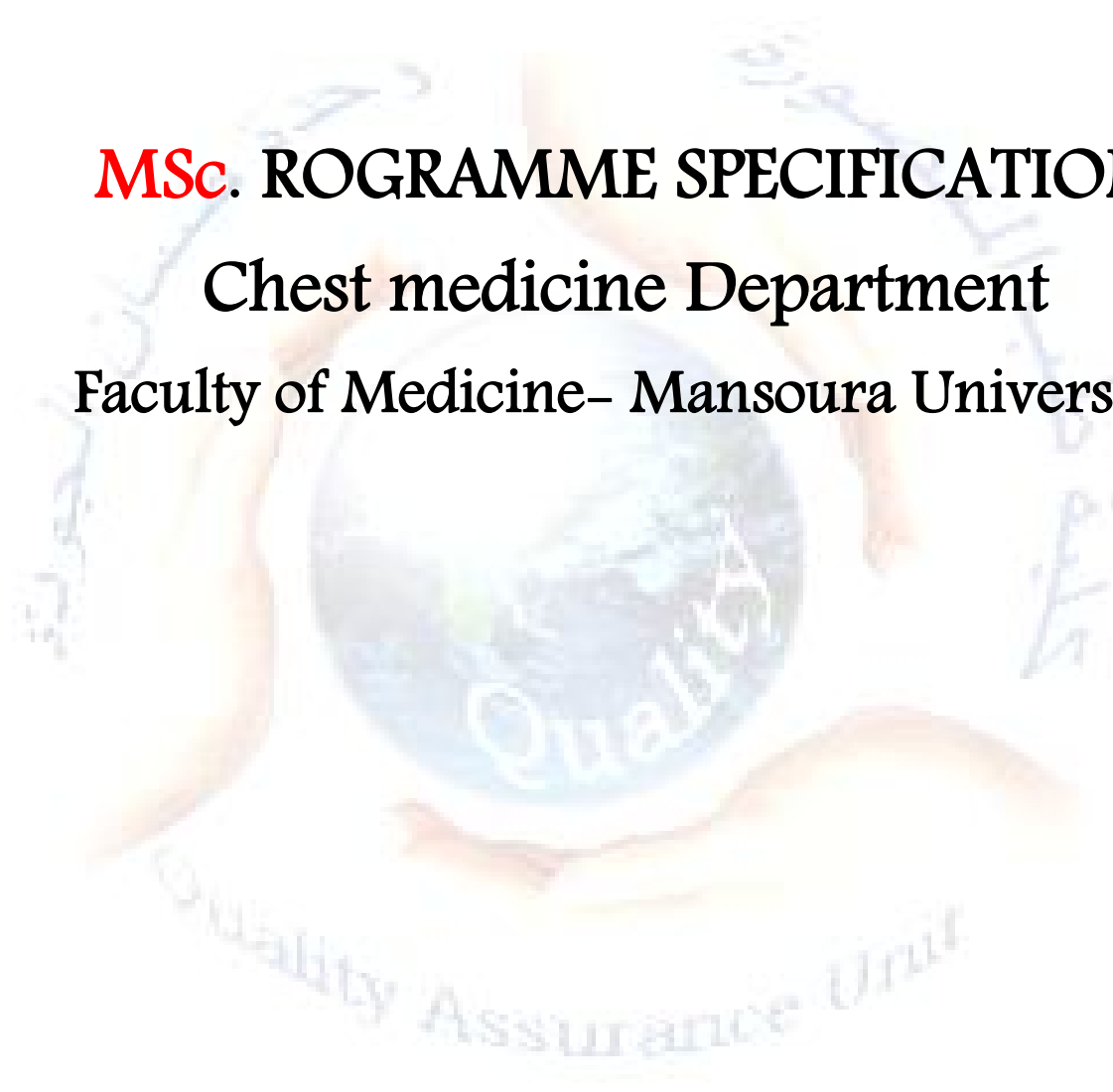




MSc. PROGRAMME SPECIFICATION

Chest medicine Department

Faculty of Medicine– Mansoura University





(A) Administrative information

(1) Programme Title & Code	Postgraduate Master degree of chest medicine / CHEST 511
(2) Final award/degree	Master
(3) Department offering the programme	Chest medicine department
(4) Coordinator	Dr.Dina Abo Elkhair Dr Heba wagih
(5) External evaluator (s)	Prof. Ahmed Goda El-Gazzar (Professor of Chest Medicine - Benha Faculty of Medicine)
(6) Date of approval by the Department`s council	15-3-2016
(7) Date of last approval of programme specification by Faculty council	9-8-2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows:

