



Program Specification for Master Degree: **Audiology**

Program type: Single

Department offering the program: Audiology Unit, Otolaryngology Department

Program Code: AUDI

Total credit points: 144

Academic year: 2009/2010

Program Coordinators: Prof. Mohamed Ibrahim Shabana
Assistant Prof. Maha Hassan Abou-Elew

External evaluator:

I. Program aims

The program is a professional degree that enables candidates to specialize in the area of neuro-otological diseases including all otological disorders as well as imbalance problems. The candidates should achieve satisfactory levels of basic knowledge and clinical skills in all aspects related to audiological practice and pediatric neuro-otology-related disorders. Candidates should achieve all these skills with respect to ethical values according to community culture. The program also aims at promoting the candidates' team standards and their ability to work and participate collaboratively within a multi-disciplinary team work. The program also aims to introduce the candidate to the basics of scientific medical research.

II. Intended learning outcomes of program (ILOs)

- 1- **Knowledge and understanding:** By the end of the program the candidate should;
 - a) Recognize the basic scientific knowledge regarding anatomy of the ear as well as the head and neck.
 - b) Identify and discuss common problems related to otological and vestibular pathology based on normal physiological functions and current as well as recent theories.
 - c) Get the basic knowledge of acoustics, electro acoustics and psychoacoustics.
 - d) Understand the genetic basics related to various neuro-otological disorders.
 - e) Analyze the fundamentals of language and speech parameters, basic linguistics as well as language development.
 - f) Recognize different Otological diseases
 - g) Identify different management and rehabilitation modalities for different types and degrees of hearing impairment and balance disorders.

- h) Recognize the basic descriptive patterns for the different instruments used in audiological evaluation with emphasis on those related to infants and young children.
- i) Describe various Ear, Nose and Pharyngeal diseases.
- j) Acquire knowledge regarding some general medical diseases related to Otolaryngology.
- k) Acquire knowledge regarding some neurological diseases.
- l) Define essential basics for statistical studies necessary for carrying out a scientific research work.

2- Intellectual skills: By the end of the program the candidate should be able to

- a) Analyze symptoms & signs and construct a management plan for various audiological & vestibular diseases.
- b) Interpret the results of different investigations related to hearing and imbalance disorders.
- c) Design an appropriate diagnostic plan for evaluation of hearing and balance disorders taking into consideration the nature of the clinical situation and the risks, benefits and costs to the patient.
- d) Design treatment & rehabilitation plans for various hearing disability as well as balance-related disorders taking into consideration the cultural and individual needs.

3- Professional and practical skills: By the end of the program the candidates should be able to:

- a. Collect clinical data specially history taking and interview for all otoneurological disorders,
- b. Evaluate and identify different types and degrees of hearing loss.
- c. Perform office clinical procedures related to balance disorders.
- d. Design appropriate therapeutic intervention plans and auditory and vestibular rehabilitation programs for various hearing and vestibular disorders.
- e. Offer proper management related to various audio-vestibular diseases.
- f. Proper examination of the ear using various clinical examination tools.
- g. Manage all audio-vestibular emergencies.

4- General and transferable skills: By the end of the program the candidates should be able to;

- a. Communicate with the patients and parents to gain their confidence.
- b. Respond effectively to a patient's and parents' emotional and psychosocial concerns.
- c. Communicate with other members of the health care providers.
- d. Appreciate team work.
- e. Achieve Computer skills necessary to make use of medical data bases and use the internet for communication.

- f. Show administrative skills that enable the candidates to fulfill the paper work needed.
- g. Show leadership skills that enable him to organize work and lead the junior as well as paramedical staff.
- h. Understand different scientific methodologies and have critical reading abilities.
- i. Write scientific article according to the basics of scientific research.

III. Academic standards.

XXXXXXXXXXXXXXXXXX

IV. Program admission requirements.

According the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), applicants should have MBChB or equivalent degree. According to Cairo University requirements, all applicants for postgraduate studies should fulfill preliminary courses on the following subjects; Medical statistics I – English language (Toefl or equivalent degree) – Computer skills (ICDL) or equivalent computer course offered by the medical education center (MEDC). Admission to the program is open during July. Training prior to registration may be accredited according to departmental and hospital evaluation. Admission for the program is open during July.

V. Program structure and contents.

Program duration: Three years.

