



## توصيف برنامج دكتوراة الأمراض الصدرية

( عام 2014 - 2013 )

### \* معلومات أساسية : Basic information

- ١ - اسم البرنامج : ... دكتوراة الامراض الصدرية والتدرن .....
- ٢ - طبيعة البرنامج : multiple (مشترك)
- ٣- القسم/ الأقسام المسئولة عن البرنامج: - قسم الأمراض الصدرية
- ٤- اسم القسم المانح للدرجة: - قسم الأمراض الصدرية -
- ٥- الاقسام المشاركة فى البرنامج: -قسم الفيسيولوجيا - قسم الباثولوجيا
- ٦- تاريخ إقرار البرنامج فى مجلس القسم : 2013 / ٩ / 5
- ٧- تاريخ إقرار البرنامج فى مجلس الكلية: 2013 / ٩ / ١٥
- ٨- مسؤول البرنامج: . Prof. Magdy Omar

*Professor of Chest Diseases and Tuberculosis- Member of the Egyptian Society of Chest Diseases and Tuberculosis*

٩- المراجعة الداخلية للبرنامج: Prof. Mahmoud El-Sahahy

*Professor of Chest Diseases and Tuberculosis- Member of the Egyptian Society of Chest Diseases and Tuberculosis*

٨- المراجعة الخارجية للبرنامج: **Prof. Fawzy Abu Al-Naga Al-Omery.**  
(Prof. Chest Diseases and Tuberculosis, Tanta faculty of medicine)

### Professional information

### \* معلومات متخصصة:

١ - الأهداف العامة للبرنامج :

#### 1- Program aims:

*The overall aims of the program are:*

1.1 To educate students about the knowledge\ and educational experience for the basic



practice in the field of the Chest medicine.

- 1.2 : **To provide** students with an understanding of the Diagnosis, problem solving and decision makes skills necessary for proper evaluation and management of chest disease.
- 1.3 : **To familiarize** students with the *patients and how to ask for medical history* & how to detect physical signs.
- 1.4 : **To enable** the students to reach the diagnosis and choose the best diagnostic modalities & treatment for various chest disorders.
- 1.5 : **To teach** appropriate ethical and professional educations necessary for establishment of good communication with patients and colleagues.
- 1.6 : **To learn** competencies necessary for continuous professional development.
- 1.7 : **To train** the students in pulmonary function unit to provide the basics of pulmonary functions and how to interpret them.
- 1.8 : **To train** the students in the bronchoscopy unit to provide the basics of bronchoscopy procedure techniques of interventional bronchoscopy and visualize the bronchial tree and Know different modalities of interventional pulmonology
- 1.9 : **To apply** principles of evidence-based medicine.
- 1.10 : **To develop** high level of Knowledge and understanding of the etiology, the pathogenesis and the clinical, laboratory and pathologic manifestations of the respiratory diseases.

## ٢ - المخرجات التعليمية المستهدفة من البرنامج :

### 2-Intended Learning Outcomes (ILOS):

#### 2.a. Knowledge and Understanding

٢.أ - المعرفة والفهم :

*On successful completion of the program, the graduate will be able to:*

2. a. 1: Describe the normal structure and function of the human respiratory systems and mind at the molecular, biochemical & cellular structures.
2. a. 2: Know how to take respiratory history & understand beside clinical signs and the methods of investigations of different pulmonary diseases.
2. a. 3: Describe the ways of pulmonary medical treatment, know the indications & contraindications of pulmonary intervention procedures and alternative surgical treatment strategies.
2. a. 4: Understand the scientific basis and interpretation of various diagnostic modalities for establishing diagnosis of some diseases.
2. a. 5: Recognize how to follow up the patient during treatment & deal with complications.
2. a. 6: Identify the principles that govern ethical decision making in clinical practice as well as the medicolegal aspect of medical malpractice.
2. a. 7: Recognize the basic principles of formulating specific clinical sheets and the art of utilizing sources of information.
2. a. 8: Recognize the importance of life-long self-learning required for continuous professional development.
2. a. 9: Understand personal limitations regarding skills and knowledge & the sound behavior towards others.
2. a. 10: Identify the pathology of tuberculosis, diagnosis and treatment



## 2.b. Intellectual Skills:

٢. ب - القدرات الذهنية :-

*On successful completion of the program, the graduate will be able to:*

2. b.1: **Plan** a Combine of the clinical and investigational database to be proficient in clinical problem solving in respiratory medicine.
2. b.2: **analyze** of all sources of information in addition to the patient interview to Interpret and evaluate the medical history. Such sources include family or friends, medical records and other health care professionals, to overcome limitations regarding information.
- 2.b.3: **solve** clinical problems.
- 2.b.4: **Interpret** patient symptoms and physical findings in terms of their anatomic, pathologic and functional diagnostic significances.
- 2.b.5: **Create** a diagnostic hypothesis with the available modes of investigations & Select the most appropriate and cost effective diagnostic procedures for each problem.
- 2.b.6: **Construct a classification for** factors that place individuals at risk for disease or injury, to determine strategies for appropriate response in the field of respiratory medicine.
- 2.b.7: **Assess** strategies to improve the quality of diagnosis in pulmonary medicine.
- 2.b.8: **judge** a decision for patient with respiratory problem management taking into consideration the patient rights in the decision.

## 2.c. Practical and professional Skills:

٢. ج . مهارات مهنية وعملية :

*On successful completion of the program, the graduate will be able to:*

2. c.1. **Perform** basic skills in field of respiratory medicine
2. C.2. **Write** and evaluate the respiratory reports.
2. c.3. **Write** safe prescription for different types of drugs especially in the acute conditions and life threatening situation.

٢. د . مهارات عامة و منتقلة:

## 2.d. General and transferable skills:-

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

2. d.1: **Establish** life-long self-learning required for continuous professional development.
2. d.2: **Use** the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.
2. d.3: **manage**, and manipulate information by all means, including electronic means.
2. d.4: **Present** information clearly in written, electronic and oral forms.
2. d.5: **Establish** effective interpersonal relationship to Communicate ideas and arguments.
2. d.6: **Communicate** effectively as a member or a leader of an interdisciplinary team
2. d.7: **Management** of time effectively
2. d.8: **Continue** self-learning



### 3- Academic Standards

٣ - المعايير الأكاديمية للبرنامج:

- **Academic Standards of MD Program of chest diseases and tuberculosis**, approved in department council no ( 2 ) date 5 / 9 / 2013, and in faculty council no. ( 356 ) date 15 / 9 / 2013. (ملحق ١)

المعايير القياسية لبرامج الدراسات العليا (درجة الدكتوراة) الصادرة عن الهيئة القومية لجودة التعليم والإعتماد (مارس ٢٠٠٩) **Academic reference standards (ARS) , MD Program (March 2009)** , which were issued by the National Authority for Quality Assurance & Accreditation of education NAQAAE (ملحق ٢)

#### (4): Program structure and contents

٤ - هيكل ومكونات البرنامج:

أ - مدة البرنامج : 60 weeks

#### Program duration

- 1<sup>st</sup> part: - One Semester (**15 weeks' duration/6months**).
- 2<sup>nd</sup> part: - Three Semester (**45 weeks duration/18 months**).
- Thesis: four semesters

ب - هيكل البرنامج:

#### Program structure

- Total hours of program 62 credit hours
- Theoretical 25 credit hours
- Practical 22 credit hours
- Thesis: ١٥ credit hours

ج - مستويات ومقررات البرنامج:

الزامي a)

compulsory

الساعات المعتمدة	الكود	المقررات	البند
٦ ساعات	UNIV 601	UNIV 601	متطلبات للجامعة والكلية
٦ ساعات		قسمى الفسيولوجى و الباثولوجى.	القسم الأول
3 ساعة	CHES812	Clinical physiology	فصل دراسي واحد في العلوم الطبية الأساسية يقوم بالتدريس مجموعة من الأساتذة. فسيولوجيا حيوية



3 ساعة	CHES811	Pathology	باثولوجيا	
26 ساعة		قسم الامراض الصدرية والتدرن	يشمل التدريب النظري والإكلينيكي والعملي في أمراض الصدر الآتي: محاضرة أسبوعياً في أمراض الصدر	القسم الثاني
14 ساعة	CHES810	Chest	حضور المرور العام بالقسم أسبوعياً.	
12 ساعة	CHES810	Clinical round attendance		
15 ساعة		Log book	تشمل حضور:	كراسة الأنشطة
8/1		Clinical conference	ندوة إكلينيكية أسبوعية بالقسم	
1/4		Clinical symposium	ندوة شهرية بالقسم	
1/4			مناقشة 2 رسالة ماجستير في كل فصل دراسي	
8/1			مناقشة 1 رسالة دكتوراه كل فصل دراسي	
1/2			دورة تدريبية مناظير التشخيصية والعلاجية	
1/2			دورة تدريبية وظائف تنفس	
1/2			دورة تدريبية في وحدة الرعاية المركزة	
1/4			مؤتمر القسم السنوي	
15 ساعة				الرسالة
62 ساعة				الإجمالي

b) Elective courses: none

### First part (15 weeks' duration/6months) (one semester):

a- Compulsory courses.

Course Title	Course Code	NO. of hours per week		Total teaching hours
		Theoretical	practical	
Pathology	CHES811	48	48	96
Physiology	CHES812	48	48	96
Total.		96	96	192

b- Elective courses: none

### Second part (45 weeks duration/18 months) (one semester):



a- Compulsory courses:

Course Title	Course Code	NO. of hours per week		Total teaching hours
		Theoretical	practical	
Chest	CHES810	14	12	26
Thesis	CHES810	15	00	15
Total.		29	12	41

b- Elective courses: none

c- Selective courses: none

5- محتويات المقررات (راجع توصيف المقررات)

- كود المقرر
- اسم المقرر:
- المحتويات: (طبقاً لما هو مذكور في اللائحة)

6 - متطلبات الإلتحاق بالبرنامج : Program admission requirements

. متطلبات الإلتحاق بالبرنامج : ( طبقاً لما هو مذكور في اللائحة):

(٦): Program admission requirements:

مادة ( ١ ) : يشترط لفيد الطالب لدرجة الدكتوراه في الطب أو الجراحة أو العلوم الطبية الأساسية أن يكون حاصلًا على درجة الماجستير في امراض الصدر بتقدير جيد على الأقل من إحدى جامعات ج . م . ع أو على درجة معادلة لها من معهد علمي آخر معترف به من الجامعة

مادة ( ٢ ) : يشترط في الطالب لنيل درجة الدكتوراه ما يلي :

- حضور المقررات الدراسية بصفة مرضية طبقاً للساعات المعتمدة .
  - أن يقوم ببحث في موضوع تقره الجامعة بعد موافقة مجلس الكلية والقسم لمدة سنتان على الأقل.
  - أن يتقدم بنتائج البحث في رسالة تقبلها لجنة الحكم بعد مناقشة علنية للرسالة .
  - اجتياز الطالب ثلاث دورات في الحاسب الآلي ( دورة في مقدمة الحاسب الآلي - دورة تدريبية " متوسطة " - دورة في تطبيقات الحاسب الآلي ) ، وذلك قبل مناقشة الرسالة .
  - اجتياز الطالب اختبار التوفيل بمستوى لا يقل عن ٥٠٠ وحدة وذلك قبل مناقشة الرسالة .
- أن يجتاز بنجاح الاختبارات التحريرية والإكلينيكية والشفهية المقررة وفقاً لما هو مبين باللائحة
- مادة ( 3 ) : على الطالب أن يقيد اسمه لامتحان قبل مواعده بشهر على الأقل .