- 1- Provide the candidate with basic knowledge of microbiology, immunology, physiology ,pharmacology, pathology ,anatomy and histology related to different chest diseases
- 2- To provide our candidates with knowledge of the basics of different diagnostic and therapeutic procedures in different chest diseases
- 3- To provide our candidates with knowledge of lung and other systems relationship
- 4- To give our candidates the ability to integrate the history, clinical examination and investigations to diagnose and treat different chest diseases.
- 5- To prepare our candidates to acquire practical skills in basic diagnostic and therapeutic techniques in bronchoscopy and thoracoscopy
- 6- To give our candidates the ability to basicly interpret chest x-ray, CT chest, pulmonary function reports, polysomnography reports and ABG.
- 7- To give our candidates the ability to select the proper treatment regimen and NIV settings based on the patient condition.
- 8- To explain the immunotherapy and the basics of interventional radiology and infection control stratigies in different chest diseases.
- 9- To provide our candidates with knowledge of different mechanical ventilation strategies and the ability to select proper strategy according to the patient condition.
- 10- To provide our candidates with knowledge of ethical consideration ,sedation and nutrition in ICU

A- Knowledge and Understanding

Candidates must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care. On successful completion of the programme, the candidate will be able:

- A1-** Explain the mechanism and regulation of respiration, oxygen and carbon dioxide transport in blood.
- A2-** recognizes abnormal breathing pattern and factor affecting pulmonary ventilation
- A3-** Explain metabolic functions of the lung and recognize the importance of acid base balance and its clinical application
- A4-** Explain pulmonary circulation , pathogenesis of pulmonary edema and coagulation pathways and mechanism of different anticoagulant drugs
- A5-** list the different drugs used in patients with different chest diseases
- A6-** Discuss the update in therapeutic protocols of patients with different chest diseases
- A7-** Recognize when and how to use steroids in different chest diseases
- A8-** Explain the mechanisms of action, indications and adverse effects of different sedatives and muscle relaxant in RICU.
- A9-** Describe the gross and microscopic features of the pathology of different infectious and non infectious chest diseases
- A10-** Explain different methods of microbial diagnosis (smear, cultures, molecular and immunologic diagnosis and drug susceptibility testing.
- A11-** Explain types, source of hospital acquired infection and infection control measures of them as well as disinfection and steralization methods.

- A12- Explain anatomy and congenital anomalies of the lung ,pleura ,mediastinum and chest wall and its applied
- A13- recognize the genetic of lung cancer
- A14- Explain the different components of immune system, types of immunity and immunomodulation.
- A15- Explain histology of the bronchial epithelium, interstitium lymphatic system and the heart and vessels
- A16- Recognize common endocrinal, cardiovascular , GI , renal , common collagen vascular and polycythemia & bleeding disorders.
- A17-recognize clinical approach to cardinal chest symptoms (cough, expectoration, dyspnea, hemoptysis, wheezes and chest pain) and sleep disordered breathing symptoms
- A18- Explain indication,contraindications,techniques and complications of different diagnostic and therapeutic procedures of chest diseases
- A19- recognizes guidelines for diagnosis and treatment of different chest diseases
- A20- Explain different types of vasculitis and how to suspect ,diagnose those with chest involvement
- A21- recognizes liver, endocrine, renal, hematological and neurological chest relationship
- A22-recognize principles of mechanical ventilation and neutrition guidelines in ICU (enteral and parentral neutrition)
- A23- Explain advantages and limitations of different interventional radiological techniques.
- A24- recognizes conventional and novel modes of mechanical ventilation (invasive and NIPPV) , mechanical ventilation strategies in obstructive and restrictive lung diseases and its complications and weaning protocol in ICU

A25-identify ethical consideration in ICU

A26-recognize different types, indication and side effects of analgesia and sedation used in ICU

A27- Explain ventilator graphics, ABG , oxygen saturation and other monitoring tools used in ICU

A28- Describe theoretical bases of general infection control strategies .

