



كلية الطب
جامعة أسيوط



Faculty of Medicine
Chest Department

**Medical Doctorate (M.D.) Degree Program and
Courses Specifications for Chest Diseases &
Tuberculosis**

(According to currently applied Credit point bylaws)

Chest Diseases & Tuberculosis
Faculty of medicine
Assiut University
2022-2023

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M. D. degree of Chest Diseases & Tuberculosis

A. Basic Information

- ✚ **Program Title:** M. D. degree of Chest Diseases & Tuberculosis
- ✚ **Nature of the program:** Single.
- ✚ **Responsible Department:** Department of Chest Diseases & Tuberculosis- Faculty of Medicine- Assiut University.
- ✚ **Program Director (Head of the Department):**

Prof. Maha Ekholy

Coordinator (s):

- **Principle coordinator:** Prof. Maha Ekholy

Assistant coordinator:

- Prof. Moahamed Mostafa Metwally

- ✚ **Internal evaluators:** Prof Hammad El Shahaat
- ✚ **External evaluator:** Prof Ramadan Nafae (Prof of Chest Diseases, Zagazig University)
- ✚ **Date of Approval by the Faculty of Medicine Council of Assiut University:** 23-9-2014
- ✚ **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University:** 27-11-2022
- ✚ **Total number of courses:** 5 courses+ 2 Elective courses

B. Professional Information

1- Program aims

1/1 To enable candidates to master high level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of pulmonary medicine and tuberculosis (TB), pulmonary function testing, diagnostic and interventional bronchology, sleep medicine and enabling the candidates of making appropriate referrals to a sub-specialist

1/2 Provide candidates with fundamental knowledge and skills of respiratory intensive care medicine as regards; dealing with critically ill respiratory patients, ICU equipments, techniques, indications, contraindications and training skills of different intensive care techniques.

1/3 To enable candidates to perform high standard scientific medical research and how to proceed with publication in indexed medical journals.

1/4 To enable candidates to describe the basic ethical and medicolegal principles relevant to Chest diseases and tuberculosis.

1/5 To enable candidates to have professional careers as a consultant in Egypt but recognized abroad.

1/6 To enable candidates to continue self learning in subspecialties.

1/7 To enable candidates to master different research methodology and do their own.

2-Intended learning outcomes (ILOs) *for the whole program*:

2/1 Knowledge and understanding:

- A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio – behavioral science relevant to Chest Diseases and Tuberculosis as well as the evidence – based application of this knowledge to patient care.
- B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
- C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Chest Diseases and Tuberculosis.
- D. Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Chest Diseases and Tuberculosis.
- E. Mention health care system, public health and health policy, issues relevant to Chest Diseases and Tuberculosis and principles and methods of system – based improvement of patient care in common health problems of the field of Chest Diseases and Tuberculosis.

2/2 Intellectual outcomes

- A. Apply the basic and clinically supportive sciences which are appropriate to the Chest Diseases and Tuberculosis related conditions / problem / topics.
- B. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Chest Diseases and Tuberculosis.
- C. Plan research projects.
- D. Write scientific papers.

- E. Participate in clinical risk management as a part of clinical governance.
- F. Plan for quality improvement in the field of medical education and clinical practice in Chest Diseases and Tuberculosis.
- G. Create / innovate plans, systems, and other issues for improvement of performance in his practice.
- H. Present and defend his / her data in front of a panel of experts.
- I. Formulate management plans and alternative decisions in different situations in the field of Chest Diseases and Tuberculosis.

2/3 Skills

2/3/1 Practical skills (Patient Care)

Students will be able to:

- A. Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
p.s. Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.
- B. Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Chest Diseases and Tuberculosis.
- C. Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.
- D. Perform diagnostic and therapeutic procedures considered essential in the field of Chest Diseases and Tuberculosis.
- E. Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.

- F. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Chest Diseases and Tuberculosis related situations.
- G. Gather essential and accurate information about patients of the Chest Diseases and Tuberculosis related conditions.
- H. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the Chest Diseases and Tuberculosis related conditions.
- I. Develop and carry out patient management plans for Chest Diseases and Tuberculosis related conditions.
- J. Counsel and educate patients and their families about Chest Diseases and Tuberculosis related conditions.
- K. Use information technology to support patient care decisions and patient education in all Chest Diseases and Tuberculosis related clinical situations.
- L. Perform competently all medical and invasive procedures considered essential for the Chest Diseases and Tuberculosis related conditions / area of practices.
- M. Provide health care services aimed at preventing the Chest Diseases and Tuberculosis related health problems.
- N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in Chest Diseases and Tuberculosis related conditions.
- O. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets. (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)

2/3/2 General skills

Including:

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

- A. Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of Chest Diseases and Tuberculosis
- B. Appraise scientific evidence.
- C. Continuously improve patient care based on constant self-evaluation and life-long learning.
- D. Participate in clinical audit and research projects.
- E. Practice skills of evidence-based Medicine (EBM).
- F. Educate and evaluate students, residents and other health professionals.
- G. Design logbooks.
- H. Design clinical guidelines and standard protocols of management.
- I. Appraise evidence from scientific studies related to the patients' health problems.
- J. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.
- K. Use information technology to manage information, access on-line medical information; for the important topics.

Interpersonal and Communication Skills

L. Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.
- Write a consultation note.

- Inform patients of a diagnosis and therapeutic plan completing and maintaining comprehensive.
 - Timely and legible medical records.
 - Teamwork skills.
- M. Create and sustain a therapeutic and ethically sound relationship with patients.
- N. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- O. Work effectively with others as a member or leader of a health care team or other professional group.

Professionalism

- P. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.
- Q. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- R. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

Systems-Based Practice

- S. Work effectively in health care delivery settings and systems related to Chest Diseases and Tuberculosis including good administrative and time management.
- T. Practice cost-effective health care and resource allocation that does not compromise quality of care.
- U. Advocate for quality patient care and assist patients in dealing with system complexities.
- V. Design, monitor and evaluate specification of under and post graduate course and programs.
- W. Act as a chair man for scientific meetings including time management.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for Medical Doctorate (MD) degree in Chest Diseases and Tuberculosis

Assiut Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program. These standards were approved by the faculty council on 20/3/2010. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.

These standards were re-revised and approved without changes by the Faculty Council on 27-11-2022

4- Program External References (Benchmarks)

1. **ACGME (Accreditation Council for Graduate Medical Education).**

http://www.acgme.org/acWebsite/navPages/nav_Public.asp

2. **American College of Chest Physicians (ACCP) Pulmonary Board Review Course Syllabus 2007**

<http://www.chestnet.org/accp/pulmonary-board-review-syllabus-2007>

3. **American College of Chest Physicians (ACCP) Critical Care Board Review Course 2007 Syllabus**

<https://accp.chestnet.org/storeWA/StoreAction.do?method=view&pcrNum=7>

4. **American College of Chest Physicians (ACCP), Sleep Medicine Board Review Course 2007 Syllabus**

<http://www.amazon.com/ACCP-Sleep-Medicine-Board-Review/dp/3805584415>

Comparison between program and specialty external reference		
Item	Chest Diseases and Tuberculosis program	ACCP Board Review Courses Syllabus 2007
Goals	Matched	Matched
ILOS	Matched	Matched
Duration	4 -6 years	Different
Requirement	Different	Different
Program structure	Different	Different

5- Program Structure

A. Duration of program: 4-6 years

B. Structure of the program:

Total number of credit points: = 420 CP

Master degree: 180 credit point

Didactic #: 37 CP (23.1%), practical 123 (76.9%), total 160 CP

Thesis and researches: 80 CP (33.3%)

First part

Didactic 10 (100%), practical 0 (0 %), total 10 CP

Second part

Didactic 24, (16.3 %), practical 123 (83.7 %), total 147 CP

Elective courses: 3 credit points

#Didactic (lectures, seminars, tutorial)

According the currently applied bylaws:

Total courses: 160 credit point

Compulsory courses: 157 credit point (98.1%)

Elective courses: 3 credit point (1.9%)

	Credit point	% from total
Basic science courses	10	4.1%
Humanity and social courses	3	1.2%
Speciality courses	147	61.3%
Others (Computer, ...)	-	0
Field training	123	51.3%
Thesis	40	16.7%
2 published researches	40	16.7%
Master degree	180	

C. Program Time Table

Duration of program 4 years divided into

○ Part 1

Program-related basic sciencel courses

- Medical statistic
- Research methodology
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

- Part 2

Program –related speciality courses and ILOs

Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.

Two elective courses can be set during either the 1st or 2nd parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course

Total degrees 1700 marks.

500 marks for first part

1200 for second part

Written exam 40% - 70%.

Clinical /practical and oral exams 30% - 60%.

D. Curriculum Structure: (Courses):

✚ Levels and courses of the program:

Courses and student work load list	Course Code	Credit points		
		didactic #	training	total
First Part				
Basic science courses (10 CP)				
Course 1: Medical Statistics	FAC309A	1		1
Course 2: Research Methodology	FAC309B	1		1
Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	1		1
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)	CHT319A#	7		7
Elective courses*		3 CP		
- Elective course 1		1.5		1.5
- Elective course 2		1.5		1.5
Thesis		40 CP		
Published researches**		40 CP		
Second Part		Speciality courses 24 CP Speciality Clinical Work (log Book) 123 CP		
Speciality Courses				
Course 5 " Chest diseases and Tuberculosis 2"*	CHT319B	24		24
Speciality Clinical Work (123 CP)	CHT319B		123	123
Total of second part		24	123	147

#Didactic (lectures, seminars, tutorial)

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Two of the above mentioned courses are prerequisites for fulfillment of the degree.

3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

** Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

* Course 5 " Chest diseases and Tuberculosis2"

Units' Titles' list	% from total	Level (Year)	Core Credit points		
			Didactic	training	Total
1) Unit 1 "Pulmonary Medicine & Tuberculosis."	70%	1,2&3	17	85.9	102.9
2) Unit 2 " Respiratory Intensive Care Medicine	10%	2&3	3	11.7	14.7
3) Unit 3 " Pulmonary Functions Testing"	10%	3&4	2	12.7	14.7
4) Unit 4 "Diagnostic and Interventional Bronchology"	5%	2&3	1	6.35	7.35
5) Unit 5 "sleep Medicine"	5%	3&4	1	6.35	7.35
Total No. of Units:	5	1,2,3&4	24	123	147

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module
Annex 6 II: Program Matrix

7-Admission requirements

+ Admission Requirements (prerequisites) if any :

I. General Requirements:

- Master degree in the chest diseases and tuberculosis

II. Specific Requirements:

- Fluent in English (study language)

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working assistant lecture 3 week leave prior to first/ second part exams.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- + Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- + Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.