مادة ( 4 ) : يشترط لنجاح الطالب في امتحان الدكتوراه الحصول على الحد الأدنى للنجاح في جميع الاختبارات المقررة وفي كل جزء من أجزاءها على حدة ذلك بأخذ المتوسط لتقديرات أعضاء اللجنة إذا رسب الطالب في أي مقرر من



## المقررات بعد الامتحان في جميع المقررات

## 7 - القواعد المنظمة لإستكمال البرنامج :

مادة (٦): تتولى لجنة الدراسات العليا بالكلية عن طريق لجنة تشكل لكل تخصص من أعضاء مجلس القسم التابع له المادة والقسم المانح للدرجة وضع البرنامج التفصيلي للمقررات في حدود الساعات المعتمدة الواردة باللائحة وعند الاختلاف يتم الاسترشاد بمقررات جامعة القاهرة ومقررات الشهادات العالمية الاوربية والامريكية بعتمدها مجالس الأقسام ثم يقرها مجلس الكلية وتشمل هذه الساعات محاضرات نظرية ودروس عملية وتدريب اكلينيكي ومحاضرات وندوات مشتركة.

## ٨ - Students Assessment Methods

## 8- طرق وقواعد تقييم الملتحقين بالبرنامج

م	الطريقة	ما تقيسه من مخرجات التعلم المستهدفة
1	Written examination	To assess knowledge and understanding & intellectual skills: From 2.a.1.....2.a.10. and b.1.....2.b.٨.
2	Oral examination	To assess knowledge and understanding, intellectual skills & General & transferable skills 2.a.1.....2.a.10., 2.b.1.....2.b.٨., 2.d.1.....2.d.8.
3	Practical & clinical examination	To assess knowledge and understanding, intellectual skills & practical and clinical skills and General & transferable skills: 2.a.1.....2.a.10., 2.b.1.....2.b.٨., 2.d.1.....2.d.8.2.a.1.....2.a.10., 2.c.1.....2.c.8.
٤	Thesis discussion	To assess knowledge and understanding, intellectual skills & practical and clinical skills and General & transferable skills: 2.a.1.....2.a.10., 2.b.1.....2.b.٨., 2.d.1.....2.d.8.2.a.1.....2.a.10., 2.c.1.....2.c.8.

## Final exam.

## First part

إجمالي	الدرجة				الاختبار	المقرر
	إكلينيكي	عملي	شفهي	تحريري		
١٠٠			٥٠	٥٠	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي	الفسولوجي
١٠٠			٥٠	٥٠	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي	الباثولوجي



٢٠٠

إجمالي الدرجة

## Second part

إجمالي	الدرجة				الاختبار	المقرر
	عملي	إكلينيكي	شفاهي	تحريري		
٩٠٠		٢٥٠	٢٥٠	٤٠٠	اختباران تحريريان مدة كل منهما ثلاث ساعات + اختبار شفهي + اختبار إكلينيكي	الأمراض الصدرية
١٠٠				١٠٠	اختبار تحريري مدته ساعة و نصف	وصف حالة
1000	إجمالي الدرجة					

### Evaluation of Program:

١٠ - طرق تقويم البرنامج:

Evaluator	Tools	sample
Internal evaluator (s) مقيم داخلي	Focus group discussion Meetings	Report ٢-١
External Evaluator (s) مقيم خارجي	Reviewing according to external evaluator checklist report of NAQAA.	1-2 Report
Senior student (s) طلاب السنة النهائية	مقابلات , استبيان	جميع الطلبة
Alumni الخريجون	مقابلات , استبيان	عينة لا تقل عن ٥٠% من طلبة آخر ٣ دفعات
Stakeholder (s) أصحاب العمل	مقابلات , استبيان	عينة ممثلة لجميع جهات العمل
Others طرق أخرى	none	

المسئول عن البرنامج : / / التاريخ :





**Program Coordinator:**

Name Prof / Magdy Omar

Signature.....

Date 02/09/2013

### **الملحقات :**

ملحق ١ : Academic standard of the program

ملحق ٢ : المعايير القياسية العامة للدراسات العليا الصادرة عن الهيئة.

ملحق 3: مصفوفة المعايير الأكاديمية للبرنامج مع المعايير القياسية للدراسات العليا الصادرة عن الهيئة.

ملحق 4: مصفوفة البرنامج مع المعايير الأكاديمية للبرنامج.

ملحق 5: مصفوفة المقررات مع البرنامج Program-Courses ILOs Matrix

ملحق ٦ : توصيف المقررات

## ملحق ١: Academic standard of the program:

### وثيقة المعايير القياسية الخاصة بدرجة دكتوراه الأمراض الصدرية

#### Academic Reference Standards for MD Degree in Chest diseases and Tuberculosis

##### 1. Graduate specifications

On completion MD Degree, Chest Diseases programs must be able to graduate:

1-1 master the basics and methodologies of scientific research

1-2 continuous work on add-on medical science in the field of diagnosis and treatment of respiratory diseases

1-3 application of the analytical method and critic of Medical Sciences in the field of diagnosis and treatment of respiratory diseases and related fields

1-4 integrating medical science with relevant creation and developer relations between the two interfaces Science

1-5 show a deep awareness of the problems of disease-specific thoracic diagnosis and treatment of modern theories in the relevant field

1-6 identification of disease-specific thoracic problems and finding innovative solutions

1-7 mastering a wide range of disease-specific skills in diagnosis and treatment of respiratory medicine

1-8-oriented development methods and tools and new methods of serving the field of chest disease diagnosis and treatment

1-9 the use of modern technological means in the diagnosis and treatment of respiratory diseases and contribute to the creation of data base diagnosis and learn how to live disease

1-10 the ability to communicate coordinate and cooperate with the medical team and patients and their families and official bodies and the ability to work with a group within a multi-team specialists

1-11 the ability to take the appropriate decision to resolve the acute respiratory problems in normal circumstances and in light of the disaster information available

1-12 applying available resources of devices and medical supplies to bring the greatest benefit to serve patients and the need to maintain and work to find new resources

1-13 full awareness of its role in community development and environmental conservation

1-14 the ability to follow the rules and ethics of the medical profession

1-15 commitment to continuous self-development and transfer of knowledge to others

## **2. The General standards**

### **2.1 Knowledge and understanding**

On completion MD study Chest Diseases programs must be able to graduate grasping both:

2.1.1 Knowledge of theories and fundamentals and modern medical science in the field of respiratory diseases and related data fields 1

2.1.2 Mastering the basics of the application and methodologies of scientific research and the use of his tools in the diagnosis and treatment of respiratory diseases

2.1.3 Respect for academic and scientific, ethical and legal principles in the field of health care

2.1.4 Principles and the basics of quality in the diagnosis and treatment of respiratory diseases

2.1.5 Identify respiratory diseases that are related to the environment or to the various professions and find the appropriate treatment and have devised ways for the development of the environment and maintenance

### **2-2 intellectual skills:**

On completion MD Degree Chest Diseases programs must be able to graduate grasping both:

2.2.1 Analyze and evaluate information in the field of respiratory diseases and measuring them and Inference them

2.2.2 Solution for diagnosis and treatment of respiratory diseases problems based on the available data

2.2.3 Conducting a research study or writing a systematic scientific study on the problem of Chest Diseases problems contribute to the diagnosis or treatment or add to the special problems of respiratory medical science

2.2.4 Drafting scientific papers

2.2.5 Risk practice Chest Diseases of infection and contact with the patient and take action to protect the graduate of the occupational diseases evaluation procedures

2.2.6 Planning for the development of performance in the field of Chest Diseases

2.2.7 The ability to take the appropriate decision to resolve the acute respiratory problems in normal circumstances and disaster

2.2.8 Innovation and creativity

2.2.9 Dialogue and debate on the evidence and the building based medicine

### **2-3 clinical and professional skills:**

On completion MD Degree Chest Diseases programs must be able to graduate grasping both:

2.3.1 Master the basic and modern skills in the field of thoracic diseases

2.3.2 Writing and evaluating various reports

2.3.3 Methods and tools to assess the list in the field of thoracic diseases

2.3.4 Use of information technology in the diagnosis of respiratory diseases and to collect data on patients and archive files and save

2.3.5 Planning for the development of medical practice and the development of the performance of others

#### **2-4 general and Transferable Skills:**

On completion MD Degree Chest Diseases programs must be able to graduate grasping both:

2.4.1 Ability to communicate, coordinate and cooperate with the medical team and patients and their families and official bodies

2.4.2 The use of information technology in the development of the means of diagnosis and treatment of Respiratory Disease

2.4.3 Teach others and evaluating their performance

2.4.4 Self-assessment and Continuing Education

2.4.5 Use different sources to get the information and knowledge

2.4.6 Work in a team and the leadership team

2.4.7 Scientific meetings management and the ability to manage time

2.4.8 Domestic and international competitive research projects and submits proposals

2.4.9 Ability to participate in scientific and educational meetings and prepare the appropriate lectures so

٢.٤.١٠ reality assess the health problems in the community, including related health system performance

موافقة مجلس القسم في جلسة رقم ٢ في 2013/٩/٥ موافقة مجلس الكلية في 2013/٩/١٥

رئيس القسم

اد/ شريف عيسى

## المعايير القياسية العامة لبرامج الدراسات العليا

## برنامج الدكتوراة

## ١- مواصفات الخريج :

خريج برنامج الدكتوراة في اى تخصص يجب ان يكون قادرا على

- ١-١ اتقان اساسيات ومنهجيات البحث العلمى
- ٢-١ العمل المستمر على الاضافة للمعارف فى مجال التخصص
- ٣-١ تطبيق المنهج التحليلى والناقد للمعارف فى مجال التخصص والمجالات ذات العلاقة
- ٤-١ دمج المعارف المتخصصة مع المعارف ذات العلاقة مستتبيا ومطورا للعلاقات البيئية بينها
- ٥-١ اظهار وعيا عميقا بالمشاكل الجارية والنظريات الحديثة فى مجال التخصص
- ٦-١ تحديد المشكلات المهنية وايجاد حلول مبتكرة لحلها
- ٧-١ اتقان نطاقا واسعا من المهارات المهنية فى مجال التخصص
- ٨-١ التوجة نحو تطوير طرق وادوات واساليب جديدة للمزاولة المهنية
- ٩-١ استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسة المهنة
- ١٠-١ التواصل بفاعلية وقيادة فريق عمل فى سياقات مهنية مختلفة
- ١١-١ اتخاذ القرار فى ضل المعلومات المتاحة
- ١٢-١ توظيف الموارد المتاحة بكفاءة وتنميتها والعمل على ايجاد موارد جديدة
- ١٣-١ الوعى بدوره فى تنمية المجتمع والحفاظ على البيئة
- ١٤-١ التصرف بما يعكس الالتزام بالنزاهة والمصادقية وقواعد المهنة
- ١٥-١ الالتزام بالتنمية الذاتية المستمرة ونقل علمه وخبراته للاخرين