A29- Describe theoretical bases of immunologic chest diseases and recognize allergen immunotherapy (types, indication and complications) and prerequisites and interpretation of skin prick test

B- Intellectual skills

B1- able to diagnose restrictive and obstructive airway diseases from pulmonary function test and interpret , serum electrolytes X-ray and CT

B2- able to interpret arterial blood gases and use guidelines of oxygen therapy

B3-able to select different drugs based on the patient condition and in different situations

B4- Expect types of microbial chest infection (viral, bacterial, fungal) as well as microbacterial) and differentiate between viral and bacterial chest infection

B5- Interpret results of molecular and immunologic diagnostic methods of chest infection

B6- Choose the best infection control measures for chest infections

B7- Differentiate between different embryological and developmental abnormalities of respiratory system.

B8- Integrate the basic histological facts with clinical data.

B9- Understand the impact of common disorders related to different body system on respiratory system.

B10- Interpret different ECG abnormalities

B11 -able to choose proper non invasive positive pressure ventilation according to patient condition and proper pressure adjustment

B12- understand the different techniques in interventional radiology and able to select the suitable technique in different situation

B13- Able to choose the best therapeutic technique for MV.

B14- able to apply the infection control measures.

B15- Able to choose the best diagnostic and therapeutic technique different chest diseases.

B16- Ability for appropriate choose of patients for immunotherapy

C- Professional/practical skills

C1- able to take history properly(chest sheet and sleep sheet) , perform general and local examination effectively

C2-proper patient preparation before any diagnostic or therapeutic procedure

C3- able to perform basic diagnostic and therapeutic fiberoptic bronchoscopy and medical thoracoscopy and interventional radiological techniques effectively

D- Communication & Transferable skills

D1- Develop communication and presentation skills

D2- Demonstrate teamwork and interpersonal skills

D3- Competently use information technology

D4- Demonstrate competence in problem solving

D5- Develop personal and career development plan

D6- Develop an autonomous and effective approach of lifelong learning

D7- Develop professional, ethical and legal practice

	A1– A16	A18 A23	A20 A21	A17 A19	A19 A24	A28 A29 A23	A24 A22 A27	A25 A26
Objective1	✓							
Objective2		✓						
Objective3			✓					
Objective4				✓				
Objective5								
Objective6								
Objective7					✓			
Objective8						✓		
Objective9							✓	
Objective10								✓

	B4 B5 B7 B8 B10	B15	B1 B2	B3 B11	B9	B13	B6 B12 B14 B16
Objective1	✓						
Objective2		✓					
Objective3					✓		
Objective4							
Objective5							
Objective6			✓				
Objective7				✓			
Objective8							✓
Objective9						✓	
Objective10							

	C1	C2 C3
Objective1		
Objective2		
Objective3		
Objective4	✓	
Objective5		✓
Objective6		
Objective7		
Objective8		
Objective9		
Objective10		

	D1	D2	D3	D4	D5	D6
Objective1				✓		
Objective2		✓				
Objective3				✓		
Objective4	✓		✓			
Objective5						
Objective6						
Objective7		✓	✓			
Objective8						
Objective9			✓		✓	
Objective10						✓

(3) Academic standards.

Academic standards for the programme in which External reference points/Benchmarks are attached in are attached in **Appendix I**.

A table of comparison between ARS, NARS, program ILOS is attached in **Appendix II**.

3.a- External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme

- The Chest department selected the MD Chest graduate programme, school of medicine, Stony Brook university (USA) as an external reference point.

<http://www.stonybrookmedicalcenter.org/som/>

3.b- Comparison of the specification to the selected external reference/ benchmark.

- At least 70% programme aims of the Benchmark are covered by the current programme.
- Assessment method and timing are differing from the structure of the programme specification of the benchmark.

Curriculum structure and contents.

4.a- Duration of the programme : 4 semesters

4.b- programme structure.

