



## COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

### (A) Administrative information

(1) Programme offering the course.	Master of Audiology
(2) Department offering the programme.	ENT/ Audiology unit
(3) Department responsible for teaching the course.	Audiology unit
(4) Part of the programme.	First part
(5) Date of approval by the Department`s council	6-8-2016
(6) Date of last approval of programme specification by Faculty council	9-8-2016
(7) Course title.	Acoustics
(8) Course code.	AUDI 524 AC
(9) Total teaching hours.	22.5

**(B) Professional information**

**(1) Course Aims.**

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

This course aims at providing participants with the knowledge and basic skills related to acoustics specialty, as well as motivating them for research and positively changing their attitude to improve the outcome of the educational process.

**(2) Intended Learning Outcomes (ILOs):**

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

**A- Knowledge and Understanding**

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

A9	Recognize acoustics of sound including fundamental properties of sound and nature, analysis and measurement of sound.
A10	Describe different psychoacoustic aspect of sound such as pitch, loudness, masking and temporal aspect of hearing.
A11	Recognize binaural hearing.

**B- Intellectual skills**

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

B11	Utilize scientific facts and theories to analyze and interpret practical data.
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### 3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
<b>Physical concepts:</b> <ul style="list-style-type: none"> <li>• Fundamental physical quantities.</li> <li>• Force.</li> <li>• Work, energy, power.</li> <li>• Simple harmonic motion.</li> <li>• Free vibration.</li> <li>• Forced vibration.</li> <li>• Impedance.</li> </ul>	0.5  0.5  0.5  0.5  0.5  0.5  0.5				
<b>Acoustics</b> <ul style="list-style-type: none"> <li>• Definition of sound</li> <li>• Fundamental properties of sound.</li> <li>• Sound wave phenomena.</li> <li>• Sound field.</li> <li>• Resonance</li> </ul>	0.25  0.5  1  0.25  0.5				
<b>Measurements of sound</b> <ul style="list-style-type: none"> <li>• Amplitude</li> <li>• Decibel notation.</li> <li>• Octave notation.</li> </ul>	0.5  1  0.5				

• Types of sounds.	0.5				
• Filters	1				
• Distortion.	0.5				
<b>Psychoacoustics:</b>					
• The concept of threshold.	0.25				
• The auditory response area.	0.5				
• Measurement of hearing.	0.5				
• Differential sensitivity.	0.5				
• Loudness.	2				
• The power law.	0.5				
• Pitch.	1.25				
• Perception of complex sounds.	1.5				
• Masking.	0.5				
• Frequency resolving power of the auditory system.	2				
• Temporal aspects of hearing.	1				
• Binaural hearing	1				
<b>Total</b>	<b>22.5</b>				<b>22.5</b>

**(3) Teaching methods:**

4.1: Lectures

4.2: Assignments.

**(4) Assessment methods:**

5.1: Written Exam to assess knowledge & intellectual skills

5.2: MCQ Exam to assess knowledge & intellectual skills

5.2: Structured oral Exam to assess knowledge & intellectual skills

**Assessment schedule:**

Assessment 1: Written Exam                      Week: 16-18

Assessment 2: MCQ exam                      Week : 16-18

Assessment 2: Structured oral Exams              Week 18-20

**Percentage of each Assessment to the total mark.**

Written exam: 96 degrees

MCQ exam: 24 degrees

Structued oral exam : 80 degrees

**(5) References of the course:**

6.1. **Hand books:** Fundamental of hearing.

6.2. **Text books:** Bases of hearing science.

6.3. **Journals:**

American Journal of Audiology

6.1. **Websites:** Audiology online

ASHA

ANSI

**Facilities and resources mandatory for course completion.**

- a. Teaching places (teaching class, teaching halls, teaching laboratory).
- b. Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier and laser printers.

**Course coordinator:**

**Head of the department.**

**Date.**

**P.S. This specification must be done for each course.**