## ٢- المعايير القياسية

## ١-٢ المعرفة والفهم

- بانتهاج دراسة برنامج الدكتوراه يجب ان يكون الخريج قادرا على الفهم والدراية بكل من
- ١-٢-١ النظريات والاساسيات والحديث من المعارف فى مجال التخصص والمجالات ذات العلاقة
  - ٢-١-٢ اساسيات ومنهجيات واخلاقيات البحث العلمى وادواته المختلفة
  - ٣-١-٢ المبادئ الاخلاقية والقانونية للممارسة المهنية فى مجال التخصص
  - ٤-١-٢ مبادئ واساسيات الجودة فى الممارسة فى مجال التخصص
  - ٥-١-٢ المعارف المتعلقة بأثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها

## ٢-٢ المهارات الذهنية

- بانتهاج دراسة برنامج الدكتوراه يجب ان يكون الخريج قادرا على
- ١-٢-٢ تحليل وتقييم المعلومات فى مجال التخصص والقياس عليها والاستنباط منها
  - ٢-٢-٢ حل المشاكل المتخصصة استنادا على المعطيات المتاحة
  - ٣-٢-٢ اجراء دراسات بحثية تضيف الى المعارف
  - ٤-٢-٢ صياغة أوراق علمية
  - ٥-٢-٢ تقييم المخاطر فى الممارسات المهنية
  - ٦-٢-٢ التخطيط لتطوير الاداء فى مجال التخصص
  - ٧-٢-٢ اتخاذ القرارات المهنية فى سياقات مهنية مختلفة
  - ٨-٢-٢ الابتكار/الابداع
  - ٩-٢-٢ الحوار والنقاش المبني على البراهين والادلة

## ٣-٢ المهارات المهنية

- بانتهاج دراسة برنامج الدكتوراه يجب ان يكون الخريج قادرا على
- ١-٣-٢ اتقان المهارات المهنية الاساسية والحديثة في مجال التخصص
  - ٢-٣-٢ كتابة وتقييم التقارير المهنية
  - ٣-٣-٢ تقييم وتطوير الطرق والادوات القائمة في مجال التخصص
  - ٤-٣-٢ استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
  - ٥-٣-٢ التخطيط لتطوير الممارسة المهنية وتنمية اداء الاخرين

## ٤-٢ المهارات العامة والمنتقلة

- بانتهاج دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على
- ١-٤-٢ التواصل الفعال بأنواعه المختلفة
  - ٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم تطوير الممارسة المهنية
  - ٣-٤-٢ تعليم الاخرين وتقييم ادائهم
  - ٤-٤-٢ التقييم الذاتي والتعليم المستمر
  - ٥-٤-٢ استخدام المصادر المختلفة للحصول على المعلومات والمعارف
  - ٦-٤-٢ العمل في فريق وقيادة فرق العمل
  - ٧-٤-٢ ادارة اللقاءات العلمية والقدرة على ادارة الوقت

ملحق 3: مصفوفة المعايير الأكاديمية للبرنامج مع المعايير القياسية للدراسات العليا الصادرة عن  
الهيئة

المعايير القياسية للدراسات العليا الصادرة عن الهيئة القومية لضمان الجودة	المعايير الأكاديمية لبرنامج <u>دكتوراة</u> الأمراض الصدرية	
خريج برنامج الدكتوراة في اي تخصص يجب ان يكون قادرا على	On completion MD Degree, Chest Diseases programs must be able to graduate:	١ - مواصفات الخريج
١-١ اتقان اساسيات ومنهجيات البحث العلمي	1-1 master the basics and methodologies of scientific research	
٢-١ العمل المستمر على الاضافة للمعارف في مجال التخصص	1-2 continuous work on add-on medical science in the field of diagnosis and treatment of respiratory diseases	
٣-١ تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص والمجالات ذات العلاقة	1-3 application of the analytical method and critic of Medical Sciences in the field of diagnosis and treatment of respiratory diseases and related fields	
٤-١ دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطا ومطورا للعلاقات البينية بينها	1-4 integrating medical science with relevant creation and developer relations between the two interfaces Science	
٥-١ اظهار وعيا عميقا بالمشاكل الجارية والنظريات الحديثة في مجال التخصص	1-5 show a deep awareness of the problems of disease-specific thoracic diagnosis and treatment of modern theories in the relevant field	
٦-١ تحديد المشكلات المهنية وايجاد حلول مبتكرة لحلها	1-6 identification of disease- specific thoracic problems and finding innovative solutions	
٧-١ اتقان نطاقا واسعا من المهارات المهنية في مجال التخصص	1-7 mastering a wide range of disease-specific skills in diagnosis and treatment of respiratory medicine	
٨-١ التوجه نحو تطوير طرق وادوات واساليب جديدة للمزاولة المهنية	1-8-oriented development methods and tools and new	

<p>٩-١ استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسة المهنة</p> <p>١٠-١ التواصل بفاعلية وقيادة فريق عمل في سياقات مهنية مختلفة</p> <p>١١-١ اتخاذ القرار في ظل المعلومات المتاحة</p> <p>١٢-١ توظيف الموارد المتاحة بكفاءة وتنميتها والعمل على ايجاد موارد جديدة</p> <p>١٣-١ الوعي بدوره في تنمية المجتمع والحفاظ على البيئة</p> <p>١٤-١ التصرف بما يعكس الالتزام بالنزاهة والمصادقية وقواعد المهنة</p> <p>١٥-١ الالتزام بالتنمية الذاتية المستمرة ونقل علمه وخبراته للآخرين</p>	<p>methods of serving the field of chest disease diagnosis and treatment</p> <p>1-9 the use of modern technological means in the diagnosis and treatment of respiratory diseases and contribute to the creation of data base diagnosis and learn how to live disease</p> <p>1-10 the ability to communicate coordinate and cooperate with the medical team and patients and their families and official bodies and the ability to work with a group within a multi-team specialists</p> <p>1-11 the ability to take the appropriate decision to resolve the acute respiratory problems in normal circumstances and in light of the disaster information available</p> <p>1-12 applying available resources of devices and medical supplies to bring the greatest benefit to serve patients and the need to maintain and work to find new resources</p> <p>1-13 full awareness of its role in community development and environmental conservation</p> <p>1-14 the ability to follow the rules and ethics of the medical profession</p> <p>1-15 commitment to continuous self-development and transfer of knowledge to others</p>	
<p>بانتهاج دراسة برنامج الدكتوراة يجب ان يكون الخريج قادرا على الفهم</p>	<p>On completion MD study Chest Diseases programs must be able to</p>	<p>٢- المعايير القياسية</p>



<p>والدراية بكل من</p> <p>١-٢-١ النظريات والاساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة</p> <p>٢-١-٢ اساسيات ومنهجيات واخلاقيات البحث العلمي وادواته المختلفة</p> <p>٣-١-٢ المبادئ الاخلاقية والقانونية للممارسة المهنية في مجال التخصص</p> <p>٤-١-٢ مبادئ واساسيات الجودة في الممارسة في مجال التخصص</p> <p>٥-١-٢ المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها</p>	<p>graduate grasping both:</p> <p>2.1.1 Knowledge of theories and fundamentals and modern medical science in the field of respiratory diseases and related data fields 1</p> <p>2.1.2 Mastering the basics of the application and methodologies of scientific research and the use of his tools in the diagnosis and treatment of respiratory diseases</p> <p>2.1.3 Respect for academic and scientific, ethical and legal principles in the field of health care</p> <p>2.1.4 Principles and the basics of quality in the diagnosis and treatment of respiratory diseases</p> <p>2.1.5 Identify respiratory diseases that are related to the environment or to the various professions and find the appropriate treatment and have devised ways for the development of the environment and maintenance</p>	<p>العامّة</p> <p>٢. ١ المعرفة و الفهم</p>
<p>بانتهاء دراسة برنامج الدكتوراه يجب ان يكون الخريج قادرا على</p> <p>١-٢-٢ تحليل وتقييم المعلومات في مجال التخصص والقياس عليها والاستنباط منها</p> <p>٢-٢-٢ حل المشاكل المتخصصة استنادا على المعطيات المتاحة</p> <p>٣-٢-٢ اجراء دراسات بحثية تضيف الى المعارف</p>	<p>On completion MD Degree Chest Diseases programs must be able to graduate grasping both:</p> <p>2.2.1 Analyze and evaluate information in the field of respiratory diseases and measuring them and Inference them</p> <p>2.2.2 Solution for diagnosis and treatment of respiratory diseases problems based on the available data</p> <p>2.2.3 Conducting a research study or writing a systematic scientific study on the problem of Chest Diseases problems contribute to</p>	<p>٢ - المعايير القياسية العامّة</p> <p>٢. ٢ المهارات الذهنية</p>

<p>٢-٢-٤ صياغة أوراق علمية</p> <p>٢-٢-٥ تقييم المخاطر في الممارسات المهنية</p> <p>٢-٢-٦ التخطيط لتطوير الاداء في مجال التخصص</p> <p>٢-٢-٧ اتخاذ القرارات المهنية في سياقات مهنية مختلفة</p> <p>٢-٢-٨ الابتكار/الابداع</p> <p>٢-٢-٩ الحوار والنقاش المبني على البراهين والادلة</p>	<p>the diagnosis or treatment or add to the special problems of respiratory medical science</p> <p>2.2.4 Drafting scientific papers</p> <p>2.2.5 Risk practice Chest Diseases of infection and contact with the patient and take action to protect the graduate of the occupational diseases evaluation procedures</p> <p>2.2.6 Planning for the development of performance in the field of Chest Diseases</p> <p>2.2.7 The ability to take the appropriate decision to resolve the acute respiratory problems in normal circumstances and disaster</p> <p>2.2.8 Innovation and creativity</p> <p>2.2.9 Dialogue and debate on the evidence and the building based medicine</p>	
<p>بانتهاء دراسة برنامج الدكتوراة يجب ان يكون الخريج قادرا على</p> <p>٢-٣-١ اتقان المهارات المهنية الاساسية والحديثة في مجال التخصص</p> <p>٢-٣-٢ كتابة وتقييم التقارير المهنية</p> <p>٢-٣-٣ تقييم وتطوير الطرق والادوات القائمة في مجال التخصص</p> <p>٢-٣-٤ استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية</p>	<p>On completion MD Degree Chest Diseases programs must be able to graduate grasping both:</p> <p>2.3.1 Master the basic and modern skills in the field of thoracic diseases</p> <p>2.3.2 Writing and evaluating various reports</p> <p>2.3.3 Methods and tools to assess the list in the field of thoracic diseases</p> <p>2.3.4 Use of information technology in the diagnosis of respiratory diseases and to collect data on patients and archive files and save</p>	<p>٢ - المعايير القياسية العامة</p> <p>٢.٣ المهارات المهنية</p>

