-1-F- Provide health care services aimed at preventing health problems related to *audiovestibular medicine*.
	2-3-1-G- Provide patient-focused care in common conditions related to *audiovestibular medicine*, while working with health care professionals, including those from other disciplines.

2-3-C- Write and evaluate reports for situations related to the field of *audiovestibular medicine*.	**-3-1-H** Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets. (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records).
2-4- General skills **2-4-A-** Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	***2/3/2 General skills*** **2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks). **2-3-2-B-** Appraises evidence from scientific studies. **2-3-2-C-** Conduct epidemiological studies and surveys.
2-4-B- Use all information sources and technology to improve his practice.	**2-3-2-C-** Conduct epidemiological studies and surveys. **2-3-2-D**.Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.
2-4-C- Demonstrate skills of teaching and evaluating others.	**2-3-2-E-** Facilitate learning of students other health care professionals including their evaluation and assessment.
2-4-D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	**2-3-2-F-** Maintain therapeutic and ethically sound relationship with patients. **2-3-2-G-** Elicit information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-H-** Provide information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-I-** Work effectively with others as a member of a health care team or other professional group.

2-4-E-Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	**2-3-2-J-** Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society. **2-3-2-K**- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices. **2-3-2-L**-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.
2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.	**2-3-2-M**-Work effectively in relevant health care delivery settings and systems including good administrative and time management **2-3-2-N-** Practice cost-effective health care and resource allocation that does not compromise quality of care. **2-3-2-O**- Assist patients in dealing with system complexities.
2-4-G- Demonstrate skills of effective time management	**2-3-2-M**-Work effectively in relevant health care delivery settings and systems including good administrative and time management
2-4-H- Demonstrate skills of self and continuous learning.	**2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).

III-Program matrix

Knowledge and Understanding

Course	Program covered ILOs							
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E	2/1/F	2/1/G	2/1/H
1) Course 1 : **Acoustics**	✓							
2) course 2 : **Anatomy**	✓							
3) course 3 : **Physiology**	✓							
Course 4 : **Medical statistics & Genetics**		✓						
Course 5 **Neurological** and psychiatric diseases	✓	✓						
Course 6 : Principles of phoniatrics	✓	✓	✓	✓	✓	✓	✓	✓
Course 7: Audiology	✓	✓	✓	✓	✓	✓	✓	✓

Intellectual

Course	Program covered ILOs			
	2/2/A	2/2/B	2/2/C	2/2/D
Course 1 : **Acoustics**			✓	✓
course 2 : **: Anatomy**	✓			
course 3 : **: Physiology**	✓			
Course 4 : **Medical statistics & Genetics**	✓	✓		
Course 5**:Neurological** and psychiatric diseases	✓	✓		
Course 6: principles of phoniatrics	✓	✓	✓	✓
Course 7 : Audiology	✓	✓	✓	✓

Practical Skills (Patient Care)

Course	Program covered ILOS							
	2/3/1/ A	2/3/1/ B	2/3/1/ C	2/3/1/ D	2/3/1/ E	2/3/1/ F	2/3/1/ G	2/3/1/ H
Course 1 : **Acoustics**		✓		✓	✓			
course 2 : **Anatomy**				✓	✓			
course 3 : **Physiology**				✓	✓			
Course 4 : **Medical statistics & Genetics**		✓						
Course 5 **Neurological** and psychiatric diseases	✓	✓	✓		✓			
Course 6 : principles of phoniatrics	✓	✓	✓	✓	✓	✓	✓	✓
Course 7 : Audiology	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs							
	2/3/2/A	2/3/2/B	2/3/2/C	2/3/2/D	2/3/2/E	2/3/2/F	2/3/2/G	2/3/2/H
Course 1: **Acoustics**				✓			✓	
course 2**: Anatomy**				✓			✓	
course 3**: Physiology**				✓			✓	
Course 4 : **Medical statistics & Genetics**				✓			✓	
Course 5 **Neurological** and psychiatric diseases				✓			✓	
Course 6 : principles of phoniatrics	✓	✓	✓	✓	✓	✓	✓	✓
Course 7 : Audiology	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs						
	2/3/2/I	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/M	2/3/2/N	2/3/2/O
Course 1 : **Acoustics**		✓			✓		
course 2 : **Anatomy**		✓			✓		
course 3 **: Physiology**		✓			✓		
Course 4 : **Medical statistics & Genetics**		✓			✓		
Course 5 **Neurological** and psychiatric diseases		✓			✓		
Course 6 : principles of phoniatrics	✓	✓	✓	✓	✓	✓	✓
Course 7 : Audiology	✓	✓	✓	✓	✓	✓	✓

Annex 7, Additional information:

(End of the program and courses specifications)