- + Examination of the second part cannot be set before 4 years from registering to the degree.
- + Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- + The minimum duration of the program is 4 years.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and speciality courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MD thesis.
4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

9-Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: Structured essay questions Objective questions MCQ Problem solving	K & I
Clinical: Long/short cases OSCE	K ,I, P &G skills
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills

Weighting of assessments:

Courses		Degrees			
Courses	Course Code	Written Exam	Oral *	Practical / Clinical Exam	Total
First Part					
Basic science courses:					
Medical Statistics	FAC309A	35	15		50
Research Methodology	FAC309B	35	15		50
Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	35	15		50
Chest Diseases and Tuberculosis 1 (Applied chest Physiology & pathology)	CHT319A#	200 100+100	150 75+75		350 175+175
Total of the first part					500
Second Part					
	Course code	written	Oral *	Practical / Clinical Exam	total
Speciality Courses					
* "Chest Diseases & Tuberculosis 2 "(Unit 1-5)	CHT319B		360	360	1200
Paper 1		120			
Paper 2		120			
Paper 3		120			
Paper 4		120			
Total of The second part		480	360	360	1200
Elective course 1		50		50	100
Elective course 2		50		50	100

* 25% of the oral exam for assessment of logbook

***Chest Disease and Tuberculosis Course**

Units' (Module)Titles' list	% from total Marks	Degrees			
		Written Exam	Oral Exam *	Practical / Clinical Exam	Total
1) Unit (Module) 1 "Pulmonary Medicine & Tuberculosis."	70%	336	252	252	840
2) Unit (Module)2 " Respiratory Intensive Care Medicine"	10%	48	36	36	120
3) Unit (Module)3 " Pulmonary Functions Testing"	10%	48	36	36	120
4) Unit 4 (Module)"Diagnostic and Interventional Bronchology"	5%	24	18	18	60
5) Unit (Module) "Sleep Medicine"	5%	24	18	18	60
Total No. of Units (Modules):	5	480	360	360	1200

* 25% of the oral exam for assessment of logbook

500 marks for first part

1200 for second part

Written exam 40% (480 marks)

Clinical/practical and oral exams 60% (720 marks)

Elective courses 200

Examination system:

➤ First part:

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written exam 3 hours in Chest Diseases and Tuberculosis 1 (Applied chest Physiology & pathology) + oral exam

➤ Second part:

- Written exam four papers 3 hours for each in Chest Diseases and Tuberculosis 2 + Oral exam+ Clinical/Practical exam

➤ Elective courses

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

10-Program evaluation

By whom	Method	Sample
Quality Assurance Unit	Reports Field visits	1
External Evaluator (s): According to department council	Reports Field visits	1
External Examiner (s): According to department council		2
Stakeholders	Reports Field visits Questionnaires	19
Senior students	Questionnaires	9
Alumni	Questionnaires	3

#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.

All course specifications for this program are in place.

Contributor	Name	Signature	Date
Program Principle Coordinator:	Prof. Mohamed Metwally		
Head of the Responsible Department (Program Academic Director):	Prof. Maha Elkholy		

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses

First Part

- 1) Course 1: Medical Statistics
- 2) Course 2: Research Methodology
- 3) Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- 4) Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)

Course 1: Medical statistics

Name of department: Public Health and Community Medicine
Faculty of medicine
Assiut University
2022-2023

1. Course data

- + Course Title: Medical statistics
- + Course code: FAC309A
- + Specialty: offered to all clinical and academic specialties
- + Number of credit points: 1 credit point
- + Department (s) delivering the course: Pubic Health and Community Medicine
- + Coordinator (s):
 - Course coordinator: Prof. Farag Mohammed Moftah
 - Assistant coordinator (s):
Prof. Medhat Araby Khalil Saleh
- + Date last reviewed: January -2022
- + Requirements (pre-requisites) if any:
 - Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

3. Intended learning outcomes (ILOs): To be able to use statistical principals to manage data

A knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A. List the types of variables	Lecture and discussion	Written examination
B. Identify the methods of data collection	Lecture and discussion	Written examination
C. Describe the different sampling strategies	Lecture and discussion	Written examination
D. Identify types of tabular and graphic presentation of data	Lecture and discussion	Written examination
E. Identify measures of central tendency and dispersion	Lecture and discussion	Written examination
F. Identify the characters of normal distribution curve.	Lecture and discussion	Written examination
G. Detect the difference between parametric and non-parametric tests	Lecture and discussion	Written examination
H. Identify the concepts of correlation and regression	Lecture and discussion	Written examination

B. intellectual

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe the normal curves.	Lecture & Discussions	Written examination
B. Describe and summarize data	Lecture & Discussions	Written examination
C. Select the proper test of significance	Lecture & Discussions	Written examination
D. Interpret the proper test of significance	Lecture & Discussions	Written examination
E. Describe the difference between parametric and non-parametric tests	Lecture & Discussions	Written examination

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design data entry files.	Tutorial on SPSS	Assignments SPSS exam
B. Validate data entry.	Tutorial on SPSS	Assignments SPSS exam
C. Manage data files.	Tutorial on SPSS	Assignments SPSS exam
D. Construct tables and graphs.	Tutorial on SPSS	Assignments SPSS exam
E. Calculate measures of central tendency and dispersion.	Tutorial on SPSS	Assignments SPSS exam
F. Select, apply and interpret the proper test of significance.	Tutorial on SPSS	Assignments SPSS exam

D general skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Appraise scientific evidence	Discussions	Research assignment
B. Use information technology to manage information, access on-line medical information; for the important topics.	tutorial	Research and audits' assignment

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction	A-F	A-D	-	A&B
Tables and graphics	D	A-D	-	A&B
Sampling	C	-	-	A&B
Methodology of data collection	B	-	-	A&B
Type of variables	A	-	-	A&B
Proportion test& Chi-square test	E,F	C&D	-	A&B
Student T test& Paired T test	E,F	C&D	F	A&B
ANOVA test	E,F	C&D	F	A&B
Non parametric tests	E,F	C&D	F	A&B
Discrimination analysis factor analysis	E,F	C&D	-	A&B
SPSS Introduction	A-F	A-D	-	A&B
Data entry and cleaning of data	A	A-D	A-C	A&B
Transforming of variables	A	A&B	A-C	A&B
Descriptive statistics	D	A-D	D&E	A&B
Graphic presentation	D	A&B	D	A&B
Chi square and interpretation of results	E,F	C&D	F	A&B
Correlation Regression	E,F	C&D	F	A&B
Multiple and logistic Regression	E,F	C&D	F	A&B

5. Course Methods of teaching/learning

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

6. Course assessment methods:

i. Assessment tools:

1. Attendance and active participation
2. Assignment
3. Practical SPSS examination
4. Written exam

ii. **Time schedule:** After 6 months from applying to the M D degree.

iii. **Marks:** 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

Department lecture notes

ii. Essential books

- Medical Statistics: Book by Ramakrishna HK 2016
- Janet Peacock and Philip Peacock. Oxford Handbook of Medical Statistics (second edition.) Publisher: Oxford University Press, Print Publication Date: Nov 2010 Print ISBN-13: 9780199551286, Published online: Jun 2011. DOI: 10.1093/med/9780199551286.001.0001
- Leslie E. Daly MSc, PhD, Hon MFPHM,, Geoffrey J. Bourke MA, MD, FRCPI, FFPHM, FFPHMI, Interpretation and Uses of Medical Statistics, Fifth Edition, First published:1 January 2000, Print ISBN:9780632047635 |Online ISBN:9780470696750 |DOI:10.1002/9780470696750
- Marcello Pagano, Kimberlee Gauvreau: Principles of Biostatistics second edition published in 2000 by Brooks/Cole and then Cengage Learning. CRC Press, Feb 19, 2018 - Mathematics - 584 pages.

iii- Recommended books

- Ji-Qian Fang (Sun Yat-Sen University, China) Handbook of Medical Statistics: <https://doi.org/10.1142/10259> | September 2017. Pages: 852
- Robert H. Riffenburgh: Statistics in Medicine 4th Edition (2020). Evidence Based Medicine How to practice and teach EBM.
- Discovering Statistics Using IBM SPSS Book by Andy Field, 2013.

iii. Periodicals, Web sites, etc

iv. **Periodicals , etc** Statistics in Medicine - Wiley Online Library

v. **Web sites** <https://www.phc.ox.ac.uk/research/medical-statistics>

8. Signatures

Course Coordinator: - Farag Mohammed Moftah	Head of the Department: - Prof. Eman Morsy Mohamed
Date: 10-1-2022	Date: 10-1-2022
Associated Coordinator: Prof. Medhat Araby Khalil Saleh	
Date: 10-1-2022	

Course 2: Research Methodology

Name of department: *Public Health and Community Medicine*
Faculty of medicine
Assiut University
2021-2022

1. Course data

-  **Course Title:** Research methodology
-  **Course code:** FAC309B
-  **Specialty:** Offered to all clinical and academic specialties
-  **Number of credit points:** 1 credit point
-  **Department (s) delivering the course:** Department of public health
-  **Coordinator (s):**
 - **Course coordinator:** Prof. Mahmoud Attia
- Assistant coordinator (s):** Prof. Ekram Mohamed
 - Prof. Medhat Araby Khalil
-  **Date last reviewed:** January 2022
-  **Requirements (prerequisites) if any:**
 - **Completed Master degree in any of the academic or clinical departments of Medicine.**

2. Course Aims

To provide graduate students with the skills of:

- planning and implementing sound research
- writing a scientific research proposal

3. Intended learning outcomes (ILOs)

A knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
B. Identify sources and types of bias in research.	Lecture and discussion Practical sessions	Written exam Log book assignments Practical exam
C. Identify methods of data collection.	Lecture and discussion Practical sessions	Written exam Log book assignments
D. Select and design valid measurement tools for research.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
E. Explain ethical issues in conducting research on human subjects.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
F. List the steps involved in proposal writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
G. Identify a research problem within a conceptual framework.	Lecture Discussion	Written exam Log book assignments

		Practical exam
H. Use the web sources to do a literature search	Practical tutorial on web	Log book assignment
I. Describe the rules of authorship in scientific writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
J. Select the appropriate study design for the research question.	Lecture Practical sessions	Written exam Practical exam
K. Minimize bias in designing research.	Lecture	Written exam
L. Screening & theoretical background	Lectures	Written exam Practical exam
M. Mention the basic ethics for conducting a research and medicolegal principles relevant to data confidentiality.	lectures seminar	Written exam Practical exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Apply basic science & knowledge for appraising scientific literature.	Discussions & seminars	Written exam Practical exam
B- Design research and present study data, in seminars.	lecture seminar	log book assignments
C- Design suitable epidemiological study.	lecture seminar	log book assignments
D- Design strategies for resolving ethical concerns in research, law, and regulations.	lecture Workshops	Written exam log book assignments
E- Apply coherently synthesize ideas and integrate lateral and vertical thinking.	lecture Workshops	log book assignments
F- Evaluate screening tests and interpreting their uses in different population.	lecture	Written exam Practical exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Conduct epidemiological studies, screening and surveys.	lectures seminar	written exam log book assignments
B- Identify steps required in fielding the study.	Lecture	Assignments Written exam
C- Managing data collection team.	lectures seminar	log book assignments
D- Identify steps required for calculation sensitivity, specificity, positive predictive value, negative predictive value, accuracy of a screening test.	Lecture Practical sessions	Assignments Written exam Practical exam
E- Be able to define and apply the epidemiologic criteria of causality and be able to distinguish between a measure of association and evidence of causality.	Lecture Practical sessions	Assignments Written exam Practical exam
F- Synthesize information from multiple sources for research writing and the ability to perform paper critique .	Lecture Practical sessions	Assignments Written exam Practical exam
G- Identify bias and confounding in epidemiological study designs, their types and ways to control them in various types of biases.	Lecture Practical sessions	Assignments Written exam Practical exam

D General skills
Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Scientific paper and proposal writing skills: be able to write an introduction, objectives and the methodological section.	Tutorial	Written examination
B- Learn authorship ethical rules.	Tutorial	Written examination
C- Perform practice-based improvement activities using a systematic methodology (audit, logbook, critical appraisal)	- Lectures - Practical sessions - Discussion - Readings	critical appraisal
D- Appraise evidence from scientific studies(journal club)	- Lectures - Practical sessions - Discussion - Readings	critical appraisal
E- Conduct epidemiological studies, screening and surveys.	- Lectures - Practical sessions - Discussion - Readings	attendance and participation
F- Facilitate training of junior students and other health care professionals in different screening activities.	Field work Participation in projects	attendance and participation

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
G- Maintain ethically sound relationship with community members.	- Lectures - Practical sessions - Discussion - Readings	Written exams
H- Provide information using effective nonverbal, explanatory, questioning, and writing skills.	- Lectures - Practical sessions - Discussion - Readings	Written exams Practical exams
I- Present results of researches in seminars.	- Lectures - Practical sessions - Discussion - Readings	Log book assignments