Program structure: Total Credit points 144

- **First part: 1.5 years - Total: 54 credit points (Table 1)**

A- Compulsory courses: (Total credit points of 11)

- Acoustics and Linguistics (AUDI 830 AL) 2 credit points
- Electro acoustics (AUDI 830 EA) 1 credit point
- Psycho-acoustics (AUDI 830 PA) 1 credit point
- Anatomy and Embryology (AUDI 801) 2 credit points
- Physiology of hearing & Balance (AUDI 804) 1 credit point

- Internal Medicine (AUDI 811) 3 credit points
- Basic Audiology (AUDI 830 BA) 1 credit point

B- Elective courses (the candidate courses two courses only) 1 credit point

Elective courses include Critical Reading MEDC1 (0.5 credit points), Scientific Writing MEDC2 (0.5 credit point), Evidence-based Medicine MEDC3 (0.5 credit points), Medical Statistics (2) MEDC4 (0.5 credit points), Communication Skills MEDC6 (0.5 credit points)

- Scientific activities 2 credit points
- Residency training program (AUDI 830 C1): 40 credit points

For one year (6 months must be spent in General Medicine in divided courses and 6 months will be distributed according to the needs of the department e.g. ENT / Pediatrics).

• **Second part: 1.5 years - Total: 70 credit points (Table 2)**

- Compulsory courses; one academic year (30 weeks)
 - Audiology (AUDI 830 AD) 3 credit points
 - Audiological Medicine (AUDI 830 AM) 3 credit point
 - Management and Treatment (AUDI 830 M&T) 3 credit points
 - Basics of ENT (AUDI 830 ENT) 3 credit points
- Scientific activities 3 credit points
- Residency training program Part 2 (AUDI 830 C2): 55 credit hours
For two years.

- **Master Thesis:** completed during second part- **Total: 20 credit points**
Supervised by ENT staff and discussed before taking the second part exam.

Table 1: First part

Courses	Credit points	total	ILOs
Compulsory courses (One academic year) - name courses relevant to bylaws			
Acoustics & Linguistics	1 &1	2	1- c, e
Electroacoustics		1	1-c
Psychacoustics		1	1-c
Anatomy & Embryology	1 &1	2	1-a, d

Physiology of Hearing & Balance		1	1- b
Internal Medicine		3	1- J, k 3- a
Basic Audiology		1	1- b, f, h 2- a, b 3- a, b, f 4- a, b, c, d, e
Elective Courses Candidate choose 2 courses - name courses relevant to bylaws			
(MEDC)	0.5	1	1- l 4-c,e,f,h,i
○ Critical Reading	0.5		
○ Scientific writing	0.5		
○ EBM	0.5		
○ Medical ethics	0.5		
○ Medical statistics II	0.5		
○ Hospital administration			
Scientific activities		2	4-c,d,e,h,i
Residency training program (phase 1): basic training AUDI 830 C1		40	2- a, b 3-f 4-a,b,c,d,e,f,g

Table 2: Second part

Item	Credit points	ILOs.
Audiology courses:		
• Audiology	3	1- b, d, f, g, i, j 2- a, b, c, d 3- d, e, g
• Audiological Medicine & Balance	3	
• Management & Rehabilitation	3	
• Basics of ENT	3	
Scientific activities	3	4- c, d, e, h, i
Master thesis	20	4- e, f, h, i
Residency training program (phase 2): AUDI 830 C2	55	1- b, g, h 2-a,b,c,d 3-a,b,c,f 4-a,b,c,d,e,f,g

Residency Training Program

• **First phase (Basic Training):**

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), all the students should have a basic medical training for 12 months. They should spend at least 6 months in the general medicine department in divided courses, 6 months will be distributed according to the needs of the department e.g. ENT / Pediatrics. During this period, the students will attend the basic sciences courses as well as complete the elective courses.

• **Second phase (Special Training):**

All students should complete the special part of the residency-training program in the Audiology Unit, Otolaryngology Department. They should spend 18 months in order to complete the needed credit points. The student is expected to attend the outpatient clinics and investigation room to share in patients care under the supervision of senior staff members. During this period the students will attend the Audiology courses, prepare his thesis and participate in the scientific activities of the department.

NB: The details of the training program are provided in separate document. The third phase of residency training (advanced training) is part of the MD degree

Master Thesis

All master-degree students should prepare a thesis in one of the main domains of hearing and balance disorders, audiological medicine and rehabilitation. The department and the ethical committees must approve the protocol of the research. The thesis may include a review part and a research part. The Thesis is supervised by one or more senior staff members from the Audiology Unit, Otolaryngology Department and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee of three professors including one of the supervisors and an external professor. Approving the thesis is mandatory to allow the student to set for the final exam.