<p>٢-٣-٥ التخطيط لتطوير الممارسة المهنية وتنمية اداء الاخرين</p>	<p>2.3.5 Planning for the development of medical practice and the development of the performance of others</p>	
<p>بانتهاج دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على</p> <p>٢-٤-١ التواصل الفعال بأنواعه المختلفة</p> <p>٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم تطوير الممارسة المهنية</p> <p>٢-٤-٣ تعليم الاخرين وتقييم ادانهم</p> <p>٢-٤-٤ التقييم الذاتى والتعليم المستمر</p> <p>٢-٤-٥ استخدام المصادر المختلفة للحصول على المعلومات والمعارف</p> <p>٢-٤-٦ العمل فى فريق وقيادة فرق العمل</p> <p>٢-٤-٧ ادارة اللقاءات العلمية والقدرة على ادارة الوقت</p>	<p>On completion MD Degree Chest Diseases programs must be able to graduate grasping both:</p> <p>2.4.1 Ability to communicate, coordinate and cooperate with the medical team and patients and their families and official bodies</p> <p>2.4.2 The use of information technology in the development of the means of Tchks and Respiratory Disease</p> <p>2.4.3 Teach others and evaluating their performance</p> <p>2.4.4 Self-assessment and Continuing Education</p> <p>2.4.5 Use different sources to get the information and knowledge</p> <p>2.4.6 Work in a team and the leadership team</p> <p>2.4.7 Scientific meetings management and the ability to manage time</p> <p>2.4.8 Domestic and international competitive research projects and submit proposals</p> <p>2.4.9 Ability to participate in scientific and educational meetings and prepare the appropriate lectures so</p> <p>٢.٤.١٠ reality assess the health problems in the community,</p>	<p>٢ - المعايير القياسية العامة</p> <p>٢.٤ المهارات العامة و المنتقلة</p>

	including related health system performance	
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ملحق 4: مصفوفة مضاهاة المعايير الأكاديمية للبرنامج و أهداف و نواتج تعلم البرنامج

مستوى إتقان مهاتمة الدراسة والأهداف العامة ونواحي تعلم البرنامج لطلبة الدكتوراة

المعيار الأكاديمي العام		الأهداف ونواحي تعلم البرنامج				الأهداف الأكاديمية			
		نواحي التعلم		الأهداف التطبيقية		المعارف والفهم		الأهداف النظرية	
		المهارات العامة	المهارات المهنية	المهارات التخصصية					
1 مواصفات الفرج	1	X	X	X			X	X	
	2	X	X	X			X	X	
	3	X	X	X		X	X		
	4	X	X	X		X	X		
	5	X	X	X		X			











ملحق (٦) :

## توصيف المقررات

### Program courses

<b>First part</b>
1- physiology
2- Pathology
<b>Second part</b>
<b>Chest Medicine</b>

Benha University.

Faculty of Medicine.

Department of physiology.

### Course Specifications

**Course title: PHYSIOLOGY FOR MD Chest disease**

**Code: CHES 812**

**Academic Year (2013-2014)**

- Department offering the course: **PHYSIOLOGY MD Chest disease**
- Date of specification approval: department council No. , date. 2013 / ٩ /5

#### A- Basic Information

- Allocated marks: 200 marks.
- Course duration: 15 weeks of teaching.

Teaching hours: 1.5 credit hour .

- credit hours / week = 22.5 hrs total teaching hours.

## **B- Professional Information**

### **1 – Overall Aims of Course are to**

- 1.1. Approach to the detailed knowledge of human physiology.
- 1.2. **Acquire** clinical skills to diagnose chest disease on physiological basis.

### **2– Intended learning outcomes of course (ILOs)**

#### **2.1- Knowledge and understanding:**

*By the end of this course, students should be able to:*

- 2.1- List according to priority the main functions of systems, organs and cells.
- 2.2- Explain and describe the basic and detailed physiological processes in correct medical terms and in correct order.
- 2.3- Memorize important physiological definitions and laws.
- 2.4- describe the different mechanisms of homeostasis and how to use it in applied physiology.
- 2.5- provide excellence in medical education, research

#### **2.2- Intellectual skills:**

*By the end of this course, students should be able to:*

- 2.2.1- interprets clinical manifestations on physiological basis.
- 2.2.2- Analyze any physiological curve.

#### **2.3- Professional and practical skills:**

*By the end of this course, students should be able to:*

- 2.3.1- Perform efficiently the appropriate steps and procedures in measuring pulse, respiratory rate and arterial blood pressure.
- 2.3.2- Perform simple experimental blood tests and the use of this data in problem solving.
- 2.3.3- Read a normal ECG paper.
- 2.3.4- interpret different laboratory tests as isolated perfused heart
- 2.3.5- asses pulmonary function tests
- 2.3.6- asses skeletal and smooth muscle contraction
- 2.3.7- perform and study platelet aggregation.

#### **2.4.- General and transferable skills**

*By the end of this course, students should be able to:*

- 2.4.1- shows discipline and appropriate manners when working in a lab and cooperation with his colleges and respect towards general property and how to handle learning facilities with care.

- 2.4.2- deal properly and cautiously in a lab.
- 2.4.3- Use the sources of biomedical information to remain current with the advances in knowledge & practice.
- 2.4.4-participate in community development and in drawing up and implementing development policies and plans.
- 2.4.5- Perform tests showing the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.
- 2.4.6- Demonstrate the macroscopic and microscopic criteria of the altered structures and functions of the body and its major organ systems that are seen in various diseases and conditions.
- 2.4.7- Perform routine technical procedures; diagnostic and therapeutic (including life support).
- 2.4.8- Apply the principles of disease surveillance and screening, communicable disease control, health promotion and health needs assessment as well as counseling practices.

**3- Physiology course for postgraduates (Chest disease )**

- Mechanics of respiration
- Pulmonary ventilation and factors affecting it
- Gas exchange through the respiratory membrane.
- Pulmonary function tests
- Regulation of respiration
- Hypoxia — cyanosis — dyspnea.
- Pneumothorax.
- Abnormal pattern of breathing
- C.O.P
- Arterial blood pressure and its regulation
- E.C.G
- Pulmonary circulation
- Coronary circulation
- Hemorrhage and shock
- Microcirculation
- Edema
- Venous circulation
- Acid — base balance
- Water and electrolyte balance
- Anemias
- Sympathetic and parasympathetic supply to heart and lung.
  
- Pyramidal and extrapyramidal tract
  
- Fever
  
- Suprarenal cortical hormone
  
- Insulin
- Thyroid hormon

**4- Teaching and learning methods:**

#### 4.1. Methods used

- 4.1-1. lectures
- 4,1.2.-seminares
- 4,1.3-confrences

#### 4-2-teaching plan

##### Time plain:

Item	Time schedule	Teaching hours
Lectures	1Time/week  (each time 2hours)	30hours

#### 5- Student assessment methods:

##### 5-a) Assessment TOOLS:

Tool	Purpose (ILOs)
Written examination	To assess knowledge and understanding , professional and general skills
Oral examination	To assess knowledge and understanding, general and transferable skills .

##### 5-b) TIME SCHEDULE:

Exam	Week
5- Final exam	at end of second term (May-June)

##### 5-c-Assessment time schedule

Assessment 1... Written and oral

##### 5-d-weighting system ( formative or summative).

##### D) Weighting System:

Examination	Marks allocated	% of Total Marks
2- Final exam: a- Written	100	50%
b- Oral	100	50%
<b>Total</b>	<b>200</b>	<b>100%</b>

- Passing grades are: EXCELLENT >85%, VERY GOOD 75- <85%, GOOD 65- <75% and FAIR 60- <65%.

#### **FORMATIVE ASSESSMENT:**

- Student knows his marks after the Formative exams.

#### **5-E) Examination description:**

Examination	Type	Description
Final Examination	1. Written	written paper composed of short essay-type questions, long assay.
	3. Oral	One oral examination station with 2 staff members (10-15 minutes: 4-5 questions)

#### **6- List of references**

6.1 - Essential books (text books)

Poul-Erik Paulev(2007):Textbook in Medical Physiology And Pathophysiology  
Essentials and clinical problems

6.2. **Kim E. Barrett ,Susan M. Barman ,Scott Boitano ,Heddwen Brooks:**

**Ganong's Review of Medical Physiology, 24th Edition (LANGE Basic Science) – April 26, 2012**

6.3- Periodicals, Web sites, ... etc

[www.jap.physiology.org](http://www.jap.physiology.org).

HYPERLINK

"http://www.physiologyonline.physiology.org/cgi/content" [www.physiologyonline.physiology.org/cgi/content](http://www.physiologyonline.physiology.org/cgi/content)

#### **7- Facilities required for teaching and learning**

1. Data show.
2. Overhead projector.
3. postgraduate laboratories with their equipments.

**Course coordinator:** Prof. Alaa Elteleis

**Head of Department:** Prof. Alaa Elteleis

**Benha University**

**Faculty of Medicine**

**Department of pathology \_\_\_\_\_.**

**Course Specification**

**Course title:** Human Pathology for Decorate degree of Chest

- (Code): \_\_\_\_ (CHES811)

**Academic Year (2013 – 2014)**

- Department offering the course: .....pathology.....
- Academic level: ... Decorate .....
- Date of specification approval:  
- Department council no....., date...5/9/2013.....

**A) Basic Information:**

- Allocated marks: 200 marks
- Course duration: 25 weeks of teaching
- Teaching hours: 1.2 hours/week = 30

**B) Professional Information:**

**1- Overall Aim of the Course:**

The overall goals of the course are:

- 1.1. Good application of basic pathological knowledge essential for the practice of chest medicine
- 1.2. Providing basic and specialized services in relation with biopsy diagnosis in the practice of medicine and investigations.

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

**2.a. Knowledge and understanding:**

*By the end of the course, students should be able to:*

- 2.a.1. Describe the dissection of respiratory biopsies.
- 2.a.2 Describe the clinical manifestations and differential diagnosis of common respiratory pathological

cases.

2.a.3. Discuss the scientific basis and interpretation of various diagnostic modalities essential for respiratory system medical practice .

2.a.4. Identify the principles that govern ethical decision making in clinical practice as well as the pathological aspect of medical malpractice.

2.a.5. Identify basic knowledge & theories needed to support literature retrieval and further research capabilities.

**2.b. Intellectual Skills:**

*By the end of the course, students should be able to:*

2.b.1. Solve problem and make decision skills necessary for proper evaluation and management.

2.b.2. Analyze the risky problems that could be met during taking biopsies .