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
J- Demonstrate respect, compassion, and integrity to the needs of society.	- Lectures - Discussion - Readings	Written exams
K- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.	- Lectures - Discussion - Readings	Written exams
L- Design strategies for resolving ethical concerns in research, law, and regulations.	Lectures - Discussion - Readings	Written exams Practical exams
M- Demonstrate ways to control for confounding in the analysis phase of a study	Lectures - Discussion - Readings	Written exams Practical exams
N- Demonstrate a commitment to ethical principles including confidentiality of participants' information and informed consent.	Lectures - Discussion - Readings	Written exams
O- Assess ethical considerations in developing communications and promotional initiatives.	- Lectures - Discussion - Readings	Written exams

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
	A	B	C	D
Over view on research conduction and research ethics	A&E	A-D	A-C	C-G, I,L&M-O
How to write a research proposal	F,I	E	F	A-C&H
Observational study design	A& D	B & C	D	E & F
Experimental study design	A& D	B & C	B	E & F
Evaluation of diagnostic tests (Screening)	L	A	B& E	F
Systematic reviews and meta analysis	G, H & M	E& F	F	C, D
Confounding, bias & effect modification	B & K	D	E & G	M

5. Course Methods of teaching/learning:

1. Lectures
2. Assignments
3. Discussion
4. Exercises

6. Course assessment methods:

i. Assessment tools:

1. Attendance and participation
2. Log book assignments
3. Written examination
4. Practical examination

ii. **Time schedule:** After 6 months from applying to the M D degree.

iii. **Marks:** 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

- Department lecture notes

ii. Essential books

- Research Design: Qualitative, Quantitative and Mixed Methods Approaches 4th Edition by John W. Creswell SAGE Publications, Inc; 4th edition (January 1, 2014)
- Research methodology: A step – by – step Guide for Beginners. Ranjit Kumar, 2020. Second edition <https://books.google.com.eg/books?>
- Medical Research Essentials Rania Esteitie, McGraw Hill Professional, third edition, Feb 5, 2014 - Medical - 104 pages
- Research Methodology in the Medical and Biological Sciences Petter Laake, Haakon Breien Benestad, Bjorn R. Reino Olsen, 4th edition , Academic Press, Nov 5, 2007 - Science - 512 pages

iv. Recommended books

- Research Methods in Education 7th Edition, by Louis Cohen, Lawrence Manion, Keith Morrison Publisher: Routledge; (April 22, 2011) www.routledge.com/textbooks/cohen7e.
- Research Methodology: A Practical and Scientific Approach Vinayak Bairagi, Mousami V. Munot · 2019, Research Methodology: A Practical and Scientific Approach - Google Books
- Based Medicine How to practice and teach EBM. David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R.Brain Haynes
- Dissertation workshop open courseware JHSPH

8. Signatures

Course Coordinator: Prof.Mahmoud Attia	Head of the Department: Prof. Eman Morsy Mohamed
Date: 10-1-2022	Date: 10-1-2022

Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Name of department:









Forensic medicine and clinical toxicology

Faculty of medicine

Assiut University

2016-2017

1. Course data

-  **Course Title: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
-  **Course code: FAC310C**
-  **Speciality: *General medicine, Special medicine, Pediatrics, Public health, Oncology and Rheumatology Emergency Medicine (1st part).***
-  **Number of credit points: 1 credit point**
-  **Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**
-  **Coordinator (s):**
 - **Course coordinator:**
Prof. Ghada omran
 - **Assistant coordinator (s) Assist.**
Prof. Zaghoul Thabet
-  **Date last reviewed: September 2017**
-  **Requirements (prerequisites) if any :**
 - **Completed Master degree.**

2. Course Aims

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of General medicine, Special medicine, Pediatrics, Public health, Oncology and Rheumatology

3. Intended learning outcomes (ILOs):

A knowledge and understanding

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Mention principals of Taking consent.	Lecture and discussion	Oral &Written exam
B. Mention principals of Writing a death certificate	Lecture and discussion	Oral &Written exam
C. Mention principals of diagnosing death.	Lecture and discussion	Oral &Written exam
D. Mention principals of writing toxicological reports.	Lecture and discussion	Oral &Written exam
E. Explain principals of medical reports.	Lecture and discussion	Oral &Written exam
F. List indications and principals of induced emesis, gastric lavage and samples collection.	Lecture and discussion	Oral &Written exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Present case , seminars in death certificate	Lecture and discussion	Oral &Written exam
B. Present case, seminars in toxicological cases	Lecture and discussion	Oral &Written exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Identify medical ethics and ethics in research.	Lecture and discussion	Reading Discussion
B. Prepare and write consent.	Lecture and discussion	Reading Discussion
C. Identify medical responsibilities.	Lecture and discussion	Reading Discussion
D. Write death certificate.	Lecture and discussion	Reading Discussion and active participation
E. Deal with a case of Suspicious death	Lecture and discussion	Reading Discussion and active participation
F. Perform gastric lavage, induce emesis, and obtain samples.		
G. Write medical and toxicological reports	Lecture and discussion	Reading Discussion and active participation
H. Develop and carry out		

patient management plans for Euthanaesia, and Organ Transplantation		
I. Counsel patients and their families about speciality related conditions including Permanent infirmities, Euthanasia, and Organ Transplantation		

D general skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Present a case.	Lecture and discussion	Global rating logbook
B. Write a consultation note	Lecture and discussion	Global rating logbook
C. Inform patients and maintaining comprehensive.	Lecture and discussion	Global rating logbook
D. Make timely and legible medical records	Lecture and discussion	Global rating logbook
E. Acquire the teamwork skills	Lecture and discussion	Global rating logbook

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
1. Death and death certificate.	B,C	A	D,E	A
2. Medical Reports	A		G	A,D,E
3. Toxicological reports	D,F	B	G,F	A,E
4. Ethics in research.	A		A	
5. Medical ethics.	E		A,B,C,H,I	B,C,E

5. Course Methods of teaching/learning:

1. Lectures.
2. Discussions.
3. Exercises.

6. Course assessment methods:

i. Assessment tools:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.

ii. Essential books

- Bernard Knight and Pekka Saukko (2015: Knight Forensic Pathology. Hodder Arnold press

- Goldfrank, Lewis R.; Howland, Mary Ann; Hoffman, Robert S.; Nelson, Ewis S.; Lewin, Neal A (2019): Goldfrank's Toxicologic Emergencies, 11th ed. McGraw Hill / Medical.
 - Medical Ethics Manual. World medical association. Third edition 2015.
 - Medical ethics and law. Dominic Wilkinson, 3rd edition 2019.

iii. Recommended books

- Biswas Gautam (2021): Review of Forensic Medicine & Toxicology. 5th ed. Jaypee Brothers Medical Pub.

iv. Journal and web site

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- All International Journals of Forensic Medicine and Clinical Toxicology which available in the university network at www.sciencedirect.com. As :
Forensic Science International Journal.
Toxicology Letter.

8. Signatures

- Course Coordinator: Prof. Ghada Omran	- Head of the Department: Prof. Randa Hussein Abdel hady
Date: 17-9-2017	Date: 17-9-2017

Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)

Course 4: Unit 1: Applied chest physiology

Name of department: of Chest Diseases & Tuberculosis

Faculty of medicine

Assiut University

2016-2017

1. Unit data

- ✚ Unit Title:** Applied chest physiology
- ✚ Unit code:** CHT319A#
- ✚ Speciality:** Chest Diseases & Tuberculosis
- ✚ Number of credit points:** 7 credit point for didactic (100%)
- ✚ Department (s) delivering the Unit:** Department of Physiology in conjunction with Department of Chest Diseases and Tuberculosis - Faculty of Medicine- Assiut- EGYPT

- ✚ Coordinator (s):** Staff members of Physiology Department in conjunction with Chest Diseases and Tuberculosis Department as annually approved by both departments councils

- ✚ Date last reviewed:** September 2017
- ✚ Requirements (prerequisites) if any :**
 - None
- ✚ Requirements from the students to achieve unit ILOs are clarified in the joining log book.**

2. Unit Aims

To acquire in depth the physiological background necessary for Chest diseases and Tuberculosis in clinical reasoning, diagnosis and management of Chest diseases.

3. Unit intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Illustrate <i>Physiologic</i> principles of:</p> <ul style="list-style-type: none"> ➤ Cardiovascular system: <ul style="list-style-type: none"> • Innervation of the heart • Regulation of the heart rate. • Cardiac output and its components. • Arterial blood pressure and its regulation. • Pulmonary and coronary circulation. • Haemorrhage and its compensatory reaction. • ECG and its clinical significant. ➤ Autonomic nervous system: <ul style="list-style-type: none"> • Structure and functions of the ANS • Its higher centers. • Autonomics receptors and chemical transmitters. ➤ Blood: <ul style="list-style-type: none"> • General components of blood and its functions. • Mechanism of blood coagulation. • Clinical conditions occurring due to abnormalities of one or more of the blood components. ➤ Metabolism: <ul style="list-style-type: none"> • Regulation of body temperature: <ul style="list-style-type: none"> ✓ Centre and mechanism for regulation of body 	<p>-Didactic (lectures, seminars, tutorial)</p>	<p>- Written and oral examination - Log book</p>

<p>temperature.</p> <ul style="list-style-type: none"> ✓ Reaction of body on exposure to cold and hot • Abnormalities of regulation of body temperature. 		
<p>B. Describe <i>Physiologic details of</i></p> <p>➤ Respiratory System:</p> <ul style="list-style-type: none"> • Functional structure of the respiratory system. • Respiratory cycle, its mechanism, and intrapleural pressure, and surfactant, work of breath and compliance of lungs. • Regulation of normal respiration. • Gas transport in blood (oxygen dissociation curve and CO₂ curve) • Respiratory functions of the blood and some disorders of the respiratory system as dyspnea, hypoxia and cyanosis). • Ventilation, Pulmonary Blood Flow, and Ventilation-Perfusion Relationships • Diffusion, Chemical Reactions, and Diffusing Capacity • The Lungs in Different Physiological States • Breathing in Exercise • he Lungs in Pregnancy • Aging of the Respiratory System <p>➤ Acid base balance:</p> <ul style="list-style-type: none"> • Mechanisms and abnormalities 		

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (physiological) supportive sciences which are appropriate to Pulmonary Medicine & Tuberculosis related problems.	-Didactic (lectures, seminars, tutorial)	-Written and oral examination - Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Chest diseases and Tuberculosis.		