●4.b.1: Number of credit hours (minimum) : 45 credit hours

First part: 5 Second part: 18 Thesis: 10 Log Book: 12

4). Programme courses.

First part (one semester =15 weeks duration/6 months)

a- Compulsory courses.

Course Title	Course Code	NO. of hours per week					Total teaching hours/15 weeks
		Theoretical		Laboratory /practical	Field	Total	
		Lectures	seminars				
Anatomy related to chest medicine	CHEST 501	0.5	-----	-----	----	0.5	7.5
Physiology related to chest medicine	CHEST 503	0.5	-----	-----	----	0.5	7.5
Pharmacology related to chest medicine	CHEST 506	0.5	-----	-----	----	0.5	7.5
Pathology related to chest medicine	CHEST 505	0.5	-----	-----	----	0.5	7.5
Microbiology related to chest medicine	CHEST 507	0.5	-----	-----	----	0.5	7.5
Internal medicine	CHEST 510	1.5	-----	0.5	----	2	37.5
Histology related to chest medicine	CHEST 502	0.5	-----	-----	----	0.5	7.5

b- Elective courses: none

Second part (18 weeks duration= 3 semesters)

a- Compulsory courses:

Chest medicine & respiratory critical care

b- Elective courses:

The candidate has to choose one of the following optional courses:

1. Interventional Radiology in chest diseases
- 2- Advanced course in respiratory ICU
- 3- Infection control in chest diseases
- 4- Interventional endoscopies in chest diseases.
- 5- Advanced course in allergic and immunologic chest diseases.

Course Title	Course Code	NO. of hours per week				Total teaching hours/45 weeks
		Theoretical		Clinical /practical	Total	
		Lectures	seminars*			
Chest medicine and respiratory critical care.	CHEST511			clinical and practical training courses		255 lectures hours and 300 clinical hours in 45 weeks
1. First module						70 lectures 120 clinical
2. Second module						85 lectures 120 clinical
3- Third. module						100 lectures 60 clinical
Optional courses.						
Interventional radiology in chest medicine	CHEST511IR	1				15
Advanced course in Respiratory ICU	CHEST511RICU					
Infection control in chest diseases	CHEST511IC					

Interventional endoscopies in chest medicine	CHEST511IE					
Advanced course in allergic and immunologic chest diseases	CHEST511AI					
Thesis		10				
Log book activities		10				

Programme–Courses ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2.....etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses' specifications are attached in [Appendix III](#).

Course Title/Code	A1- A4	A5- A8	A9	A10 A11 A14	A12 A13	A15	A16	A17- A21	A23	A22 A24- A27	A28	A18	A29
Physiology related to medicine/CHEST503	X												
Pharmacology related to medicine/CHEST506		X											
Pathology related to medicine/CHEST505			X										
Microbiology related to medicine/CHEST507				X									
Anatomy related to chest medicine /CHEST501					X								
Histology related to medicine/CHEST502						X							
Internal medicine/CHEST510							X						
Chest medicine and respiratory critical care/ CHEST511								X					
Interventional radiology in chest medicine/ CHEST 511IR									X				
Advanced course in Respiratory ICU/ CHEST511RICU										X			
Infection control in chest diseases/ CHEST511IC											X		
Interventional endoscopies in medicine/ CHEST511IE												X	
Advanced course in allergic immunologic chest diseases/ CHEST511AI													X

Course Title/Code		B3		B4 B5 B6	B7	B8	B10	B1 B2 B9 B11	B12	B13	B6 B14	B15	B16
Physiology related to medicine/CHEST503													
Pharmacology related to medicine/CHEST506		X											
Pathology related to medicine/CHEST505													
Microbiology related to medicine/CHEST507				X									
Anatomy related to chest medicine /CHEST501					X								
Histology related to medicine/CHEST502						X							
Internal medicine/CHEST510							X						
Chest medicine and respiratory critical care/ CHEST511								X					
Interventional radiology in chest medicine/ CHEST 511IR									X				
Advanced course in Respiratory ICU/ CHEST511RICU										X			
Infection control in chest diseases/ CHEST511IC											X		
Interventional endoscopies in medicine/ CHEST511IE												X	
Advanced course in allergic immunologic chest diseases/ CHEST511AI													X