2.b.3. Interpret the clinical and investigational database to be proficient in clinical problem solving.

2.b.4. Plan for performance development in his practice.

2.b.5. Select the most appropriate and cost effective diagnostic procedures for each problem.

2.b.6. Formulate of research hypothesis & questions.

2.b.7. Adopt the questioning approach to own work & that of others to solve clinical problems

**2.c. Practical and Clinical Skills:**

*By the end of the course, students should be able to:*

2.c.1. Assess, diagnose and evaluate of cases and investigation.

2.c.2. Understand and interpret all important pathological aspects for early cancer detection and assessment.

2.c.3. Perform the gross examination and able to describe the findings of different organs efficiently

2.c.4. Diagnose and manage different respiratory cases.

2.c.5. Understand reports like cancer assessment report, cytological report and immunohistochemical report.

2.c.6. Apply different technical skills in his special practice.

**2.d. General and transferable Skills:**

*By the end of the course, students should be able to:*

2.d.1. Work effectively as a member or a leader of an interdisciplinary team and



2.d2. Respect rules & regularities for evaluation of performance of others.

2.d3. Establish life-long self-learning required for continuous professional development

2.d4. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d5. Do self criticism. .

2.d6. Retrieve, manage, and manipulate information by all means, including electronic means.

### **3- Course contents:**

<b>Subject</b>	<b>Lectures (hrs)</b>	<b>Tutorial / Small group discussion (hrs)</b>	<b>Practical (hrs)</b>	<b>Total (hrs)</b>	<b>% of Total</b>
<b>General Pathology</b>	5	xx	0	5	16.6
Cell response to injury,	1/2	xx	Xx	1/2	1.6
Stem cells and repair,	1		Xx	1	3.3
Tissue deposits					
Inflammation ,Granulomas ,Viral diseases	1/2	xx	Xx	1/2	1.6
Disturbance of growth Neoplasia,	1	xx	Xx	1	3.3
Developmental and genetic diseases	1/2	xx	xx	1/2	1.6
Circulatory disturbances, Radiation	1	xx	xx	1	3.3
Basic immunopathology					
Nutritional disorders	1/2	xx	xx	1/2	1.6
Diagnostic methods in pathology					
<b>Special Pathology</b>	10	x	15	25	84.4
Pulmonary infections	1.5	xx	2	3.5	11.6
2. Chronic Obstructive Pulmonary Diseases (COPD):	1.5	Xx	2	3.5	11.6
3 Circulatory disturbances	2	Xx	1.5	2.5	8.3
4. Diffuse interstitial pulmonary disease	1	Xx	1.5	2.5	8.3

5. Tumors of lung & pleura: Latest WHO classification	2	Xx	3	5	16.6
6. Lymphoproliferative disorders of the lung	1	Xx	2	3	10
Types of biopsies, Immunohistochemistry of the respiratory system & other diagnostic methods.	2	Xx	3	5	16.6
Cytopathology in chest disease					
Total	15	xx	15	30	100

**4- Teaching and learning methods:**

**METHODS USED:**

1. Modified Lectures
2. Small group discussions
3. Problem solving.
4. Self learning
5. histopathology slide lab
6. **museum pathology**

**TEACHING PLAN:**

**Lectures:** Division of students into 1 group  
0.6 hour /week, Time from 10 to 10:45.

**Tutorials:**

**Practical classes**

**Time plan: faculty bylow**

**5- Students Assessment methods:**

**5-A) ATTENDANCE CRITERIA:** Faculty bylaws

**5-B) Assessment Tools:**

<b>Tool</b>	<b>Purpose (ILOs)</b>
Written examination	To assess knowledge, understanding & intellectual skills
Oral examination	To assess knowledge understanding & attitudes
Practical examination	To assess professional and practical skills

**5-C) TIME SCHEDULE:** Faculty bylaws

**5-D) Weighting System:**

<b>Examination</b>	<b>Marks allocated</b>	<b>% of Total Marks</b>
1- First part:	200	100
a- Written	100	50
b- Practical	50	25
c- Oral	50	25
2- Second part:		
a- Written		

b- Practical c- Oral		
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Student knows his marks after the Formative exams.

**5-E) Examinations description:**

3- Thesis		
4- Assignments & other activities		
<b>Total</b>		

- The minimum passing & Passing grades (Faculty bylaws).

**FORMATIVE ASSESSMENT:**

<b>Examination</b>	<b>Description</b>
<b>1- <u>First part:</u></b> a- Written b- Practical c- Oral	MCQs, shorts assay, long essay, case reports, problem solving..... Jars and slide photos 2 sessions
<b>2- <u>Second part:</u></b> a- Written b- Practical c- Oral	-
<b>3- <u>Thesis:</u></b>	
6- Assignments & other activities	. Assignments, projects, practical books
<b>Total</b>	

**6- List of references:**

6.1- Course notes.

- 1- Handouts updated, administered by staff members
- 2- Museum notebook.
- 3- CDs for histopathological slides and museum specimens are available at the department.

6.2- Essential books (text books)

- Rosai and Ackerman's Surgical Pathology Juan Rosai, Mosby 2004
- Sternberg's Diagnostic surgical Pathology 4<sup>U1</sup> edition, Lippincott Williams and Wilkins
- Kumar V ,Abbas AK ,Fausto N:Robbins and Cotran Pathologic Basis of Disease ,7<sup>th</sup> ed.;2005, Elsevier Saunders. Available at faculty bookshops & main library.

6.3- Periodicals, Web sites, etc

<http://www.pathmax.com/> <http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2>  
<http://www.med.uiuc.edu/PathAtlas/titlePage.html> <http://www.medscape.com/pathologyhome>

<http://www.gw> hyperlink <http://umc.edu/dept/path/2> [umc.edu/dept/path/2F](http://umc.edu/dept/path/2F)

### **7- Facilities required for teaching and learning:**

Facilities used for teaching this course include:

4. Data show
5. Overhead projector
6. Museum specimens
7. Projector slides covering available slides in slide box
5. Surgical specimens

**Course coordinator: Prof. Dr. Samia Ahmed Youssef**

**Head of Department: Prof. Dr. Abdel-lattif El-Balshi**

Approved 05/09/2013

**Benha University  
Faculty of Medicine  
Chest Diseases Department**

### ***Course specifications***

**Course title :** *MD Chest Diseases and Tuberculosis*

**Code :** *CHES810*

**Academic Year** *( 2013 – 2014 )*

**Department:** Chest Diseases Department

**Academic Year of MD program**

**Date of specification approved: 2013 – 2014**

**A) Basic Information:**

Allocated marks: 1000 marks

Course duration: 18 months of teaching

Teaching hours : 152 hours / month = 2736 total teaching hours

**B) Professional Information:**

**1- Overall Aim of the Course:**

- 1) To develop a high level of knowledge and understanding of respiratory disease
- 2) to develop a high level of skills in the assessment and managing patients with respiratory disease
- 3) To understand the etiology; the pathogenesis; and the clinical, laboratory and pathologic manifestations of the respiratory diseases.
- 4) To interpret properly, and manage information from laboratory and radiology studies that relate to the patients' conditions
- 5) To apply the principles of evidence-based medicine and cost effectiveness in making decisions about the utilization of limited medical resources
- 6) To develop a very high level of self leaning and research skills

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

**a- Knowledge and understanding:**

By the end of the course, students should be able to:

- 1) Identify the etiology, epidemiology, pathophysiology, genetics, diagnosis, clinical features, investigations and management of respiratory disease
- 2) Describe the importance of environment and occupation in respiratory disease and the role of preventative medicine and public health in respiratory medicine
- 3) Define the patient's rights to play a part in the decision-making process of their own management
- 4) Describe the determinants of health and principles of disease prevention and behavior change appropriate for specific patient populations within the community and internationally, and apply these to patient care responsibilities and broader patient care initiatives (natural history of disease and relationships with risk factors and disease prevention).

**b- Intellectual skills:**

**By the end of the course, students should be able to:**

1. Interpret the most important symptoms and signs of chest disease
2. Formulate appropriate management plans for individual patients presenting with the most common chest disorders. The management plan should indicate investigations (and how they would be interpreted) as well as treatment.
3. Make decisions regarding common clinical situations using appropriate problem solving skills using evidence based medicine and relevant ethical principles.
4. Interpret X ray and CT films , PFTs , pleural aspirates ABGs and biopsies covering the most important chest conditions .

**c- Professional and practical skills:**

By the end of the course, students should be able to::

1. Perform PFT and how to judge fallacies in the test
2. Perform pleural aspiration without complications
3. insert intercostal tube
4. Do bronchoscope properly and to take lavage and biopsy
5. get arterial blood samples for ABGs
6. Monitor patients on mechanical ventilators and to manage weaning failures
7. Diagnose urgent life-threatening conditions and put a complete plan for the management and follow up.

**d- General and transferable skills:**

By the end of the course, students should be able to:

1. Present patient's data in an organized and informative manner.
2. Communicate effectively with children, adolescents and their families using appropriate communication skills.
3. Demonstrate appropriate professional attitudes and behaviors in different practice situations.

**3- Course contents:**

<b>Subject</b>	<b>Lectures (hrs)</b>	<b>Tutorial/Small group discussion (hrs)</b>	<b>Practical (hrs)</b>	<b>Total (hrs)</b>	<b>% of total</b>
Design of the human lung	12	xxx	xxx	12	0.4%
The respiratory muscles	12	xxx	xxx	12	0.4%
Genetic, molecular and cellular bases of lung development	12	xxx	xxx	12	0.4%
Development and growth of the lung	12	xxx	xxx	12	0.4%
Cellular and molecular mechanisms regulating airway smooth muscle physiology and pharmacology	12	xxx	xxx	12	0.4%
Pulmonary Surfactant System Alveolar Homeostasis	12	xxx	xxx	12	0.4%
Transport function of the airway epithelia and submucosal glands	12	xxx	xxx	12	0.4%
The pulmonary mechanics	24	4	xxx	48	1.7 %
Control of ventilation	12	8	xxx	60	2.2%
Diffusion, chemical reaction and diffusion capacity	12	xxx	xxx	12	0.4 %
Blood gases transport	12	xxx	xxx	12	0.4%
Acid-base balance and abgs	24	6	xxx	72	6.7 %
Exercise, intergration and adaptation	24	xxx	xxx	24	0.8 %
Breathing in exercise	12	xxx	xxx	12	0.4%
Pregnancy and the lung	24	xxx	xxx	24	0.8 %
Aging and lung	24	xxx	xxx	24	0.8 %
Pulmonary defence mechanism against infections	24	xxx	xxx	24	0.8 %
Lymphocyte and macrophage mediated inflammations of the lung	12	xxx	xxx	12	0.4 %