C- Practical skills

Practical: 0 credit point

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral exam Logbook

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A, A.B	-Clinical round -Seminars -Lectures	-Log book -Chick list Oral exam

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles.	- Observation and supervision Written & oral communication	Logbook Oral Exam

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	-360o global rating

**4. Unit contents (topic s/modules/rotation
Course (Unit 1) Matrix**

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
	A	B	C	D
Cardiovascular system:				
Innervation of the heart	A	A&B	-	A-D
Regulation of the heart rate.	A	A&B	-	A-D
Cardiac out put and its components.	A	A&B	-	A-D
Arterial blood pressure and its regulation.	A	A&B	-	A-D
Pulmonary and coronary circulation.	A	A&B	-	A-D
Haemorrhage and its compensatory reaction.	A	A&B	-	A-D
ECG and its clinical significant.	A	A&B	-	A-D
Autonomic nervous system: (ANS)				
Structure and functions of the ANS	A	A&B	-	A-D
Its higher centers.	A	A&B	-	A-D
Autonomics receptors and chemical transmitters.	A	A&B	-	A-D
Blood:				
General components of blood and its functions.	A	A&B	-	A-D
Mechanism of blood coagulation.	A	A&B	-	A-D
Clinical conditions occurring	A	A&B	-	A-D

due to abnormalities of one or more of the blood components.				
Metabolism:				
Regulation of body temperature: Centre and mechanism for regulation of body temperature. Reaction of body on exposure to cold and hot	A	A&B	-	A-D
Abnormalities of regulation of body temperature	A	A&B	-	A-D
Respiratory System:				
Functional structure of the respiratory system.	B	A&B	-	A-D
Respiratory cycle, its mechanism, and intrapleural pressure, and surfactant, work of breath and compliance of lungs.	B	A&B	-	A-D
Regulation of normal respiration.	B	A&B	-	A-D
Gas transport in blood (oxygen dissociation curve and CO ₂ curve)	B	A&B	-	A-D
Respiratory functions of the blood and some disorders of the respiratory system as dyspnea, hypoxia and cyanosis).	B	A&B	-	A-D
Ventilation, Pulmonary Blood Flow, and Ventilation-Perfusion Relationships	B	A&B	-	A-D

Diffusion, Chemical Reactions, and Diffusing Capacity	B	A&B	-	A-D
The Lungs in Different Physiological States	B	A&B	-	A-D
Breathing in Exercise	B	A&B	-	A-D
The Lungs in Pregnancy	B	A&B	-	A-D
Aging of the Respiratory System	B	A&B	-	A-D
Acid base balance:				
Mechanisms and abnormalities	B	A&B	-	A-D

5. Unit methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Unit methods of teaching/learning: for students with poor achievements

1. Extra didactic (lectures, seminars, tutorial)

7. Unit assessment methods:

i. Assessment tools:

1. Written and oral examination
2. Log book

ii. **Time schedule:** After 12 months from applying to the M D degree.

iii. **Marks:** 175

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

- Medical physiology books by Staff Members of the Department of Medical physiology -Assiut University.

ii. Essential books

- Fishman's Pulmonary Diseases and Disorders , fourth edition, 2015
- Guyton AC, Hall JE: Textbook of Medical Physiology, 11th ed. Saunders, 2006.

iii. Recommended books

- Respiratory Physiology - West J B - 26 Mar 2008
- Gillian Pocock, Christopher D. Richards: Human Physiology the Basis of Medicine. Oxfordcore texts, 1999-2001.

iv. Periodicals, Web sites, ... etc

➤ **Periodicals,**

- American journal of physiology.
- Journal of applied physiology.

v. others : None

Course 4: Unit 2: Applied chest Pathology

Name of department: of Chest Diseases & Tuberculosis

Faculty of medicine

Assiut University

2022-2023

1. Unit data

- ✚ **Unit Title:** Applied chest Pathology
- ✚ **Unit code:** CHT319A#
- ✚ **Speciality** Chest Diseases & Tuberculosis
- ✚ **Number of credit points:** 7 credit point
- ✚ **Department (s) delivering the Unit:** Department of Pathology
in conjunction with Department of Chest Diseases and
Tuberculosis - Faculty of Medicine- Assiut- EGYPT

- ✚ **Coordinator (s):** Staff members of Pathology Department in
conjunction with Chest Diseases and Tuberculosis Department
as annually approved by both departments councils

- ✚ **Date last reviewed:** June 12, 2022
- ✚ **Requirements (prerequisites) if any :**
 - None
- ✚ **Requirements from the students to achieve unit ILOs are
clarified in the joining log book.**

2. Unit Aims

To acquire indepth the Pathological background necessary for Chest diseases and Tuberculosis in clinical reasoning, diagnosis and management of Chest diseases.

3. Unit intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Mention Principles of General Pathology</p> <ul style="list-style-type: none"> • Disturbance of circulation • Immunity & hypersensitivity. • Bacterial infection. • Tuberculosis. • Disturbance of growth • Pathology of tumors • Diagnostic cytology 	-Didactic (lectures, seminars, tutorial)	- Written and oral examination - Log book
<p>B. Describe Pathological details of:</p> <ul style="list-style-type: none"> • Cardiovascular System: <ul style="list-style-type: none"> - Pulmonary hypertension - Corpulmonale - Heart failure • Respiratory System: <ul style="list-style-type: none"> - Pathology of the lung - Pathology of the pleura - Pathology of the mediastinum - Pathology of the diaphragm 		

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (pathological) supportive sciences which are appropriate to Pulmonary Medicine & Tuberculosis related problems.	-Didactic (lectures, seminars, tutorial)	-Written and oral examination - Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Chest diseases and Tuberculosis.		

C- Practical skills

Practical: 0 credit point

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral exam Logbook

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A, A.B	-Clinical round -Seminars -Lectures	-Log book -Chick list Oral exam

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles.	- Observation and supervision Written & oral communication	-Log book Oral exam

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	-360o global rating

4. Unit contents (topic s/modules/rotation Course (Unit 2) Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
General Pathology				
Disturbance of circulation	A	A.B	-	A-D
Immunity & hypersensitivity.	A	A.B	-	A-D
Bacterial infection.	A	A.B	-	A-D
Tuberculosis.	A	A.B	-	A-D
Disturbance of growth	A	A.B	-	A-D
Pathology of tumors	A	A.B	-	A-D
Diagnostic cytology	A	A.B	-	A-D
Cardiovascular System:				
Pulmonary hypertension	B	A.B	-	A-D
Corpulmonale	B	A.B	-	A-D
Heart failure	B	A.B	-	A-D
Respiratory System:				
Pathology of the lung	B	A.B	-	A-D
Pathology of the pleura	B	A.B	-	A-D
Pathology of the mediastinum	B	A.B	-	A-D
Pathology of the diaphragm	B	A.B	-	A-D

5. Unit methods of teaching/learning:

5. Didactic (lectures, seminars, tutorial)
6. Observation and supervision
7. Written & oral communication
8. Senior staff experience

6. Unit methods of teaching/learning: for students with poor achievements

2. Extra didactic (lectures, seminars, tutorial)

7. Unit assessment methods:

i. Assessment tools:

1. Written and oral examination
2. Log book

ii. Time schedule: After 12 months from applying to the M D degree.

iii. Marks: 175

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

- Fishman’ s Pulmonary Diseases and Disorders , fourth edition, 2008
- KUMAR, V., COTRAN, R.S., and ROBBINS, S.L. Robbins Basic Pathology. 7th ed. Saunders Publisher

iii. Recommended books

- . Rosai and Ackerman's Surgical Pathology Juan Rosai, Mosby 2004
- Sternberg's Diagnostic surgical Pathology 4th edition, Lippincott Williams and Wilkins

iv. Periodicals, Web sites, ... etc

➤ **Periodicals,**

- Human pathology
- Histopathology
- American Journal of surgical pathology

➤ **Web sites:** <http://www.ncbi.nlm.nih.gov/pubmed/>

9. Signatures

Course Coordinator	
Unit 1 Coordinator:	Head of the Department:
Date: 1	Date:
Unit 2 Coordinator:	Head of the Department:
Date:	Date:

Second Part

Course 4 Chest Diseases and Tuberculosis 2






Name of department: of Chest Diseases & Tuberculosis





Faculty of medicine


Assiut University

2022-2023

1. Course data

-  **Course Title:** Chest Diseases & Tuberculosis 2
-  **Course code:** CHT319B
-  **Speciality** Chest Diseases & Tuberculosis
-  **Number of credit points:** 147 credit point - didactic 24 credit point (16.3%) - practical 123 credit point (83.7%)
-  **Department (s) delivering the course:** Department of Chest Diseases & Tuberculosis- Faculty of Medicine- Assiut- EGYPT

-  **Coordinator (s):**
 - **Principle coordinator:** Prof. Maha Elkholy
 - Assistant coordinator:** Prof. Mohamed Mostafa Metwally
-  **Date last reviewed:** June 12, 2022
-  **Requirements (prerequisites) if any :**
 - None
-  **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

-  **This course consists of 7 Units(Modules)**
 - 1- Unit (Module) 1 Pulmonary Medicine & Tuberculosis.
 - 2- Unit (Module) 2 Respiratory Intensive Care Medicine
 - 3- Unit (Module) 3 Pulmonary Functions Testing

**4- Unit (Module) 4 Diagnostic & Interventional Bronchology
& Medical Thoracoscopy**
5- Unit (Module) 5 Sleep Medicine

 **Unit Coordinator (s):**

Unit	Principle Coordinator	Assistant coordinators
1- Unit (Module) 1 Pulmonary Medicine & Tuberculosis.	Prof. Atef Al-Karn	Prof. . Maha Elkholy Prof. Amany Omr Prof. Lamiaa Shaban Prof. Ali Abdel Azeem Hasan Prof. Yousef Ahmad Yousef Dr. Mostafa Kamal
2- Unit (Module) 2 Respiratory Intensive Care Medicine	Prof. Ashraf Zin El- Abdeen	Prof. Gamal Rabie Prof. Khaled Hussein Dr. Reham Abel Elmorshedy Dr. Ahmed Metwally Dr. Manal Elkhawaga
3- Unit (Module) 3 Pulmonary Functions Testing	Prof. Olfat M. N. Elshinawy	Prof. Maha K Ghanem Assist. Prof. Hoda Makhlof Dr. Samiaa Hamdy Dr. Sahar Farghaly Dr. Doaa Magdy
4- Unit (Module) 4 Diagnostic & Interventional Bronchology & Medical Thoracoscopy	Prof. Raafat Talaat	Prof. Mohamed Mostafa Metwally Dr. Alaa Rashad Dr. Mohamed Fawzy Abel El-Ghany Dr. Mohamed Fawzy Adam

2. Course Aims

1. To enable MD students to master high level of clinical skills, in addition to update and advanced medical knowledge, integration and interpretation of different investigations, professional competence in the area of chest diseases and tuberculosis, pulmonary physiology, respiratory intensive care medicine, diagnostic and therapeutic bronchoscopy and thoracoscopy and sleep related disorders.
2. To provide candidates with enough general skills related to Chest Diseases and Tuberculosis including, writing specialized medical reports, use of information technology in clinical decisions and research, teaching junior students and counseling patients and their families about chest diseases and conditions.

3. Course intended learning outcomes (ILOs):

Unit 1 (Module) Pulmonary Medicine & Tuberculosis.

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. <u>Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</u></p> <p>OBSTRUCTIVE LUNG DISEASES</p> <p>A. Chronic Obstructive Pulmonary Disease</p> <p>B. Bronchial Asthma</p> <p>C. Other Obstructive Disorders</p> <p>1. Upper Airway Obstruction in Adults</p> <p>OCCUPATIONAL AND ENVIRONMENTAL DISORDERS</p> <p>A. Occupational Disorders</p> <p>1. Occupational Asthma, Byssinosis, and Industrial Bronchitis</p> <p>B. Environmental Disorders</p> <p>1. Thermal Lung Injury and Acute Smoke Inhalation</p> <p>DRUG-INDUCED LUNG DISEASES</p> <p>1. Pulmonary Toxicity Associated with Chemotherapeutic Agents</p> <p>2. Drug-Induced Lung Disease Due to Non chemotherapeutic Agents</p> <p>INTERSTITIAL AND INFLAMMATORY LUNG DISEASES</p> <p>A. Immunologic and Interstitial Diseases</p> <p>1. Systemic Sarcoidosis</p> <p>2. Idiopathic Pulmonary Fibrosis</p> <p>3. Hypersensitivity Pneumonitis</p>	<p>-Didactic (lectures, seminars, tutorial)</p> <p>-Clinical rounds</p> <p>-Seminars</p> <p>-Clinical rotations</p> <p>-Service teaching</p>	<p>-OSCE at the end of each year</p> <p>-log book & portfolio</p> <p>- One MCQ examination at the second half of the second year and another one in the third year</p> <p>-Written and oral examination</p>

