Cairo University

Faculty of Medicine

Program Specification for Medical Doctorate Degree in Pulmonology

Program type: Single

Department offering the program: Chest Department

Program Code: CHEST 914

Total Credit points: 272 (160 for Master Degree & 112 for Doctorate Degree)

Academic year: 2016 - 2017

Program coordinators: Professor Esmat Abdel-Nabi

External Evaluator:

I. Aim of the Program

The aim of Pulmonology Doctorate program is to produce a competent consultant in pulmonology and critical pulmonary care who is able to apply recent national and international guidelines in the various fields of pulmonology with a sound professional and medical ethical attitude.

The graduate will be able to take personal responsibility for his/her own development and updating of knowledge in pulmonary medicine including critical care. He/she is expected to gain the necessary knowledge and skills necessary to conduct scientific medical research with respect to the professional ethics in medicine and research.

II. Intended Learning Outcomes of the Program (ILOs)

A. <u>Knowledge and Understanding</u>:

By the end of the program the candidate should be able to:

A1 – describe the detailed anatomy and histology of the respiratory system and mediastinum.
A2 – identify the basic and advanced mechanisms of respiratory physiology and sleep physiology
A3 – recognize the molecular basics of the respiratory system biochemical reactions
A4 – describe various pharmacological and non-pharmacological therapeutic options in chest medicine
A5 – recognize the microbiological basics and immunological basics of the respiratory system
A6 – define various diseases in chest medicine including the newly-described diseases
A7 – identify the etiology of various chest diseases and sleep-related respiratory disorders

A8 – recognize the detailed and recent principles of respiratory intensive care
A9 – explain the pathophysiological changes in various respiratory & critical pulmonary diseases and sleep-related respiratory disorders
A10 – indicate the various indications of mechanical ventilation.
A11 – discuss the various methods of mechanical ventilation.
A12 – list complications of various procedures in respiratory ICU.
A13 – recognize the essential details of pulmonary function testing.
A14 – describe the various sleep-related respiratory disorders.
A15 – discuss the various methods of bronchoscopy and interventional procedures.
A16 – explain the clinical manifestations of in various chest cases.

B. Intellectual Skills:

By the end of the program the candidate should be able to:

B1 – diagnose different respiratory diseases
B2 – relate the pathophysiology and prognosis of various respiratory diseases
B3 – appraise a case study in chest and critical care pulmonary medicine
B4 – analyze critical and non-critical medical chest problems and clinical manifestations
B5 – evaluate the clinical manifestations and differential diagnosis of various respiratory diseases
B6 – differentiate various radiological abnormalities of chest diseases
B7 – interpret various pulmonary function tests and sleep study reports
B8 – interpret arterial blood gases
B9 – determine clinical decisions regarding various chest diseases and critical pulmonary diseases.
B10 – plan management lines of various clinical cases and critical pulmonary diseases.
B11 – distinguish the main pathological changes in bronchoscopic findings including interventional procedures.
B12 – implement research study in respiratory medicine
B13 – differentiate various radiological abnormalities of chest diseases

C. Professional and Practical Skills:

By the end of the program the candidate should be able to:

C1 – analyze history of chest patients
C2 – demonstrate general examination of chest patients
C3 – examine the chest locally (inspection, palpation, percussion and auscultation)
C4 – diagnose various chest diseases clinically including critical respiratory diseases
C5 – demonstrate aspiration of pleural effusion
C6 – operate spirometry
C7 – practice arterial blood gases sampling
C8 – operate fiberoptic bronchoscope
C9 – insert intercostal tube
C10 – place endotracheal tube
C11 – analyze the various parameters of arterial blood gases
C12 – operate the basic modes of mechanical ventilation
C13 – adjust the oxygen level needed for various respiratory diseases
C14 – assess severity and stages of various respiratory diseases including critical pulmonary diseases
C15 – place central venous pressure line.

D. General and Transferable Skills:

By the end of the program the candidate should be able to:

D1 – to acquire standard ethical behavior
D2 – to exemplify good manners and attitude
D3 – to communicate effectively with the patients, their families and all health care personnel
D4 – to be able to work in a team
D5 – to reflect proper infection control

III. Academic standards

1. Academic reference standers: The academic standers of anatomy program m is adopted and accredited by the departmental council
2. External References for Standards:
   European Respiratory Society (ERS)

IV. Program Admission Requirements

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), applicants should have Master degree or equivalent accredit degree in chest medicine. Admission to the MD program is open during January and July. For details for admission, refer to Cairo University Bylaws. Training prior to registration may be accredited according to departmental and hospital evaluation.