Scientific Activities:

The students should participate in the scientific activities of the departments such as:

- *Journal club.-----detailed logbook + attending how many theses discussion*
- *Seminars (including recent topics and controversial issues). Students are expected to participate in the discussions.*
- *Scientific meetings arranged by the department.*

Each activity is monitored and given credit points registered in a special section in the residency-training logbook. The student should collect the required points before allowed to sit for final exam.

V. Regulations for progression and program completion

After collecting the required credit points for the respective courses, the first phase of the residency training, and the scientific activities, the student will be eligible to sit for the first part examination. In case the student fails to pass the examination, he/she may proceed in the clinical training and can resubmit for the next examination. After passing the first part, the student submits a protocol for Master Thesis at the beginning of the second part. Before submitting to the final examination he/she should finish the thesis and get approval, complete phase 2 of special training program, and collect the required credit points. The candidate will receive his/her

degree after passing this final examination. Master degree should be obtained within a maximum of 6 years after registration date.

VI. Assessment

A: Assessment Tools:

• **Supervision & Monitoring of the Training Program:**

According to the Faculty of Medicine, Cairo University Bylaws for Residency Training Programs, coordinators carry continuous assessment during the program. A residency training logbook including scientific activities will be kept for each student to document all his/her clinical, laboratory and/or operative activities as well as his/her participation in different scientific activities. The head of the department should allow the students to undergo the final examination when they complete their training program and collect the credit points needed.

• **Formal Assessment**

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), Students should be assessed at the end of first part and at the end of the second part

1. First Part Final Exam:

- **Acoustics, Electro-acoustics and Linguistics:** Three-hour written exam (including short essay and multiple choice questions) + oral exam
- **Anatomy and Embryology:** Two-hour written exam (including short essay and multiple choice questions) + oral exam
- **Psychoacoustics and Physiology of Hearing & Balance:** Two-hour written exam (including short essay and multiple choice questions) + oral exam
- **Internal Medicine:** Two-hour written exam (including short essay and multiple choice questions) + oral exam
- **Basic Audiology:** Two-hour written exam (including short essay and multiple choice questions) + oral exam
-

2. Second Part Final Exam Part 2:

- **Audiology & Audiological Medicine:** *Two written exams (Three-hours each) including short essay questions, and MCQ (including problem solving) + oral exam + clinical exam*
- **Basics of Ear nose and Throat:** *Two-hour written examination (including short essay questions, problem solving and MCQ)*
- **Management & Rehabilitation:** *Three hour written exam including short essay questions, and MCQ (including problem solving) + clinical exam*

B: Assessment Schedule:

1. First Part Final Exam:

The written exam will be held in April/October (five days):

Day one: Acoustics, Electro acoustics & Linguistics (3 hours)

Day two: Anatomy & Embryology (2 hours)

Day three Psycho-acoustics & Physiology of hearing & balance (2hours)

Day four: Internal Medicine (2 hours)
 Day five: Basic Audiology (2 hours)
 This will be followed by the oral exams on separate days.

2. Second Part Final Exam:

The written exam will be held in May/ November (four days):
 Day one: Audiology & Audiological Medicine: paper 1 (3 hours)
 Day two: Audiology & Audiological Medicine: paper 2 (3 hours)
 Day three: Ear Nose and Throat: (2 hours)
 Day four: Management, Treatment & Rehabilitation (3 hours)
 This will be followed by the clinical and oral exams on separate days (for Audiology, Audiological Medicine & Rehabilitation)

C: Weighing Of Assessment: Marks allocated to courses (50 marks for each credit point)

Course	Written	Oral	Clinical/practical	Total
First part				550
Acoustics, Electro acoustics & Linguistics	100	50	-	150
Anatomy & Embryology	60	40	-	100
Psychacoustics & Physiology of hearing & balance	60	40	-	100
Internal Medicine	100	50	-	150
Basic Audiology	30	20	-	50
Second part				600
Audiology				
○ Audiology (paper 1)	100	50	50	300
○ Audiological Medicine (paper 2)	100			
Ear Nose and Throat Diseases & Audiology	150	-	-	150
Management, Treatment & Rehabilitation	100		50	150

Remarks:

- It is mandatory to pass the third paper of the Audiology exam separately.
- Passing mark in a written exam is $\geq 60\%$.

VII. Evaluation of program intended learning outcomes:

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

Date of approval by department council

Program Coordinator

Head of Department