4. Radiation Pneumonitis
5. Pulmonary Manifestations of the Collagen Vascular Diseases
6. The Eosinophilic Pneumonias

DISORDERS OF THE PULMONARY CIRCULATION

1. Pulmonary Hypertension and Cor Pulmonale
2. Pulmonary Thromboembolic Disease
3. Pulmonary Vasculitis

DISORDERS OF THE PLEURAL SPACE

1. Non-Malignant Pleural Effusions
2. Malignant Pleural Effusions
3. Pneumothorax
4. Malignant Mesothelioma and Other Primary Pleural Tumors

DISEASES OF THE MEDIASTINUM

1. Nonneoplastic Disorders of the Mediastinum
2. Acquired Lesions of the Mediastinum: Benign and Malignant

DISORDERS OF THE CHESTWALL, DIAPHRAGM, AND SPINE

1. Nonmuscular Diseases of the Chest Wall

NEOPLASMS OF THE LUNGS

A. Cancer of the Lungs

INFECTIOUS DISEASES OF THE LUNGS

Common Syndromes in Pulmonary Infectious Diseases

1. Infections of the Upper Respiratory Tract
2. Acute Bronchitis and Community-Acquired Pneumonia
3. Acute Exacerbations of Chronic Obstructive Pulmonary Disease
4. Pneumonia in Childhood
5. Aspiration, Empyema, Lung Abscesses, and Anaerobic Infections
6. Bronchiectasis

<p>Pulmonary Infections in Special Hosts</p> <ol style="list-style-type: none"> 1. Pneumonia in Surgery and Trauma <p>Major Pathogens in Pulmonary Infections</p> <ol style="list-style-type: none"> 1. Pneumonia Caused by Gram-Positive Bacteria 2. Nosocomial Pneumonia 3. Viral Infections of the Lung and Respiratory Tract <p>Mycobacterial Infections</p> <ol style="list-style-type: none"> 1. Tuberculosis <p>ACUTE RESPIRATORY FAILURE</p> <p>A. Lung Failure</p> <p>B. Respiratory Pump Failure</p>		
<p><u>B. Mention the principles of</u></p> <p>Lung Immunology</p> <ol style="list-style-type: none"> 1. Pulmonary Defense Mechanisms against Infections 2. Lymphocyte- and Macrophage-Mediated Inflammation in the Lung 3. Mast Cells and Eosinophils 4. Antibody-Mediated Lung Defenses and Humoral Immunodeficiency <p>Lung Injury and Repair</p> <ol style="list-style-type: none"> 1. Cytokines and Chemokines in Lung Inflammation and Injury 2. Leukocyte Accumulation in Pulmonary Disease 3. Oxidative and Nitrosative Lung Injury 4. The Pathogenesis of Pulmonary Fibrosis <p>SYMPTOMS AND SIGNS OF RESPIRATORY DISEASE</p> <p>A. Clinical Approach to the Patient</p> <ol style="list-style-type: none"> 1. Approach to the Patient with Respiratory Symptoms 2. Skin Disease in Patients with Pulmonary Disease 3. Pulmonary-Systemic Interactions 4. Evaluation of Impairment and Disability Due to Lung Disease <p>OBSTRUCTIVE LUNG DISEASES</p>	<p>-Didactic (lectures, seminars, tutorial)</p> <p>-Clinical rounds</p> <p>-Seminars</p> <p>-Clinical rotations</p> <p>-Service teaching</p>	<p>-OSCE at the end of each year</p> <p>-log book & portfolio</p> <p>- One MCQ examination at the second half of the second year and another one in the third year</p> <p>-Written and oral examination</p>

A. Chronic Obstructive Pulmonary Disease

1. Pathologic Features of Chronic Obstructive Pulmonary Disease: Diagnostic Criteria and Differential Diagnosis
2. Chronic Obstructive Pulmonary Disease: Epidemiology, Pathophysiology, and Pathogenesis
3. Chronic Obstructive Pulmonary Disease: Clinical Course
4. Cigarette Smoking and Disease
5. Rehabilitation in Chronic Obstructive Pulmonary Disease and Other Respiratory Disorders

B. Bronchial Asthma

1. The Biology of Asthma
2. Asthma: Epidemiology
3. Aspirin- and Exercise-Induced Asthma

OCCUPATIONAL AND ENVIRONMENTAL DISORDERS

A. Occupational Disorders

1. Occupational Lung Disorders: General Principles and Approaches

INTERSTITIAL AND INFLAMMATORY LUNG DISEASES

A. Immunologic and Interstitial Diseases

1. Interstitial Lung Disease: A Clinical Overview and General Approach

DISORDERS OF THE PULMONARY CIRCULATION

1. The Pulmonary Circulation

DISORDERS OF THE CHESTWALL, DIAPHRAGM, AND SPINE

1. Effects of Neuromuscular Diseases on Ventilation.

SURGICAL ASPECTS OF PULMONARY MEDICINE

1. Perioperative Care of the Patient Undergoing Lung Resection
2. Thoracic Trauma
3. Lung Transplantation

NEOPLASMS OF THE LUNGS

A. Cancer of the Lungs

1. Genetic and Molecular Changes of Human Lung Cancer
2. The Solitary Pulmonary Nodule: A Systematic Approach
3. The Pathology of Non–Small Cell Lung Carcinoma
4. Small Cell Lung Cancer: Natural History
5. Extrapulmonary Syndromes Associated with Lung Tumors
6. Pulmonary Metastases

B. Lymphoproliferative Disorders

1. Lymphoproliferative and Hematologic Diseases Involving the Lung and Pleura

INFECTIOUS DISEASES OF THE LUNGS

1. Pulmonary Clearance of Infectious Agents
2. Approach to the Patient with Pulmonary Infection
3. The Radiology of Pulmonary Infection
4. The Pathology of Pulmonary Infection
5. Principles of Antibiotic Use and the Selection of Empiric Therapy for Pneumonia
6. Vaccination against Pulmonary Infections
7. Microbial Virulence Factors in Pulmonary Infections

Mycobacterial Infections

1. The Epidemiology, Prevention, and Control of Tuberculosis
2. The Microbiology, Virulence, and Immunology of Mycobacteria

ACUTE RESPIRATORY FAILURE

A. Lung Failure

1. Respiratory Failure: An Overview
2. Acute Respiratory Distress Syndrome: Pathogenesis
3. Acute Lung Injury and the Acute Respiratory Distress Syndrome: Clinical Features, Management, and Outcomes

<p>4. Sepsis, Systemic Inflammatory Response Syndrome, and Multiple Organ Dysfunction Syndrome</p> <p>5. Acute Respiratory Failure in the Surgical Patient</p> <p>B. Respiratory Pump Failure</p> <p>1. Pump Failure: The Pathogenesis of Hypercapnic Respiratory Failure in Patients with Lung and Chest Wall Disease</p> <p>C. Management and Therapeutic Interventions</p> <p>1. Oxygen Therapy and Pulmonary Oxygen Toxicity</p> <p>2. Pulmonary Pharmacotherapy</p> <p>3. Nutrition in Acute Respiratory Failure</p> <p>Updates in pulmonary medicine</p>		
<p>C. <u>Mention basics of the following rare diseases and conditions</u></p> <p>OBSTRUCTIVE LUNG DISEASES</p> <p>1. Cystic Fibrosis</p> <p>2. Bronchiolitis</p> <p>3. Bullous Disease of the Lung</p> <p>4. Allergic Bronchopulmonary Aspergillosis (Mycosis)</p> <p>OCCUPATIONAL AND ENVIRONMENTAL DISORDERS</p> <p>A. Occupational Disorders</p> <p>1. Asbestos-Related Lung Disease</p> <p>2. Chronic Beryllium Disease and Hard-Metal Lung Diseases</p> <p>3. Coal Workers' Lung Diseases and</p> <p>4. Acute and Chronic Responses to Toxic Inhalations</p> <p>B. Environmental Disorders</p> <p>1. Indoor and Outdoor Air Pollution</p> <p>2. High-Altitude Physiology and Clinical Disorders</p> <p>3. Diving Injuries and Air Embolism</p> <p>INTERSTITIAL AND INFLAMMATORY LUNG DISEASES</p> <p>A. Depositional and Infiltrative Disorders</p> <p>1. Depositional Diseases of the Lungs</p> <p>2. Pulmonary Langerhan's-Cell Histiocytosis</p>	<p>-Didactic (lectures, seminars, tutorial)</p> <p>-Clinical rounds</p> <p>-Seminars</p> <p>-Clinical rotations</p> <p>-Service teaching</p>	<p>-OSCE at the end of each year</p> <p>-log book & portfolio</p> <p>- One MCQ examination at the second half of the second year and another one in the third year</p> <p>-Written and oral examination</p>

3. Pulmonary Lymphangiomyomatosis
4. The Lungs in Patients with Inborn Errors of Metabolism

ALVEOLAR DISEASES

1. Alveolar Hemorrhage Syndromes
2. Pulmonary Alveolar Proteinosis

DISORDERS OF THE PULMONARY CIRCULATION

1. Pulmonary Arteriovenous Malformations

DISEASES OF THE MEDIASTINUM

1. Congenital Cysts of the Mediastinum:
Bronchopulmonary Foregut Anomalies

NEOPLASMS OF THE LUNGS

A. Cancer of the Lungs

1. Primary Lung Tumors Other Than Bronchogenic Carcinoma: Benign and Malignant

INFECTIOUS DISEASES OF THE LUNGS

Common Syndromes in Pulmonary Infectious Diseases

1. Mediastinitis
2. Microbiology and Infection in Cystic Fibrosis

Pulmonary Infections in Special Hosts

1. Pulmonary Infection in Immunocompromised Hosts
2. Human Immunodeficiency Virus and Pulmonary Infections

Major Pathogens in Pulmonary Infections

1. *Aspergillus*, *Candida*, and Other Opportunistic Mold Infections of the Lung
2. Cryptococcosis and the Endemic Mycoses
3. *Pneumocystis* Pneumonia
4. Protozoan Infections of the Thorax
5. Helminthic Diseases of the Lungs
6. Zoonotic and Other Unusual Bacterial Pneumonias

Mycobacterial Infections

1. Mycobacterial Infections and HIV Infection 2. Diseases due to Non-Tuberculous Mycobacteria		
D. Explain the facts and principles of the relevant basic supportive sciences related to Pulmonary Medicine & Tuberculosis.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to Pulmonary Medicine & Tuberculosis.		
F. Describe the basic ethical and medicolegal principles relevant to the Pulmonary Medicine & Tuberculosis.		
G. Describe the basics and measurements of quality assurance to ensure good clinical care in Pulmonary Medicine & Tuberculosis.		
H. Explain the ethical and scientific principles of medical research.		
I. Explain the impact of common health problems in the field of Pulmonary Medicine & Tuberculosis on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to Pulmonary Medicine & Tuberculosis.	-Clinical rounds -Senior staff experience	-Procedure and case presentation -Log book & Portfolio
B. Apply the basic and clinically supportive sciences which are appropriate to Pulmonary Medicine & Tuberculosis related problems.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Pulmonary Medicine & Tuberculosis.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs. <ul style="list-style-type: none"> • Pneumothorax • Hemoptysis • Mortality in the ward 		
G. Plan quality improvement activities in the field of medical education and clinical practice in to Pulmonary Medicine & Tuberculosis.		
H. Create and innovate plans, systems, and other issues for improvement of performance in to Pulmonary Medicine & Tuberculosis.		
I. Present and defend his / her data in front of		

a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of Pulmonary Medicine & Tuberculosis.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to Pulmonary Medicine & Tuberculosis.	-Didactic (lectures, seminars, tutorial) -Clinical rounds Clinical rotations (service teaching)	-OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Clinical exam
B. <u>Order the following non invasive and invasive diagnostic procedures</u> <ul style="list-style-type: none"> ● Routine appropriate Lab investigations related Pulmonary Medicine & Tuberculosis. ● X ray Chest ● CT chest ● Chest MRI ● Pulmonary Cytopathology ● Interventional Radiology in the Thorax: Nonvascular and Vascular Applications 	-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under	- Procedure presentation - Log book - Chick list