Mast cells and eosinophils	24	xxx	xxx	24	0.8%
Antibody mediated lung defense and humoral immunodeficiency	24	xxx	xxx	24	0.8 %
Cytokine and chemokine in lung inflammation and injury	24	xxx	xxx	24	0.8 %
Leukocyte accumulation in pulmonary diseases	12	xxx	xxx	12	0.4 %
Oxidative and nitrosative lung injury	12	xxx	xxx	12	0.4 %
History taking and physical examination	xxx	xxx	96	96	3.6 %
Intercostal intubation	xxx	xxx	24	24	0.8%
Fiberoptic bronchoscope	xxx	xxx	12	12	0.4 %
Thoracoscope	xxx	xxx	12	12	0.4 %
Chronic obstructive pulmonary diseases	36	xxx	36	72	2.7 %
Interstitial lung diseases	36	xxx	48	94	3.1%
Occupational and environmental lung diseases	48	xxx	xxx	48	1.7 %
Drug induced lung diseases	12	xxx	xxx	12	0.4 %
Alveolar hemorrhage syndromes:	12	xxx	xxx	12	0.4 %
Pulmonary circulation in health and disease	12	xxx	xxx	12	0.4 %
Diseases of the pleura	36	xxx	24	94	3.1 %
Diseases of the mediastinum	36	xxx	xxx	36	1.3%
Diseases of the chest wall and diaphragm	24	xxx	24	48	1.7 %
Sleep related respiratory disorders	24	xxx	48	92	2.7 %
Surgical aspect in pulmonary medicine	24	xxx	xxx	24	0.8 %
The lung neoplasm	60	xxx	240	300	9.3 %
Lymphoproliferative and homeostatic disorders of the lung and pleura	2	xxx	xxx	12	0.4 %
Infectious diseases of the lung	214	xxx	24	128	6.2 %
Tuberculosis	36	xxx	240	246	10.2%
Respiratory failure	24	xxx	36	60	2.2 %
Principles in mechanical ventilation	48	xxx	24	36	2.7%
Acute lung injury	12	xxx	12	24	0.8 %
Decision making in ICU	12	xxx	12	24	0.8 %
Ethics in ICU	12	xxx	12	24	0.8%
PFT	xxx	12	xxx	36	2.7 %
Imaging in pulmonary diseases	xxx	12	xxx	48	4%
Antimycobacterial therapy	xxx	12	xxx	48	4 %
Antibiotics and chemotherapeutics	xxx	8	xxx	48	1.7 %
Oxygen therapy	xxx	8	xxx	48	1.7 %
Nebulizers and inhalation therapy	xxx	12	xxx	72	2.7 %
Nanotechnology in respiratory medicine	12	xxx	xxx	12	0.4%
Gene therapy in respiratory diseases	12	xxx	xxx	12	0.4%
<b>Total</b>	<b>1008</b>	<b>72</b>	<b>936</b>	<b>2236</b>	<b>100 %</b>

### **3-A) Topics details :**

#### **Design of the human lung**

1. The lung as an organ
2. Organization of lung tissue
3. Functional design of the lung

### The respiratory muscles

1. Structural and functional properties of respiratory muscle
2. Actions of respiratory muscle
3. Respiratory muscle interaction
4. Physiological conditions affecting respiratory muscle interaction
5. Pathological conditions affecting respiratory muscle interaction

### Genetic, molecular and cellular bases of lung development

1. Ii. Growth factor signaling during lung development
2. Positioning and regulation of fgf10 expression in the lung bud
3. Proximal-distal differentiation of the lung endoderm
4. Formation of a functional respiratory unit (alveolus)
5. Toward an integrated model of lung branching morphogenesis

### Development and growth of the lung

1. Ii. Prenatal lung development----embryonic period
2. Prenatal lung development fetal period (week 5--term)
3. Postnatal lung development
4. Growth of the lung

### Cellular and molecular mechanisms regulating airway smooth muscle physiology and pharmacology

1. Asthma and airway smooth muscle shortening
2. Airway smooth muscle hypertrophy and hyperplasia
3. Chemokine and cytokine release by airway smooth muscle cells
4. Airway smooth muscle cells and extracellular matrix

### Pulmonary surfactant system alveolar homeostasis

1. Physical forces at the air-liquid interface
2. Composition of pulmonary surfactant
3. Recycling and catabolism of surfactant lipids and proteins
4. Regulation of surfactant production
5. Surfactant homeostasis and replacement in infantile respiratory distress syndrome
6. Surfactant in adult respiratory distress syndrome
7. Inhibition of surfactant activity
8. Reduction of surfactant synthesis

### Transport function of the airway epithelia and submucosal glands

1. Biology of epithelia covering the airway surface
2. Biology of airway submucosal glands
3. Integrated physiology and host defense functions

### The pulmonary mechanics

1. Lung volumes
2. Static mechanical properties of the respiratory system
3. Elastic properties of the lungs (pulmonary compliance)



4. Dynamic mechanical properties of the respiratory system
5. Mechanical determinants of regional ventilation
6. Work and energy cost of breathing

#### Control of ventilation

1. Major afferent systems
2. Central neural mechanisms
3. Coordination of the activity of the respiratory muscles
4. Integrated responses of the control system
5. Pathophysiology: disorders of the regulation of breathing

#### Ventilation, pulmonary blood flow and ventilation-perfusion relationships

1. Basic outline of the gas exchange pathway
2. Potential disruption of the gas transport pathway
3. Assessment of ventilation-perfusion inequality

#### Diffusion, chemical reaction and diffusion capacity

1. Diffusion
2. Chemical reactions of gases
3. Diffusing capacity

#### Blood gases transport

1. Oxygen transport
2. Carbon dioxide transport

#### Acid-base balance

1. Basic physiology of the role of the kidney
2. In acid-base balance
3. Bicarbonate reclamation
4. Net renal acid excretion
5. Respiratory contribution to acid-base balance
6. Acute and chronic adaptation to respiratory acidosis
7. Renal adaptation to respiratory alkalosis
8. Respiratory adjustment to metabolic acidosis
9. Respiratory adjustment to metabolic alkalosis
10. Alternative concepts of acid-base balance
11. Approach to the patient with an acid-base disturbance

#### Exercise, intergration and adaptation

1. The integrated response
2. Homeostasis and its perturbations
3. Adaptation

#### Breathing in exercise

1. Ventilatory requirements

2. Ventilatory control
3. Ventilatory costs
4. System constraints and limitations

#### Pregnancy and the lung

1. Anatomic changes of normal pregnancy
2. Physiological changes of normal pregnancy
3. Acute respiratory distress in pregnancy
4. Respiratory diseases in pregnancy

#### Aging and lung

1. Structural changes in the lung
2. Changes in mechanical properties of the lungs
3. Changes in muscles of respiration
4. Control of breathing
5. Pulmonary circulation
6. Pulmonary function tests
7. Exercise capacity
8. Sleep
9. Interpreting pulmonary function tests in the elderly

#### Pulmonary defiance mechanism against infections

1. Specialized regional defenses
2. Defects in host defenses that can be associated with respiratory infections
3. Host defenses in the approach to patients with pulmonary disease

#### Lymphocyte and macrophage mediated inflammation of the lung

1. Lymphocytes in the lung
2. Macrophages in the lung
3. Lymphocyte-macrophage interactions in the lung

#### Antibody mediated lung defiance and humoral immunodeficiency

1. Overview of b lymphocyte biology
2. Marginal zone and b1 b cells
3. Immunoglobulin structure and function
4. Origins and fate of respiratory tract immunoglobulin
5. Antigen-specific pulmonary antibody responses
6. Immunoglobulin measurement in the human lung
7. Pathology induced by respiratory tract immunoglobulin
8. Humoral immunodeficiency and the lung

#### Cytokine and chemokine in lung inflammation and injury

1. Early-response cytokines and the initiation of pulmonary inflammation
2. Type i and type ii cytokines iii. Fibrotic cytokines

3. Chemotactic cytokines and the inflammatory response

#### Leukocyte accumulation in pulmonary diseases

1. Leukocyte adherence and migration regulated by adhesion molecules
2. Chemoattractant molecules during lung response
3. G protein--coupled receptor-mediated requirement for migration
4. Progression of leukocyte migration during pulmonary inflammation

#### Oxidative and nitrosative lung injury

1. Formation of oxidative and nitrosative species
2. Production of nitric oxide and reactive nitrogen species
3. Functional consequences of protein nitration in vitro
4. Hypercapnia: an example of a radical quandary

#### The pathogenesis of pulmonary fibrosis

1. Pathways to pulmonary fibrosis
2. Fibroblasts/myofibroblasts: the bridge between inflammation or epithelial
3. Activation and relentless fibrosis
4. Genetic susceptibility and pulmonary fibrosis

#### Clinical application in respiratory medicine

1. History
2. Physical examination
3. Dyspnea
4. Abnormal breathing patterns
5. Diagnostic testing in the evaluation of dyspnea
6. Cough
7. Hemoptysis
8. Cyanosis
9. Clubbing
10. Hypertrophic osteoarthropathy
11. Thoracic pain
12. Fever
13. Radiologic evaluation
14. Common chronic pulmonary diseases
15. Choosing pulmonary function tests

#### Chronic obstructive pulmonary diseases

1. History of pathologic descriptions of COPD
2. Lesions of the lung parenchyma in COPD: emphysema
3. Lesions of the large airways in COPD
4. Lesions of the small airways in COPD
5. Lesions of the vessels in COPD

#### Occupational and environmental lung diseases

1. Classification of occupational and environmental lung disease

2. Basic principles of occupational and environmental lung disease
3. Importance of occupational and environmental lung diseases
4. Establishing a cause
5. Clinical approach to the patient
6. Prevention

#### Drug induced lung diseases

1. Approach to the patient with suspected chemotherapy-induced pulmonary toxicity
2. Cytotoxic antibiotics
3. Alkylating agents
4. Antimetabolites
5. Nitrosoureas
6. Biologic response modifiers
7. Miscellaneous agents

#### Interstitial lung diseases

1. Epidemiology
2. Clinical approach to patients with interstitial lung disease
3. Treatment

#### Alveolar hemorrhage syndromes:

1. Autoimmune causes of alveolar hemorrhage: differential diagnosis
2. Clinical features of autoimmune alveolar hemorrhage
3. Diagnosis
4. Therapy of immune-mediated alveolar hemorrhage
5. Specific syndromes

#### Pulmonary circulation in health and disease

1. Pulmonary hemodynamics
2. Pulmonary vasomotor control
3. The pulmonary arterial microcirculation in gas exchange
4. The bronchial circulation
5. The fetal and neonatal pulmonary circulations
6. Abnormal pulmonary vascular communications
7. Congenital pulmonary arteriovenous communications

#### Diseases of the pleura

1. Parapneumonic effusions and/or empyema
2. Tuberculous pleural effusions
3. Fungal pleural effusions
4. Viral pleural effusions
5. Parasitic infections of the pleural space
6. Pulmonary emboli
7. Pancreatitis
8. Esophageal perforation
9. Intra-abdominal abscess