Course Title/Code	C1	C2	C3
Physiology related to medicine/CHEST503			
Pharmacology related to medicine/CHEST506			
Pathology related to medicine/CHEST505			
Microbiology related to medicine/CHEST507			
Anatomy related to chest medicine /CHEST501			
Histology related to medicine/CHEST502			
Internal medicine/CHEST510	x		
Chest medicine and respiratory critical care/ CHEST511	x	x	x
Interventional radiology in chest medicine/ CHEST 511IR			
Advanced course in Respiratory ICU/ CHEST511RICU			
Infection control in chest diseases/ CHEST511IC			
Interventional endoscopies in medicine/ CHEST511IE			
Advanced course in allergic immunologic chest diseases/ CHEST511AI			

Course Title/Code	D1-D7	D4
Physiology related to medicine/CHEST503		
Pharmacology related to medicine/CHEST506		
Pathology related to medicine/CHEST505		
Microbiology related to medicine/CHEST507		
Anatomy related to chest medicine /CHEST501		
Histology related to medicine/CHEST502		
Internal medicine/CHEST510		
Chest medicine and respiratory critical care/ CHEST511	x	
Interventional radiology in chest medicine/ CHEST 511IR		
Advanced course in Respiratory ICU/ CHEST511RICU		
Infection control in chest diseases/ CHEST511IC		
Interventional endoscopies in medicine/ CHEST511IE		x
Advanced course in allergic immunologic chest diseases/ CHEST511AI		

(4) Programme admission requirements:

- **General requirements:**

According to the faculty postgraduate bylaws [Appendix IV](#).

- **Specific requirements (if applicable):**

No specific requirements

(5) Regulations for progression and programme completion:

- Student must complete minimum of 45 credit hours in order to obtain the MSc. degree, which include the courses of first and second parts, thesis and activities of the log book.
- Courses descriptions are included in [Appendix III](#).
- Registration for the Msc. thesis is allowed 6 months from the day of registration to the programme and must fulfill a total of 10 credit hours including material collection, patients selection and evaluation, laboratory work, patients follow-up, and meetings with supervisors.

Log book fulfillment:

- Student must fulfill a minimum of 10 credits of log book activities including;
 1. Rotational clinical training in the general and specialized outpatients clinics of chest medicine department
 2. Rotational training on all chest department units including; FOB, allergy and immunology unit, sleep, pulmonary function and respiratory ICU
 3. Undergraduate clinical demonstration.
 4. Conferences attendance or speaking.
- Lectures and seminars of the previously described courses must be documented in the log book and signed by the lecturer.

- Any workshops, conferences and scientific meetings should be included in the log book .

Final exam:

First part

Tools		Mark
Physiology related to chest Medicine Pharmacology related to chest Medicine Pathology related to chest Medicine Microbiology related to chest Medicine Anatomy related to chest Medicine Histology related to chest Medicine	written exam,	Written exam: 90 degree for each (18 for MCQ, 72 for written exam) Oral exam: 60 mark for each
Internal Medicine	Written exam	180 (36 for MCQ, 144 for written exam)
	Oral exam	60
	Clinical exam	60

Second part

Tools	Mark
Chest Medicine & Respiratory Critical Care	
Written exam - Chest medicine & respiratory critical care (2 papers with time allowed 3 each paper)	120+120
MCQ	60
Oral exam	100
Practical exam	100
OSCE Clinical exam	100

Total marks:	600
Elective course	
Written	32
MCQ	8

(6) Evaluation of Programme's intended learning outcomes (ILOs).

Evaluator	Tools*	Signature
Internal evaluator (s)	Focus group discussion Meetings	
External Evaluator (s) Prof. Ahmed Goda El-Gazzar (Professor of Chest Medicine - Bar Faculty of Medicine)	Reviewing according to external evaluator checklist report.	
Senior student (s)	Personal communication	
Alumni	none	
Stakeholder (s)	none	
others	none	

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

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

Programme coordinator: Name: Heba Wagih Dina Aboelkhair	Signature & date:
Dean: Name:	Signature & date:
Executive director of the quality assurance unit.	Signature & date:

Name:	
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