<ul style="list-style-type: none"> ● Scintigraphic Evaluation of Pulmonary Disease ● Pulmonary function testing ● Bronchoscopy ● Thoracoscopy ● Sleep analysis ● Exercise testing ● Arterial blood gases ● Chest sonography ● Pleural aspiration ● Pleural and lung biopsy ● Tuberculin test 	<p>supervision of senior staff</p>	
<p>C. <u>Interpret the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> ● Routine appropriate Lab investigations related to Pulmonary Medicine & Tuberculosis. ● X ray Chest ● CT chest ● Chest MRI ● Pulmonary Cytopathology ● Interventional Radiology in the Thorax: Nonvascular and Vascular Applications ● Scintigraphic Evaluation of Pulmonary Disease ● Pulmonary function testing ● Bronchoscopy ● Thoracoscopy ● Sleep analysis ● Exercise testing ● Arterial blood gases ● Chest sonography ● Pleural aspiration ● Pleural and lung biopsy 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Checklist

<ul style="list-style-type: none"> • Tuberculin test 		
<p>D. <u>Perform the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Pulmonary function testing • Bronchoscopy • Thoracoscopy • Sleep analysis • Exercise testing • Arterial blood gases • Chest sonography • Pleural aspiration • Pleural and lung biopsy • Tuberculin test 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list
<p>E. <u>Prescribe the following non invasive and invasive therapeutic procedures.</u></p> <ul style="list-style-type: none"> • Pleural aspiration • Intercostal tube insertion • Pleurodesis • Postural drainage • Chest physiotherapy • Different methods of oxygen therapy • Inhalation therapy 	<ul style="list-style-type: none"> -Observation -Post graduate teaching -Hand on workshops 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list
<p>F. <u>Perform the following non invasive and invasive therapeutic procedures</u></p> <ul style="list-style-type: none"> • Pleural aspiration • Intercostal tube insertion • Pleurodesis • Postural drainage • Chest physiotherapy • Different methods of oxygen therapy • Inhalation therapy 	<ul style="list-style-type: none"> -Observation -Post graduate teaching -Hand on workshops 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list
<p>G. <u>Develop and carry out patient management plans for the following problems</u></p>	<ul style="list-style-type: none"> -Clinical round with 	

<ul style="list-style-type: none"> • bronchial asthma • COPD • interstitial lung diseases • URTIs • community acquired pneumonia • pulmonary embolism • respiratory failure • Pulmonary hypertention • Core pulmonale • ARDS and pulmonary edema • Tuberculosis • Suppurative lung diseases • Lung cancer and other space occupying lesions • Pneumothorax • Pleural effusion • Unusual and complicated cases of various diseases related to Pulmonary Medicine & Tuberculosis. 	<p>senior staff</p>	
<p>H. <u>Counsel and educate patients and their family about</u></p> <ul style="list-style-type: none"> • Bronchial asthma • COPD • Interstitial lung diseases • Inhalation therapy • Domiciliary O2 therapy • Pulmonary TB • Suppurative Lung Diseases • Respiratory failure • Pulmonary embolism • Physiotherapy in chronic chest illness • Prevention of transmission of infective Chest diseases • Anticoagulants 	<p>-Clinical round with senior staff</p>	

<ul style="list-style-type: none"> • Medications of other chest diseases • Side effects of radiotherapy/ chemotherapy • Side effects of Anti- TB drugs 		
<p>I. Use information technology to support patient care decisions and patient education for the Pulmonary Medicine & Tuberculosis related conditions.</p>	<p>-Clinical round with senior staff</p>	
<p>J. <u>Provide health care services aimed at preventing the following conditions</u></p> <ul style="list-style-type: none"> • Delayed diagnosis of infective and neoplastic chest diseases • Hospital acquired infections and pneumonia. • TB • Cross- transmission of URTIs (flu/common cold) • Deterioration and recurrence of thrombo-embolic diseases • Exacerbation of stable cases of asthma, COPD, suppurative lung diseases, and interstitial lung diseases • Occupational lung diseases 	<p>-Clinical round with senior staff</p>	
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care for the mentioned in A.A and A.C</p>	<p>-Clinical round with senior staff</p>	
<p>L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles) in conditions mentioned in A.A and A.C	-Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops	- Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.	-Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops	- Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D. Use information technology to manage information, access on-line medical information; and support their own education		
E. Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	-Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops	- Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
G. Perform the following oral communications: <ul style="list-style-type: none"> • Interpretation of the results of different investigations related to Chest diseases and Tuberculosis and discussion of different therapeutic options 		
H. Fill the following reports: <ul style="list-style-type: none"> • Patients' medical reports • Death report • Chest ultrasonography reports • ABGs reports 		
I. Work effectively with others as a member or leader of a health care team as regard diagnosis and treatment of conditions mentioned in A.A and A.C		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	<ul style="list-style-type: none"> - Observation - Senior staff experience - Case taking 	<ul style="list-style-type: none"> -Objective structured clinical examination - Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		<ul style="list-style-type: none"> - 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	<ul style="list-style-type: none"> - Observation - Senior staff experience 	<ul style="list-style-type: none"> - 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		<ul style="list-style-type: none"> - Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		<ul style="list-style-type: none"> - 360o global rating - Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

Unit 2 (Module) Respiratory Intensive Care Medicine

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p><u>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</u></p> <ol style="list-style-type: none"> 1. Ventilator associated pneumonia 2. Sepsis syndrome. 3. ARDS 4. Cardiogenic pulmonary oedema 5. Acute exacerbation of COPD 6. Status asthmaticus 7. Acute pulmonary embolism 8. Agitation in the Intensive Care Unit 9. Idiopathic pulmonary fibrosis 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation 	<ul style="list-style-type: none"> - log book -Objective structure clinical examination (OSCE) One MCQ examination at the second half of the second year -Written and oral exam
<p><u>B. Mention the principles of</u></p> <p style="color: red;">Section 1: Basic and advanced life support</p> <p style="color: red;">Section 2: Preventive practice in critically ill</p> <ol style="list-style-type: none"> 1. Infection control in ICU 2. Alimentary prophylaxis 3. Venous thromboembolism <p style="color: red;">Section 3: Indications of admission to ICU</p> <p style="color: red;">Section 4: Vascular access:</p> <p style="color: red;">Section 5: Airway management</p> <ol style="list-style-type: none"> 1. Nasal and oral airways 2. Laryngeal mask airway 3. Endotraheal tube 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -outpatient -inpatient -case presentation -Direct observation 	<ul style="list-style-type: none"> - log book -Objective structure clinical examination (OSCE) One MCQ examination at the second half of the second year

<p>4. Suction</p> <p>Section 6: Haemodynamic monitoring</p> <ol style="list-style-type: none"> 1. Arterial blood pressure 2. Pulmonary artery pressure 3. Central venous pressure and pulmonary artery wedge pressure. 4. Cardiac output 5. Oxygen delivery & tissue oxygenation 6. Arrhythmias 7. Haemodynamic drug infusion <p>Section 7: Invasive & noninvasive assessment of arterial blood gases</p> <ol style="list-style-type: none"> 1. Acid base status 2. Hypoxaemia and hypercapnia 3. Pulse oximetry 4. End tidal CO₂ 5. Transcutaneous O₂ and CO₂. <p>Section 8: The most common electrolyte disorders</p> <ol style="list-style-type: none"> 1. Hypokalemia 2. Hypomagnesaemia 3. Hyponatremia 4. Hypocalcemia. <p>Section 9: Infection in ICU</p> <ol style="list-style-type: none"> 1. Ventilator associated pneumonia 2. Sepsis syndrome. 3. Empirical antibiotic therapy <p>Section 10: Mechanical ventilation</p> <ol style="list-style-type: none"> 1. Objectives of mechanical ventilation 2. Indications of mechanical ventilation 3. Modes and settings of mechanical ventilation 4. Weaning from mechanical ventilation 5. Non invasive positive pressure ventilation 6. Complications of mechanical ventilation 7. Sedation and muscle relaxants <p>Section 11: Nutrition</p>		<p>-Written and oral exam</p>
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<ol style="list-style-type: none"> 1. Metabolic substrate requirements 2. Enteral tube feeding 3. Total parenteral nutrition <p>Section 12: Specific management and ventilatory strategies in pulmonary syndromes</p> <ol style="list-style-type: none"> 1. ARDS 2. Cardiogenic pulmonary oedema 3. Acute exacerbation of COPD 4. Status asthmaticus 5. Acute pulmonary embolism 6. Idiopathic pulmonary fibrosis <p>Section 13: Management and Therapeutic Interventions</p> <ol style="list-style-type: none"> 1. Agitation in the Intensive Care Unit 2. Decision Making in the Intensive Care Unit 3. Ethics in the Intensive Care Unit 		
<p><u>C. Mention basics of the following rare diseases and conditions</u></p> <p>OBSTRUCTIVE LUNG DISEASES</p> <ol style="list-style-type: none"> 1. Bullous Disease of the Lung <p>INTERSTITIAL AND INFLAMMATORY LUNG DISEASES</p> <ol style="list-style-type: none"> 1. Pulmonary Lymphangiomyomatosis <p>ALVEOLAR DISEASES</p> <ol style="list-style-type: none"> 1. Alveolar Hemorrhage Syndromes <p>DISORDERS OF THE PULMONARY CIRCULATION</p> <ol style="list-style-type: none"> 1. Pulmonary Arteriovenous Malformations 	<p>-Didactic (lectures, seminars, tutorial)</p> <p>-Clinical rounds</p> <p>-Seminars</p> <p>-Clinical rotations</p> <p>-Service teaching</p>	<p>-OSCE at the end of each year</p> <p>-log book & portfolio</p> <p>- One MCQ examination at the second half of the second year and another one in the third year</p> <p>-Written and oral examination</p>
<p>D. Explain the facts and principles of the relevant basic supportive sciences related to Respiratory</p>		

Intensive Care Medicine.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to Respiratory Intensive Care Medicine.		
E. Describe the basic ethical and medicolegal principles relevant to the Respiratory Intensive Care Medicine.		
F. Describe the basics and measurements of quality assurance to ensure good clinical care in Respiratory Intensive Care Medicine.		
G. Explain the ethical and scientific principles of medical research.		
H. Explain the impact of common health problems in the field of Respiratory Intensive Care Medicine on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to Respiratory Intensive Care Medicine.	-Clinical rounds -Senior staff experience	-Procedure and case presentation -Log book & Portfolio
B. Apply the basic and clinically supportive sciences which are appropriate to the Respiratory Intensive Care Medicine related problems.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to		

clinical situation related to Respiratory Intensive Care Medicine.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs. <ul style="list-style-type: none"> ● Peumothorax ● Ventilator associated pneumonia ● Cardio respiratory arrest ● Pulmonary embolism ● Mortality ● Intubation ● Self extubation 		
G. Plan quality improvement activities in the field of medical education and clinical practice in Respiratory Intensive Care Medicine.		
H. Create and innovate plans, systems, and other issues for improvement of performance in Respiratory Intensive Care Medicine.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of Respiratory Intensive Care Medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Take history, examine and clinically diagnose different conditions related to Respiratory Intensive Care Medicine</p>	<p>Lecture - Seminar - Outpatient -Inpatient -Case presentation -Direct observation</p>	<p>-OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Clinical exam</p>
<p>B. <u>Order the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> ● Ventilator adjustment ● CVP ● Oral airway placement ● ABG sampling 	<p>-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff</p>	<p>- Procedure presentation - Log book - Chick list</p>
<p>C. <u>Interpret the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> ● ABG sampling 	<p>-Clinical round with senior staff</p>	<p>- Procedure presentation - Log book</p>

