COURSE SPECIFICATION

Communication sciences

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Phoniatrics/ PHON 600
(2) Department offering the programme:	Otorhinolaryngology Department
(3) Department responsible for teaching the course:	Otorhinolaryngology Department – Phoniatric unit
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	15/5/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	Communication sciences
(8) Course code:	PHON 624 CS
(9) Total teaching hours:	45hours/15weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

To expand the candidate knowledge about the principles of basic medical and non medical sciences that related to voice, speech, language and swallowing disorders in order to apply them in the management of the patients and to carry out research work.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1. Expand the basic medical knowledge and made more thorough primarily by the study in detail of the anatomy, physiology and pathological physiology of the functions of voice, speech, language, hearing, and swallowing.

A2. Comprehend the neurophysiological principles of the central encoding, decoding, memory and integration processes in speech, hearing, and swallowing.

A3. Identify the developmental and aging processes as to voice, language, speech, hearing, and swallowing.

A5. Acquire advanced knowledge of basic non-medical sciences (phonetics, linguistics and electronics) required for phoniatricians through attending relevant courses.

B- Intellectual skills :

B3. Analyses the speech (verbal) message of the patient concerning voice, phonology, semantic, syntax, and morphology in order to be able to describe precisely the type and degree of pathological aspects of communication.

(3) Course content:

Subjects	Lectures	Clin/ Lab	Field	Total Teaching Hours
(A) Anatomy and embryology of the vocal tract and related structures:				
1- Anatomy of the skull, the face and the neck and its triangles including the embryology and development of these anatomical parts.	2×1lectures	-------	-----	2 hours
2- Anatomical structures of the ear, nose, and pharynx.	2×1 lectures	-------	-----	2 hours
3- Anatomical structures of the oral cavity (lip, tongue and palate) including the embryology and development of these anatomical parts..	2×1 lecture			2 hours
4- Structure of the thoracic cavity and function anatomy of the lungs.	2×1 lectures	------	---------	2 hours
5- Detailed anatomy of the laryngeal skeleton and muscular system and nerve and blood supply of the larynx and including the functional anatomy of the phonatory system.	2×3 lectures	-------	-----	6 hours
6- The macroscopic and microscopic structure of the vocal folds.	2×1 lectures	-------	-----	2hours
7- The anatomical structure and functional anatomy of the brain (meninges, cerebral cortex, internal capsule, limbic lobe, ventricles, diencephalons, cerebellum), and brain stem (midbrain, pons, medulla, nuclei of the cranial nerves, cranial nerves), including the anatomy of the vascular system and applied anatomy of these structures. The embryological origin of the brain structures is identified.	2x2 hours			4 hours
(B) Physiology of Communication and swallowing:				
1- Communication (levels, methods, function).	2×1 lectures			2 hours
2- Respiration: mechanism,, types(pectoral, abdominal),	2×1 lectures			2 hours

role of muscles during phonation and speech and measurement of respiratory capacity.				
3- Larynx: functions, laryngeal sphincters, theories of phonation, vocal parameters, registers, self regulatory mechanism and control of the laryngeal and respiratory movements and physiology of the posterior glottis.	2×2 lectures			4 hours
4- Cortical organization for language function: cortical areas, cerebral dominance and its evidence. And functions of the right and left hemispheres.	2×1 lectures			2 hours
5- Physiology of the velopharyngeal valve in speech and non-speech activities.	2×1 lectures			2 hours
6- Hierarchy of the motor organization: UMN, LMN, extrapyramidal, vestibuloreticular, cerebellar and conceptual programming levels.	2×1 lectures			2 hours
7- Physiology of the special senses with emphasis of hearing and taste sensations.	2×1 lectures			2 hours
8- Physiology of deglutition in adults.	2×1 lectures			2 hours
9- Physiology of deglutition in infants and development of feeding and swallowing.	2×1 lectures			2 hours
(B) Instrumentation and electronics of communication and swallowing:				
1- Analog electronics (principles, semiconductor devices).	2×1 lectures			2 hour
2- Digital system (priciples and interfacing the analog and digital worlds).	1×1 lectures			1 hour
3- General purpose tools (organization of instrumental arrays, Amplifiers, microphone, tape recorders, analog to digital converters).	2×1 lectures			2 hours

(4) Teaching methods:

4.1: Lectures

4.2: Power point presentation

4.3: Essay discussion

(5) Assessment methods:

5.1:Written exam for assessment of A1,2,4,5 (after 6 months from the date of registration to the degree).

5.2 MCQ continuous assessment at the end of the semester.

(6) Percentage of each assessment to the total mark:

6.1. Written exam: 100 marks (including 20marks MCQ).

(7) References of the course:

7.1. Justice, L. (2006): Communication sciences and disorders: an introduction. L. Justice (1st Ed.). New Jersey: Prentice Hall.

7.2. Tibbitts R., Richardson P. (2002): Clinical neuroanatomy and related neuroscience (4th edition). Edinburgh: W.B. Saunders.

7.3. R.J. BAKEN and ROBERT F. ORLIKOFF (2000): Clinical Measurements of Speech and Voice, Second edition, Singular Publishing Group.

7.4. Zemlin, W. R. (1988): Speech and Hearing Science: Anatomy and Physiology. 3rd Edition. Englewood Cliffs, NJ: Prentice-Hall.

7.5. Siekel, J.A., King, D.W., & Drumright, D.G. (2005). *Anatomy and Physiology for Speech, Language, and Hearing* (3rd ed.). Clifton Park, NY: Thompson Delmar Learning. [Chapters 10 and 11]

7.6. Perkins, W. H. and Kent, R. D. (1986): Functional Anatomy of Speech, Language and Hearing: A Primer. Austin, TX: Pro-Ed Publishers.

7.7. Kahane, J. C. (1986): Anatomy and Physiology of the Speech Mechanism. Austin, TX: Pro-Ed Publishers.

7.8.Rohen, J. and Yokochi, C. (1988): Color Atlas of Anatomy. 2nd Edition. New York: Igaku-Shoin.

(8) Facilities and resources mandatory for course completion:

Lecture halls and data show.

Course coordinator: Prof. Dr. Tamer Samir Abou-Elsaad