10. Collagen vascular diseases
1. Pleural effusion from drug reactions
2. Pleural effusion secondary to asbestos exposure
3. Chylothorax
4. Hemothorax
5. Postsurgical pleural effusions
6. Sarcoidosis
7. Post-cardiac injury (dressler's) syndrome
8. Uremic pleuritis
9. Yellow nail syndrome
10. Pleural effusions in patients with aids

#### Diseases of the mediastinum

1. Anatomy
2. pneumomdiastinum
3. acute mediastinitis
4. chronic mediastinitis

#### Diseases of the chest wall and diaphragm

1. Kyphoscoliosis
2. Thoracoplasty
3. Pectus excavatum
4. Ankylosing spondylitis
5. obesity
6. flail chest

#### Sleep related respiratory disorders

1. What is sleep?
2. Why sleep?
3. Autonomic regulation during sleep
4. Substrate and physiological
5. Mechanisms of sleep
6. The nature of rem

#### Surgical aspect in pulmonary medicine

1. Patient selection
2. Morbidity and mortality
3. Preoperative assessment and optimization
4. Perioperative factors reducing lung function
5. Resection
6. Complications after lung resection

#### The lung neoplasm

##### Genetic and molecular changes in the lung

1. Genetic susceptibility to lung cancer
2. Molecular changes

3. The progression of normal airway epithelium to malignant epithelium
4. The impact of molecular genetic changes on the cell cycle

#### Solitary pulmonary nodules

1. Definition
2. Incidence and prevalence
3. Malignant solitary pulmonary nodules
4. Benign solitary pulmonary nodules
5. Imaging techniques
6. Distinguishing between benign and
7. Malignant nodules
8. Biopsy techniques
9. Thoracotomy and thoracoscopy
10. Diagnostic approach
11. The 1999 and 2004 world health organization classification of lung cancer

#### Pathology of nonsmall cell lung carcinoma

1. Tumors---major revisions
2. General considerations in histological classification
3. Squamous cell carcinoma
4. Adenocarcinoma, including bronchioloalveolar carcinoma
5. Adenosquamous carcinoma
6. Large cell carcinoma
7. Sarcomatoid carcinoma
8. Carcinoid tumors
9. Salivary gland tumors
10. Ancillary studies
11. Histochemical stains

#### Treatment of nonsmall cell lung carcinoma

1. Diagnosis
2. Staging
3. Surgical treatment of lung cancer
4. Chestwall resection
5. Results of treatment
6. Future directions
7. Criteria for reporting results
8. Localized non--small-cell lung cancer
9. Locally advanced NSCLC
10. Advanced-stage NSCLC
11. Management of non--small-cell lung cancer
12. Limited-stage small-cell lung carcinoma
13. Toxicity of thoracic radiotherapy
14. Advances in radiotherapy

#### Small cell lung cancer

1. Epidemiology
2. Histopathological classification
3. Tumor biology
4. Natural history
5. Diagnosis
6. Staging
7. Clinical presentation
8. Paraneoplastic phenomena
9. Extrapulmonary small cell carcinoma
10. Prognostic factors
11. Treatment
12. Late complications

Benign lung tumors other than bronchogenic carcinoma

1. Benign tumors
2. Malignant tumors

Extrapulmonary syndrome associated with lung tumors

1. Hypercalcemia of malignancy
2. Hyponatremia of malignancy
3. Ectopic ACTH Syndrome
4. Acromegaly
5. Hematologic syndromes
6. Neurologic syndromes
7. Cancer-associated retinopathy
8. Lambert-Eaton Syndrome

Pulmonary metastasis

1. Patient selection, operability, and resectability
2. Tissue histology, disease-free interval, and number of metastases
3. Extent of and approach to resection
4. Role of mediastinal nodal evaluation and effect on outcome
5. Isolated lung perfusion

Lymphoproliferative and haemostatic disorders of the lung and pleura

1. Anatomy and histology of the pulmonary lymphoid system
2. General considerations
3. Reactive lymphoid processes
4. Malignant lymphoid lesions
5. Posttransplant lymphoproliferative disorder
6. Leukemic infiltrates involving the lung
7. Pleural lymphomas

Infectious diseases of the lung

1. Mechanical defenses

2. Innate immunity
3. Inflammatory responses
4. Adaptive immune responses

#### Acute bronchitis and community acquired pneumonia

1. Acute bronchitis
2. Pneumonia
3. Treatment
4. Adjunctive therapy
5. Prevention
6. Quality of care measures: pneumonia

#### Acute exacerbation of chronic obstructive pulmonary disease

1. Definition
2. Etiology
3. Evaluation
4. Treatment

#### Pneumonia in childhood

1. Neonatal pneumonia
2. Pneumonia in early infancy
3. Pneumonia after the first 6 months of life
4. Tuberculosis
5. Pneumonia complicating childhood viral exanthems
6. Aspiration pneumonia
7. *Pneumocystis Carneiii* pneumonia (PCP)
8. Recurrent pneumonia

#### Aspiration, empyema, lung abscess

1. Microbiology of aspiration pneumonia
2. Microbiology of empyema
3. Microbiology of lung abscess
4. Radiology and diagnosis of anaerobic
5. Pleuropulmonary infections
6. Diagnosis of lung abscess
7. Treatment of aspiration pneumonia and anaerobic lung infections
8. Treatment of lung abscess

#### Mediastinitis

1. Mediastinitis
2. Acute mediastinitis
3. Chronic mediastinitis



### Cystic fibrosis

1. Diagnosis
2. Pathogenesis of infection
3. Secondary pathogenic steps: mucus, pseudomonas, and inflammation
4. Treatment of lung disease
5. Antibiotics
6. Anti-inflammatory agents
7. Antimicrobials in the treatment of acute exacerbations

### Bronchiectasis

1. Prevalence
2. Pathophysiology
3. Clinical features
4. Classification using radiology
5. Predisposing or associated factors
6. Diagnosis of bronchiectasis
7. Bacteriology
8. Treatment

### Pneumonia in surgery and trauma

1. Epidemiology
2. Risk factors
3. Pathogenesis
4. Microbiology
5. Clinical features and diagnosis
6. Prevention
7. Treatment of pneumonia in trauma and surgery patients

### Pulmonary infection in immunocompromised host

1. Microbial virulence and infection
2. Protecting the patient from infection
3. Recognition of new syndromes
4. Concomitant processes
5. Patient management
6. General considerations in special hosts
7. Bone marrow and stem cell transplantation
8. Solid organ transplantation
9. Primary immune defects
10. Digeorge's syndrome

### Human immunodeficiency virus and pulmonary infection

1. Pathophysiology
2. Pathophysiology of HIV in the lung
3. Systemic immunodeficiency
4. Lung-specific immunodeficiency
5. Overview of HIV management

6. Epidemiology of pulmonary disease in HIV
7. Basic evaluation of the HIV-positive patient with respiratory complaints
8. Empiric therapy and the HIV-positive patient with pulmonary complaints

*Pneumonia caused by gram positive bacteria*

1. *Streptococcus pneumoniae*
2. *Staphylococcus aureus*
3. *Rhodococcus equi*
4. *Streptococcus pyogenes* (group a streptococcus)
5. Other gram-positive pathogens

*Nosocomial pneumonia*

1. Pathogenesis
2. Incidence
3. Risk factors for nosocomial pneumonia
4. Risks associated with respiratory devices
5. Mortality
6. Etiologic agents
7. Diagnosis
8. Therapy
9. Prevention

*Pulmonary fungal infection*

1. Pulmonary aspergillosis
2. Pulmonary candidiasis
3. Pulmonary zygomycosis (mucormycosis)
4. Other emerging opportunistic molds
5. Cryptococcal infections
6. Histoplasmosis
7. Coccidioidomycosis
8. Blastomycosis

*Pneumocystis pneumonia*

1. Structure and life cycle
2. Taxonomy and molecular biology
3. Epidemiology of infection due to *pneumocystis*
4. Clinical presentation
5. Extrapulmonary pneumocystosis
6. Radiography
7. Laboratory findings
8. Sputum examination and histologic diagnosis
9. Invasive diagnosis of pneumocystosis
10. Prophylaxis and prophylactic strategies
11. Treatment of *pneumocystis pneumonia*

Viral infections of the upper and lower airways

1. General principles
2. The common cold
3. Laryngitis and pharyngitis
4. Tracheobronchitis (croup)
5. Tracheobronchitis
6. Bronchiolitis
7. Influenza
8. Viral pneumonia

Protozoal lung infection

- I. Amebiasis
  1. Free-living amoeba: *acanthamoeba*
  2. Systemic coccidiosis
  3. Intestinal coccidiosis
  4. Cyclosporiasis
  5. Malaria
  6. Babesiosis
  7. Trypanosomiasis
  8. Leishmaniasis
  9. Ciliate infections
  10. Flagellates
  11. Microsporidiosis

Parasitic helminthic lung disease

1. Biology and immunology
2. Approach to the patient with helminthic
3. Infection of the lungs
4. Diseases due to nematodes (roundworms)
5. Diseases due to cestodes (segmented worms)
6. Diseases due to trematodes (flatworms)

Zoonotic and unusual bacterial pneumonia

1. Zoonotic bacterial pneumonias
2. Environmental and animal product pneumonias
3. Pneumonias caused by obligate human commensals

Tuberculosis

1. Surveillance
2. Epidemiology
3. Transmission
4. Prevention and control
5. Tuberculous and nontuberculous mycobacteria
6. Host determinants of disease
7. Bacterial determinants of disease

8. Diagnosis of tuberculosis
9. Drug susceptibility testing
10. Prevention
11. Treatment
12. Clinical presentation
13. Diagnosis
14. Tuberculosis in special hosts
15. Treatment of tuberculosis
16. *Mycobacterium tuberculosis* and HIV
17. *Mycobacterium avium* complex and HIV
18. Atypical mycobacteria

Approach in patient with pulmonary infection

1. The patient with pneumonia
2. Pulmonary infections: pathological and
3. Pathogenetic features
4. Major clinical syndromes
5. Noninfectious processes mimicking pulmonary infections

Radiology in pulmonary infections

1. Imaging modalities
2. Generic lung findings associated with pneumonia

Pathology of pulmonary infections

1. The approach to tissue sampling
2. Handling of biopsy tissues
3. Patterns of pulmonary injury in infection

Principle of antibiotic use in pulmonary infections

1. Principles of antibiotic use
2. Features of specific antimicrobials used in the therapy of respiratory infections
3. Principles of therapy for respiratory tract infections

Vaccination against pulmonary infections

- I. Vaccines against bacterial pulmonary pathogens
- II. Vaccines against viral pulmonary pathogens
- 1.