<ul style="list-style-type: none"> • Haemodynamic Monitoring 	<ul style="list-style-type: none"> -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Chick list
<p>D. <u>Perform the following non invasive/invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Ventilator adjustment • CVP • Oral airway placement • ABG sampling 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list
<p>E. <u>Prescribe the following non invasive and invasive therapeutic procedures.</u></p> <ul style="list-style-type: none"> • Syringe pump adjustment • Intubation and mechanical ventilation • NIV &IPPV modes and settings • Weaning from mechanical ventilation • Resuscitation 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list

	senior staff	
<p>F. <u>Perform the following non invasive and invasive therapeutic procedures</u></p> <ul style="list-style-type: none"> • Syringe pump adjustment • Intubation and mechanical ventilation • NIV & IPPV modes and settings • Weaning from mechanical ventilation • Resuscitation 	<p>-Clinical round with senior staff</p> <p>-Observation</p> <p>-Post graduate teaching</p> <p>-Hand on workshops</p> <p>-Perform under supervision of senior staff</p>	<p>- Procedure presentation</p> <p>- Log book</p> <p>- Chick list</p>
<p>G. Develop and carry out patient management plans for the following problems</p> <ul style="list-style-type: none"> • Discharged patients from ICU • Previously intubated 	<p>-Clinical round with senior staff</p>	
<p>H. <u>Counsel and educate patients and their family about</u></p> <ul style="list-style-type: none"> • Symptoms of critical illness • Methods of management • How they synchronize with ventilators 	<p>-Clinical round with senior staff</p>	
<p>I. Use information technology to support patient care decisions and patient education for the Respiratory Intensive Care Medicine related conditions.</p>	<p>-Clinical round with senior staff</p>	
<p>J. <u>Provide health care services aimed at preventing the following conditions</u></p> <ul style="list-style-type: none"> • Hospital acquired pneumonia • Ventilator associated respiratory tract infection • Healthcare associated pneumonia 	<p>-Clinical round with senior staff</p>	

<ul style="list-style-type: none"> • T.B infections • Septicemia • Avian flu 		
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care for the following</p> <ul style="list-style-type: none"> • Suctioning • Tracheotomy tube care • Disinfection • Caring wounds 	<p>-Clinical round with senior staff</p>	
<p>L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles) in the following problems:</p> <ul style="list-style-type: none"> • ARDS • Difficult weaning 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.</p> <ul style="list-style-type: none"> • Endotracheal tube obstruction • Life threatening bronchospasm • Barotrauma • Arrhythmias 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness</p>		
<p>D. Use information technology to manage information, access on-line medical information; and support their own education</p>		
<p>E. Lead the learning of students and other health care professionals. Different maneuvers in RICU Settings of ventilator</p>		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	-Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops	- Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
G. Perform the following oral communications: <ul style="list-style-type: none"> • Advise patient for synchrony • Deal with patient relatives • Ordering residents • Ordering nurses 		
H. Fill the following reports: <ul style="list-style-type: none"> • Patients' medical reports • ABGs reports • Ventilatory lung mechanics • Aerodynamics 		
I. Work effectively with others as a member or leader of a health care team <ul style="list-style-type: none"> • A member of a health care team in respiratory intensive care • A leader of a health care team in night shift 		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	<ul style="list-style-type: none"> - Observation - Senior staff experience - Case taking 	<ul style="list-style-type: none"> -Objective structured clinical examination - Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		<ul style="list-style-type: none"> - 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	<ul style="list-style-type: none"> - Observation - Senior staff experience 	<ul style="list-style-type: none"> - 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		<ul style="list-style-type: none"> - Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		<ul style="list-style-type: none"> - 360o global rating - Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

Unit 3 (Module) Pulmonary Function Testing

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. <u>Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</u></p> <ul style="list-style-type: none"> ● Bronchial Asthma ● COPD ● Interstitial lung diseases ● Respiratory Failure 	<ul style="list-style-type: none"> - Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient - Case presentation -Direct observation 	<ul style="list-style-type: none"> - Log book - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year -Written and oral exam
<p>B. <u>Mention the principles of</u></p> <ul style="list-style-type: none"> ● Pulmonary dysfunction in different chest disease ● Indication of pulmonary function testing ● Spirometry and flow volume loop ● Reversibility testing ● Blood gases and its disturbances ● Diffusions ● Lung volumes ● Airway resistance ● Exercise testing ● Ventilation/perfusion matching ● Disability evaluation 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -outpatient -inpatient -case presentation -Direct observation 	<ul style="list-style-type: none"> - Log book -Objective structure clinical examination (OSCE) One MCQ examination at the second half of the second year -Written

<ul style="list-style-type: none"> • Compliance • Pre-operative evaluation of PF • Respiratory muscle function • PFT in ICU • Small airway function • Bronchial provocation testing • Unexplained dyspnea 		and oral exam
<p>C. <u>Mention basics of the following rare diseases and conditions</u></p> <ul style="list-style-type: none"> • Occupational lung diseases 		
<p>D. Explain the facts and principles of the relevant basic supportive sciences related to Pulmonary Function Testing.</p>		
<p>E. Explain the facts and principles of the relevant clinically supportive sciences related to Pulmonary Function Testing.</p>		
<p>F. Describe the basic ethical and medicolegal principles relevant to the Pulmonary Function Testing.</p>		
<p>G. Describe the basics and measurements of quality assurance to ensure good clinical care in Pulmonary Function Testing.</p>		
<p>H. Explain the ethical and scientific principles of medical research.</p>		
<p>I. Explain the impact of common health problems in the field of Pulmonary Function Testing on the society.</p>		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to Pulmonary Function Testing.	-Clinical rounds -Senior staff experience	-Procedure and case presentation -Log book & Portfolio
B. Apply the basic and clinically supportive sciences which are appropriate to the Pulmonary Function Testing related problems.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Pulmonary Function Testing.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs. <ul style="list-style-type: none"> • Complication of cardiopulmonary exercise testing • Complication of challenge test 		
G. Plan quality improvement activities in the field of medical education and clinical practice in Pulmonary Function Testing.		
H. Create and innovate plans, systems, and other issues for improvement of performance in Pulmonary Function Testing.		

I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of Pulmonary Function Testing.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to Pulmonary Function Testing.	-Didactic (lectures, seminars, tutorial) - Outpatient -Inpatient -Case presentation -Direct observation	-OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Clinical exam
B. <u>Order the following non invasive and invasive diagnostic procedures</u> <ul style="list-style-type: none"> ● Spirometry and flow volume loop ● Reversibility testing ● Blood gases ● Diffusions ● Lung volumes ● Airway resistance ● Exercise testing 	-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform	- Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE) - One MCQ

	under supervision of senior staff	examination at the second half of the second year
<p>C. <u>Interpret the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Blood gases • Spirometry • Reversibility testing • Potable Peak expiratory flow rate • Diffusions • Lung volumes • Exercise testing 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year
<p>D. <u>Perform the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Blood gases • Spirometry • Reversibility testing • Potable Peak expiratory flow rate • Diffusions • Lung volumes • Exercise testing 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year
<p>E. Prescribe the following non invasive and invasive therapeutic procedures.</p> <ul style="list-style-type: none"> • Reversibility test 	<ul style="list-style-type: none"> -Clinical round with senior staff 	<ul style="list-style-type: none"> - Procedure presentation - Log book

<ul style="list-style-type: none"> • Oxygen therapy 	<ul style="list-style-type: none"> -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff 	<ul style="list-style-type: none"> - Chick list
<p>F. Perform the following non invasive and invasive therapeutic procedures</p> <ul style="list-style-type: none"> • Reversibility test • Oxygen therapy 		
<p>G. <u>Develop and carry out patient management plans for the following problems</u></p> <ul style="list-style-type: none"> • Bronchial Asthma • COPD • interstitial lung diseases • Occupational lung diseases • Respiratory Failure • Unexplained dyspnea 	<ul style="list-style-type: none"> -Clinical round with senior staff 	
<p>H. <u>Counsel and educate patients and their family about</u></p> <ul style="list-style-type: none"> • Bronchial Asthma • COPD • Interstitial lung diseases • Occupational lung diseases • Respiratory Failure • How pulmonary function testing is performed 	<ul style="list-style-type: none"> - Clinical round with senior staff -Perform under supervision of senior staff 	
<p>I. Use information technology to support patient care decisions and patient education for the Pulmonary Function Testing related</p>	<ul style="list-style-type: none"> -Clinical round with senior staff 	

conditions.		
J. Provide health care services aimed at preventing the following conditions <ul style="list-style-type: none"> • Smoking related diseases 	-Clinical round with senior staff	
K. Work with health care professionals, including those from other disciplines, to provide patient-focused care for the following <ul style="list-style-type: none"> • Cardiac diseases • Pre operative assessments • Rehabilitation 	-Clinical round with senior staff	
L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles) <ul style="list-style-type: none"> • GOLD Guidelines • GINA Guidelines • ATS/ERS INTERPRETATION OF PULMONARY FUNCTION 	-Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops	- Global rating -Procedure & case presentation -Log book & Portfolios - Chick list

<p>B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.</p> <ul style="list-style-type: none"> Articles about PFT in chest diseases 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness</p>		
<p>D. Use information technology to manage information, access on-line medical information; and support their own education</p>		
<p>E. Lead the learning of students and other health care professionals in Pulmonary function testing</p>		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
G. Perform the following oral communications: <ul style="list-style-type: none"> • Interpretation of result of the pulmonary function test and blood gases 		
H. Fill the following reports: <ul style="list-style-type: none"> • ABGs reports • Pre PFTs sheet • Final comment on the results of the PFTs 		
I. Work effectively with others as a member or leader of a health care team <ul style="list-style-type: none"> • A member of a health care team in Pulmonary function testing in different chest disease • A leader of a health care team in <ul style="list-style-type: none"> ➤ Spirometry ➤ Body box ➤ Diffusion ➤ CPET ➤ Blood gases 		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	<ul style="list-style-type: none"> - Observation - Senior staff experience - Case taking 	<ul style="list-style-type: none"> -Objective structured clinical examination - Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		<ul style="list-style-type: none"> - 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	<ul style="list-style-type: none"> - Observation - Senior staff experience 	<ul style="list-style-type: none"> - 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		<ul style="list-style-type: none"> - Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		<ul style="list-style-type: none"> - 360o global rating - Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

Unit (Module) 4 Diagnostic & Interventional Bronchology & Medical Thoracoscopy

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. <u>Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</u></p> <ul style="list-style-type: none"> ● Lung cancer. ● Mediastinal space occupying lesions. ● Pleural diseases 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation 	<ul style="list-style-type: none"> - Log book - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year -Written and oral exam
<p>B. <u>Mention the principles of</u></p> <ul style="list-style-type: none"> ● Indications of Diagnostic Bronchoscopy, ● Early detection of lung cancer. ● The principles & physics for Fibro-optic Bronchoscopy, ● Each interventional modality including that of Laser, Autofluorescence bronchoscopy, Argon plasma coagulation, cryotherapy, electrocautery, photodynamic therapy and endobronchial ultrasound. ● Diagnostic medical thoracoscopy. ● Rigid Bronchoscopy 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation 	<ul style="list-style-type: none"> - Log book -Objective structure clinical examination (OSCE) One MCQ examination at the second half of the second year

		-Written and oral exam
C. <u>Mention basics of the following rare diseases and conditions</u> • Rare tumors of the lung		
D. Explain the facts and principles of the relevant basic supportive sciences related to Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		
F. Describe the basic ethical and medicolegal principles relevant to the Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		
G. Describe the basics and measurements of quality assurance to ensure good clinical care in Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		
H. Explain the ethical and scientific principles of medical research.		
I. Explain the impact of common health problems in the field of Diagnostic & Interventional Bronchology & Medical Thoracoscopy on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to Diagnostic & Interventional Bronchology & Medical Thoracoscopy.	-Clinical rounds -Senior staff experience	-Procedure and case presentation -Log book & Portfolio
B. Apply the basic and clinically supportive sciences which are appropriate to the Chest diseases & Tuberculosis related problems.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs. <ul style="list-style-type: none"> ● Pneumothorax ● Hemoptysis ● Cardio respiratory arrest ● Cross infection 		
G. Plan quality improvement activities in the field of medical education and clinical practice in Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		
H. Create and innovate plans, systems, and other issues for improvement of performance in Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		