V. Program Structure and Contents

Program duration: 2 academic years

Program structure: **Total credit points 272 - (Table 1)**

- **Previous Master Degree** **160** credit points

- **Compulsory courses;** two academic year (30 weeks each)
  - Pulmonary Medicine **18** credit points

- **Elective courses:** (choose 2 courses) **4** credit points
  - Critical Care Pulmonary Medicine 2 credit points
  - Bronchoscopy & Interventional Procedures 2 credit points

- Pulmonary Function & Sleep Study 2 credit points

- **Scientific Activities** **5** credit points
- **Residency Training Program (Part 3): (Advanced Pulmonology) 45** credit points
- **MD Thesis:** **40** credit points

Table 1

Courses		Credit Points		ILOs
Code	**Title**	**CPs**	**Total**	
Previous Master Degree		**160**		
COMPULSORY COURSES				
CHEST T914 PM	Pulmonary Medicine	18	**18**	A1- A2 – A3- A4 – A5 – A6 – A7 – A16 B1 – B2 – B3 – B5 – B6 – B9 – B10 – B13 C1- C2 – C3 –C4 – C14 – C15
ELECTIVE COURSES				
CHEST 914 CCP	Critical Care Pulmonary Medicine	2	**4**	A8 – A9 – A10 – A11 – A12 B3- B4 – B9 – B10 C4- C5 – C7 – C12 – C13 – C15
CHEST 914 BIP	Bronchoscopy & Interventional Procedures	2		A15 B11 C8 – C9 – C10 – C11
CHEST 914 PFSS	Pulmonary Functions & Sleep Study	2		A2 – A13 – A14 B7 – B8 C 6 – C11
SCIENTIFIC ACTIVITIES				
			5	B3 – B9 – B10 C1 – C11 D2 – D3
Residency Training Program (Part 3)				
			45	A8-A9-A11-A13-A15-A16 B1-B2-B3-B4-B5-B6-B7-B8-B9-B10-B11-B12- B13 C1-C2-C3-C4-C5-C6-C7-C8-C9-C10-C11-C12-C13-C14-C15 D1-D2-D3-D4-D5
THESIS				
			40	B1 – B5 – B12 C4 D2 – D3 – D4

MD Thesis:

All MD degree students should prepare a thesis in pulmonology. The research and ethical committee 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 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.

Scientific Activities:

The candidates should participate in the scientific activities of the department such as:

- Seminars.
- Journal clubs.
- Scientific meetings.
- Workshops.
- Conferences.
- Thesis discussions.

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

- **Residency Training Program (Part 3):**

  According the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), the duration of the advanced training is 24 months. All the students should spend at least 18 months in the chest department. They may spend electively 6 months in other departments or centers either at Cairo university hospitals or elsewhere. During this period the students will attend the pulmonology course, attend the outpatient clinics, inpatient section, the pulmonary function Lab, and the bronchoscopy and interventional unit to share in patients care, share in the academic activities and prepare his/her 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

Matrix

Courses	A Knowledge and Understanding											B Intellectual Skills					C Clinical Skills										
Name	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**1**
Scientific Activities																											
Residency Training Program																											
Master																											

VI. Regulations for Progression and Program Completion

After collecting the required credit points for the respective courses, the advanced residency training, the scientific activities, and the Thesis the student will be eligible to sit for the final examination. In case the student fails to pass the examination, he/she may resubmit for the next examination. The candidate will receive his/her degree after passing this final examination. MD degree should be obtained within a maximum of 6 years after registration date.

VII. Assessment

A: Assessment Tools

- **Supervision and Monitoring of Training Program**

According to the Faculty of Medicine, Cairo University Bylaws for practical Residency Training Programs, professors carry continuous assessment during the program. A practical residency training program logbook will be kept for each candidate to document all his/her practical activities as well as his/her participation in different scientific activities. The head of the department should allow the candidates 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 the program

- **Pulmonology:**

  Two written exams (Three-hours each) including short assay questions, and MCQ (including problem solving) + One written commentary case (one and half hour) + oral exam + clinical exam

- **Elective courses:**

  Three-hour written exam (One hour for each course) including short assay and multiple choice questions + oral exam

B: Assessment Schedule:

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

Day 1 :	*Pulmonary Medicine (paper I)*
Day 2 :	*Pulmonary Medicine (paper II)*
Day 3 :	*Commentary Case*
Day 4 :	*Elective courses*

This will be followed by the clinical and oral exams in separate days

C: Weighing Of Assessment (Marks allocated to courses):

(50 marks for each credit point)

** C: clinical exam; P: practical exam*

Remarks

Courses		Marks			
Code	**Title**	**Written**	**Oral**	**Clinical/ Practical***	**Total**
Compulsory course					
CHEST T914 PM-	Pulmonary Medicine	150 + 150 + 100	200	300	**900**
Elective courses (choose only 2 courses)					
CHEST 914 CCP	Critical Care Pulmonary Medicine	100	50	50	**200**
CHEST 914 BIP	Bronchoscopy & Interventional Procedures	100	50	50	**200**
CHEST 914 PFSS	Pulmonary Functions & Sleep Study	100	50	50	**200**
		600	**300**	**400**	
				Total	**1300**

- It is mandatory to pass all the papers of written exams separately.
- The passing mark in any written exam is ≥ 60%.

VIII. *Evaluation of Program Intended Learning Outcomes*

Evaluator	Tool	Sample
1. Senior Students	Questionnaire at the end of the program	All the PG students
2. Alumni	The faculty is currently developing an Alumni office for postgraduates	Not yet determined
3. Stakeholders	A meeting will be arranged during annual conference of the department	Available representatives from: - Army hospitals - National medical insurance - Medical syndicate - Ministry of health
4. External Evaluators	Review program and courses Attending the final exam	Once before implementation Bi-annual report
5. College Quality Assurance committee	Annual program reviewer	

Signatures

Date of approval by department: **6th April 2011**

Program coordinator: Prof. Esmat Abdel-Nabi

Program Coordinator	***Head of Department***
Prof. Esmat Abdel-Nabi	*Prof.* Ahmed El Hadidi