Pulmonary virulence factor in pulmonary infections

1. General mechanisms of infectious processes in the respiratory tract
2. Molecular factors and processes in respiratory infections
3. Specific virulence mechanisms of microbial pathogens
4. Examples of the molecular pathogenesis of acute and chronic bacterial respiratory infections

Infections of the upper respiratory tract

1. The common cold
2. Pharyngitis
3. Oral cavity infections

4. Laryngitis
5. Croup
6. Epiglottitis
7. Bacterial tracheitis
8. Laryngeal papillomatosis
9. Sinusitis
10. Ear and mastoid infections

#### Respiratory failure

1. Classification of respiratory failure
2. Pathophysiology
3. Categories of respiratory failure
4. Approach to the patient
5. Principles of management
6. Monitoring patients with acute respiratory failure
7. Complications of acute respiratory failure
8. Prognosis

#### Acute lung injury and acute respiratory distress syndrome

1. Pathophysiology of pulmonary edema in acute lung injury
2. Mechanisms of acute lung injury
3. Ventilator-associated lung injury
4. Resolution of lung injury

#### The systemic inflammatory response syndrome (sirs) and multiple organ dysfunction syndrome (mods)

1. Definitions, natural history, and epidemiology
2. Stress response, sirs, sepsis, and mods
3. Clinical patterns of sirs and mods epidemiology
4. Pathophysiology
5. Hypotheses of underlying mechanisms
6. Management

#### Acute respiratory failure in surgical patients

1. Identification of the high-risk patient
2. Impact of anesthesia and postoperative analgesia on pulmonary function
3. Impact of surgery on postoperative pulmonary function
4. Causes of postoperative respiratory failure
5. Use of noninvasive positive pressure ventilation

#### Pump failure

1. Compensatory/adaptive mechanisms
2. Decompensating/maladaptive responses
3. Specific diseases
4. Assessment of patients with abnormalities of the ventilatory pump
5. Treatment

Oxygen therapy and pulmonary oxygen toxicity

1. Tissue oxygenation
2. Recognition and assessment of tissue hypoxia
3. Indications for oxygen therapy
4. Techniques of oxygen administration
5. Pulmonary oxygen toxicity
6. Pathophysiology
7. Clinical syndromes

Pulmonary pharmacotherapy

1. Bronchodilators
2. Anti-inflammatory agents
3. Mucokinetic agents
4. Physiological replacements
5. Respiratory stimulants

Intubation and upper airway management

1. Upper airway anatomy and clinical relevance
2. Upper airway management
3. Techniques and equipment
4. Airways
5. Resuscitation bags
6. Masks
7. Extraglottic airway devices
8. Tracheal intubation

Hemodynamic and respiratory monitoring in acute respiratory failure

1. General principles
2. Indications for monitoring hemodynamics
3. Methods for monitoring hemodynamics
4. Methods for monitoring respiratory function

Principles in mechanical ventilation

1. Objectives and indications for mechanical ventilation
2. Modes of mechanical ventilation
3. Ventilator settings
4. Bronchodilator therapy
5. Monitoring and complications
6. Weaning

Nutrition in acute respiratory failure

1. Overview of malnutrition
2. Effects of malnutrition
3. Assessment of nutritional status
4. Indications for nutritional support
5. Goals of nutritional support

6. Route of administration and complications
7. Basic nutritional prescription
8. Monitoring
9. Special considerations in patients with advanced lung disease

Treatment of agitation in acute respiratory failure

1. Sedation
2. Analgesia
3. Strategies for use of sedatives and analgesics in the intensive care unit

Decision making in ICU

1. Outcomes of medical conditions commonly seen in the intensive care unit
2. Severity of illness scoring systems and mortality prediction
3. Use of severity scores in the intensive care unit

Ethics in ICU

1. Fundamental principles of bioethics
2. Relationship between health care law and ethics
3. Principles regarding end-of-life issues in the intensive care unit 6
4. Ethics related to futile medical interventions
5. Ethical principles related to microallocation of ICU resources
6. Specific ethical questions and considerations in the ICU
7. “do not attempt resuscitation” (DNAR) orders in the intensive care unit
8. Providing palliative care to ICU patients

**3 -B) Tutorial / Small Group Discussions**

- 1) Interpretation of Arterial blood gases
- 2) Interpretation of pulmonary function tests
- 3) Approach to patient with Dyspnoea
- 4) Approach to patient with cough
- 5) Approach to patient with hemoptysis
- 6) Approach to patient with wheezing
- 7) Approach to patient with chest pain
- 8) Approach to patient with strider
- 9) And mycobacterial therapy
- 10) Antibiotic and chemotherapeutics

**3-C) Practical classes:**

1. Chest case taking and physical examination
2. Obstructive lung diseases
3. Interstitial lung diseases
4. Pulmonary tuberculosis
5. Suppurative lung diseases

6. Pleural effusion
7. Bronchogenic carcinoma
8. Pulmonary function tests
9. Intercostal intubation
10. Fiberoptic Bronchoscope
11. Thoracoscope
12. O2 therapy
13. Nebulizers and inhalation therapy
14. Tuberculin and allergy skin testing
15. BCG and other vaccinations
16. Mechanical ventilation

#### ***4- Teaching and Learning methods:***

4.1 Lectures.

4.2 Practical /clinical lessons

4.3 Discussion sessions.

4.4 Information collection from different sources.

4.5 Attending and participating in scientific meeting and workshops

Facilities used for teaching this course include:

##### **a. LECTURE HALL:**

At the chest department. Writing board and Data show facilities are available. The Hall is will equipped with microphones and sound system

##### **b. SMALL GROUP CLASSES:**

4 rooms at the chest department. Data show are available for use when needed.. Writing boards are not available in all rooms.

##### **c. LIBRARY:**

8<sup>th</sup> floor of Benha Faculty of medicine. E book in chest department is in progress.

##### **d. CLINICAL FACILITIES:**

- Specialized outpatient clinic serving over 100 patients (once every week).
- 4 inpatient units in chest department

##### **e. SKILLS LAB/ MODELS:**

**Chest models are not available at the moment**

##### **f. METHODS FOR DISABLED STUDENTS:**

**No special arrangements are available.**

#### **N.B. We need**

-  Writing boards in all rooms
-  Chest models

#### **Teaching plan:**

**Lectures :**



Lectures at the lecture hall in the chest department, daily from 9.00– 11.00 am in each term. Lectures would cover diagnostic pictures, diagnostic tools and problem solving, as well as some introductory and core topics (introduction to assignment, emergencies, genetics, behavioral issues and ethics, communication skills and orientation to special services)

**Tutorials:**

Division of students into 4 groups, at the 4 rooms in the chest department twice weekly from 11.00 – 12.30 am.

**Practical classes**

Students are divided into 4 groups. Each group in each room . teaching staff are available for each room . Teaching starts at 11.00 -12.30 am daily teaching will include training on history taking and clinical examination as well as presentation and discussion of clinical findings.

**Time plan:**

Item	Time schedule	Teaching hours	Total hours
<b>Lectures</b>	Daily: 9.00 – 11.00 am	52 hours /month	<b>936 hrs</b>
<b>Practical</b>	Daily : 11.00 – 12.30 am	96 hours / month	<b>1728hrs</b>
<b>Tutorial</b>	12.30 – 2.30 pm Twice monthly	4 hours/month	72 hours
<b>Total</b>		<b>152 hours / month</b>	<b>2736 hours</b>

3- Students assessment methods:

3-A) Attendance criteria: Faculty bylaws

The minimum acceptable attendance is 75%. Students who fail to attend that percentage of activities will not be allowed to take the end of term examination. They may be allowed to take it during a subsequent term if they satisfy the required attendance, otherwise the marks allocated for the end of term examination would be recorded as a proportion from the final written examination score. Students need to attend at least 60% in order to sit for the final examination.

5-B) Assessment tools:

Tools	Purpose (ILOs)
Written examination	
○ Short essay	To assess <b>2. a. 1:2. a. 10:2. a. 8:2. a. 3 -2.b.7:2.b.6: 2. b.1:</b>
○ MCQs	To assess <b>2. a. 2: 2. a. 9: 2. a. 1: 2. b.2: 2.b.8: 2.b.4:</b>
○ Case study	To assess <b>2. a. 4: 2. a. 5</b>

Oral examination	To assess 2. d.1:2. d.4:2. d.8:2. d.7:2. b.1: 2.b.6: 2.b.5: 2.b.4:
Practical examination	To assess 2. b.2: 2.b.8: 2.b.4: 2. c.6:2. c.2:2. c.3:2. c.4:2. c.5: 2. c.1: 2. d.1:2. d.4:2. d.8:2. d.7

5-C) Time schedule: Faculty bylaws

**FINAL EXAMINATION:** at the end of the academic term for all students.

5-D) Weighting system:

Examination			Mark allocated	% of Total Marks
Shock exams			(not previously announced)	Xxxx
Final exam	Written	Paper 1	200	20%
		Paper 2	200	20%
		Case study	100	10%
	Practical	Long case	100	10%
		Short case1	50	5%
		Short case 2	50	5%
		Station 1	100	5%
	Oral	Station 2	50	5%
		Oral question	100	5%
Log book			50	5%
<b>Total</b>			1000	100%

***The minimum passing and passing grades (Faculty bylaws):***

To pass the final exam, students should pass all written, practical and oral exams by at least 60% of the total degrees. Written exam and case study are considered one unit. All practical exams are one unit and all oral exams are one unit. Students should pass each unit by at least 50% of the total degree for each unit.

Formative assessment:

Student knows his marks after the Formative exams.

**5-E) Examinations Description:**

Examination	Description:	Marks
Shock exams	<b>Shock exams (not previously announced) based on short written questions</b>	xxx
	Paper 1 :Selected MCQs &short essay questions	200

Final exam	Written	Paper 2: Selected MCQs & short essay questions	200
		Case study: case presentation and MCQs	100
		<b>Total</b>	<b>500</b>
	Practical	Long case	100
		Short case 1	50
		Short case 2	50
		<b>Total</b>	<b>200</b>
	Oral	Station 1 : X ray and CT	100
		Station 2: PFT and ABG	50
		Station 3 : oral question	100
		<b>Total</b>	<b>250</b>
	Assignment & other activities	Log book	<b>50</b>
	<b>Total</b>		<b>1000</b>

6- List of references:

**6-1: Basic materials:** No Department book for MD candidates. to purchase from different bookshops at the faculty. Overhead projections, slides and computer presentations used during teaching

**6-2: Essential books :** Fishman's pulmonary diseases and disorders 5<sup>TH</sup> edition 2008 to purchase from different bookshops at the faculty.

**6-3: Recommended books:** Fishman's pulmonary diseases and disorders 5<sup>TH</sup> edition 2008 The McGraw-Hill Companies, Inc. to purchase from different bookshops at the faculty.

6-4: periodicals, websites ....

HYPERLINK "http://www.chestnet.org/accp/" <http://www.chestnet.org/accp/>

HYPERLINK "http://www.thoracic.org/" <http://www.thoracic.org/>

HYPERLINK "http://dev.ersnet.org/" <http://dev.ersnet.org/>

HYPERLINK "http://erj.ersjournals.com/" <http://erj.ersjournals.com/>

<http://thorax.bmj.com/>

7- Facilities required for teaching and learning:

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No special arrangements are available.

Course coordinator: *Prof. Magdy M. Omar*

Head of department: *Prof. Sherif Essa*

Date: 25 /08/2013