I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of Diagnostic & Interventional Bronchology & Medical Thoracoscopy.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to Diagnostic & Interventional Bronchology & Medical Thoracoscopy	-Didactic (lectures, seminars, tutorial) - Outpatient -Inpatient -Case presentation -Direct observation	-OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Clinical exam
B. <u>Order the following non invasive and invasive diagnostic procedures</u> <ul style="list-style-type: none"> ● Fibro-optic Bronchoscopy ● Medical thoracoscopy ● Rigid bronchoscopy ● Transbronchial needle aspiration ● Autofluorescence bronchoscopy ● Endobronchial ultrasound 	-Lecture - Seminar -Outpatient -Inpatient -Case presentation -Direct observation	- Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE)

<ul style="list-style-type: none"> • Laser bronchoscopy • Endobronchial electrocautery • Argon-plasma Coagulation • Endobronchial cryotherapy • Airway stents • Endobronchial brachytherapy • Photodynamic therapy 		<ul style="list-style-type: none"> - One MCQ examination at the second half of the second year
<p>C. <u>Interpret the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Fibro-optic Bronchoscopy • Medical thoracoscopy • Rigid bronchoscopy • Transbronchial needle aspiration • Autofluorescence bronchoscopy • Endobronchial ultrasound • Laser bronchoscopy • Endobronchial electrocautery • Argon-plasma Coagulation • Endobronchial cryotherapy • Airway stents • Endobronchial brachytherapy • Photodynamic therapy 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -outpatient -inpatient -case presentation -Direct observation 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year
<p>D. <u>Perform the following non invasive/invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Fibro-optic Bronchoscopy • Medical thoracoscopy 	<ul style="list-style-type: none"> -Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE) - One MCQ examination at the second

	senior staff	half of the second year
<p>E. <u>Prescribe the following non invasive and invasive therapeutic procedures.</u></p> <ul style="list-style-type: none"> • Fibro-optic Bronchoscopy • Rigid bronchoscopy • Transbronchial needle aspiration • Autofluorescence bronchoscopy • Endobronchial electrosurgery and Argon-plasma Coagulation • Endobronchial cryotherapy • Airway stents • Medical thoracoscopy 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation 	<ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list
<p>F. <u>Perform the following non invasive and invasive therapeutic procedures</u></p> <ul style="list-style-type: none"> • Fibro-optic Bronchoscopy • Medical thoracoscopy 		
<p>G. Develop and carry out patient management plans for the following problems</p> <ul style="list-style-type: none"> • Endobronchial tumors either benign or malignant • Mediastinal space occupying lesions • Follow up of inserted stents 	<ul style="list-style-type: none"> -Clinical round with senior staff 	
<p>H. Counsel and educate patients and their family about</p> <ul style="list-style-type: none"> • Five year survival of bronchogenic carcinoma and end-of-life care 	<ul style="list-style-type: none"> - Clinical round with senior staff -Perform under supervision of senior staff 	
<p>I. Use information technology to support patient care decisions and patient education for the Diagnostic & Interventional Bronchology & Medical Thoracoscopy related</p>	<ul style="list-style-type: none"> -Clinical round with senior staff 	

<p>conditions.</p> <ul style="list-style-type: none"> • Design internet homepages and follow up patients for smoking cessation and fighting air pollution. 		
<p>J. Provide health care services aimed at preventing the following conditions</p> <ul style="list-style-type: none"> • Bronchogenic carcinoma by carrying out smoking cessation programs and prevention of air pollution 	-Clinical round with senior staff	
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care for the following</p> <ul style="list-style-type: none"> • Nutrition and end of life care 	-Clinical round with senior staff	
<p>L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills
Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles)</p> <ul style="list-style-type: none"> • Multimodality approach for lung cancer management and pleural tumors 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.</p> <ul style="list-style-type: none"> • Articles about diagnostic & interventional bronchology 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness</p>		
<p>D. Use information technology to manage information, access on-line medical information; and support their own education</p>		
<p>E. Lead the learning of students and other health care professionals In diagnostic & interventional bronchology and medical thoracoscopy</p>		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
G. Perform the following oral communications: <ul style="list-style-type: none"> • Interpretation of biopsy results and discussion of the diagnostic and therapeutic options 		
H. Fill the following reports: <ul style="list-style-type: none"> • Bronchoscopy report • Thoracoscopy report 		
I. Work effectively with others as a member or leader of a health care team <ul style="list-style-type: none"> ➤ A member of a health care team in diagnostic & Interventional bronchology ➤ A leader of a health care team in early detection of lung cancer 		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	<ul style="list-style-type: none"> - Observation - Senior staff experience - Case taking 	<ul style="list-style-type: none"> -Objective structured clinical examination - Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		<ul style="list-style-type: none"> - 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	<ul style="list-style-type: none"> - Observation - Senior staff experience 	<ul style="list-style-type: none"> - 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		<ul style="list-style-type: none"> - Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		<ul style="list-style-type: none"> - 360o global rating - Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

Unit (Module) 5 Sleep Medicine

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. <u>Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</u></p> <ul style="list-style-type: none"> ● Obstructive sleep apnea ● Central sleep apnea ● Nocturnal hypoventilation in other diseases (COPD, restrictive disease, asthma) 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation 	<ul style="list-style-type: none"> - Log book - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year -Written and oral exam
<p>B. <u>Mention the principles of</u></p> <ul style="list-style-type: none"> ● Obstructive sleep apnea ● Central sleep apnea ● Nocturnal hypoventilation in other diseases (COPD, restrictive disease, asthma) ● Preoperative care and management of patients with Obstructive sleep apnea ● Ploysomnography 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation 	<ul style="list-style-type: none"> - Log book -Objective structure clinical examination (OSCE) One MCQ examination at the second half of the second year -Written

		and oral exam
C. Mention briefly state of art of the following rare diseases and conditions • Overlap syndrome		
D. Explain the facts and principles of the relevant basic supportive sciences related to Sleep Medicine.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to Sleep Medicine.		
F. Describe the basic ethical and medicolegal principles relevant to the Sleep Medicine.		
G. Describe the basics and measurements of quality assurance to ensure good clinical care in Sleep Medicine.		
H. Explain the ethical and scientific principles of medical research.		
I. Explain the impact of common health problems in the field of Sleep Medicine on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to Sleep Medicine.	-Clinical rounds -Senior staff experience	-Procedure and case presentation -Log book & Portfolio
B. Apply the basic and clinically supportive sciences which are appropriate to the Sleep Medicine related problems.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Sleep Medicine.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs. • Cardio respiratory arrest		
G. Plan quality improvement activities in the field of medical education and clinical practice in Sleep Medicine.		
H. Create and innovate plans, systems, and other issues for improvement of performance in Sleep Medicine.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of Sleep Medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Take history, examine and clinically diagnose different conditions related to Sleep Medicine.</p>	<p>-Didactic (lectures, seminars, tutorial) - Outpatient -Inpatient -Case presentation -Direct observation</p>	<p>-OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Clinical exam</p>
<p>B. <u>Order the following non invasive and invasive diagnostic procedures</u></p> <ul style="list-style-type: none"> • Ploysomnography • Airflow and respiratory effort measurements • Cardiorespiratory monitoring • Continuous oximetry 	<p>- Clinical rounds Senior staff experience</p>	<p>- Procedure presentation - Log book - Chick list - Objective structure clinical examination (OSCE) - One MCQ examination at the second half of the second year</p>
<p>C. <u>Interpret the following non invasive and invasive diagnostic procedures</u></p>	<p>- Clinical rounds</p>	

<ul style="list-style-type: none"> • Ploysomnography • Airflow and respiratory effort measurements • Cardiorespiratory monitoring • Continuous oximetry 	Senior staff experience	
<p>D. Perform the following non invasive/invasive diagnostic procedures</p> <ul style="list-style-type: none"> • Ploysomnography 	- Clinical rounds Senior staff experience	
<p>E. Prescribe the following non invasive and invasive therapeutic procedures.</p> <ul style="list-style-type: none"> • CPAP therapy • Oxygen therapy • Non CPAP therapy of obstructive sleep apnea 	- Clinical rounds Senior staff experience	- Procedure presentation - Log book - Chick list
<p>F. Perform the following non invasive and invasive therapeutic procedures</p> <ul style="list-style-type: none"> • CPAP therapy • Oxygen therapy • Non CPAP therapy of obstructive sleep apnea 	- Clinical rounds Senior staff experience	
<p>G. Develop and carry out patient management plans for the following problems</p> <ul style="list-style-type: none"> • DD of sleep disorders • Ventilatory support • Surgical management • Behavioral management • Pharmacologic management 	-Clinical round with senior staff	
<p>H. Counsel and educate patients and their family about</p> <ul style="list-style-type: none"> • Consequences of day time sleepness-as motor car accidents and cardiovascular complications. • Avoidance of hypnotics, sedatives and alcohol • weight reduction • Position therapy training 	- Clinical round with senior staff -Perform under supervision of senior staff	

<ul style="list-style-type: none"> • Intraoral device usage training 		
<p>I. Use information technology to support patient care decisions and patient education for the Sleep Medicine related conditions.</p> <ul style="list-style-type: none"> • Design internet homepages and follow up patients for sleep hygiene and how to diagnose and treat sleep related disorders. 	<p>-Clinical round with senior staff</p>	
<p>J. Provide health care services aimed at preventing the following conditions</p> <ul style="list-style-type: none"> • Motor car accidents • Cardiovascular complications • Hypoxemia • Hypercapnia • Pulmonary hypertension 	<p>-Clinical round with senior staff</p>	
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care for the following</p> <ul style="list-style-type: none"> • When to refer to sleep lab. • When and how to treat via different treatment options • Weight reduction 	<p>-Clinical round with senior staff</p>	
<p>L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles)</p> <ul style="list-style-type: none"> • Sleep disordered breathing • Recent trends in management of OSAS 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.</p> <ul style="list-style-type: none"> • Articles about sleep medicine and its disorder 	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
<p>C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness</p>		
<p>D. Use information technology to manage information, access on-line medical information; and support their own education</p>		
<p>E. Lead the learning of students and other health care professionals</p>		

<ul style="list-style-type: none"> • The Stages of Sleep • Changes in the Cardiorespiratory System During Sleep • Sleep Apnea Syndromes • Differential Diagnosis and Evaluation of Sleepiness 		
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Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	<ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops 	<ul style="list-style-type: none"> - Global rating -Procedure & case presentation -Log book & Portfolios - Chick list
G. Perform the following oral communications: <ul style="list-style-type: none"> • Interpretating polysomnograph 		
H. Fill the following reports: <ul style="list-style-type: none"> • Sleep lab report 		
I. Work effectively with others as a member or leader of a health care team <ul style="list-style-type: none"> • A member of a health care team in Sleep lab clinical history taking and examination • A leader of a health care team in Sleep lab clinical 		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	<ul style="list-style-type: none"> - Observation - Senior staff experience - Case taking 	<ul style="list-style-type: none"> -Objective structured clinical examination - Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		<ul style="list-style-type: none"> - 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	<ul style="list-style-type: none"> - Observation - Senior staff experience 	<ul style="list-style-type: none"> - 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		<ul style="list-style-type: none"> - Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		<ul style="list-style-type: none"> - 360o global rating

		- Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: Second Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Unit 1 Pulmonary Medicine & Tuberculosis				
Section 1: Lung Immunology	B,H	A-J	-	B-G,J-P
1. Pulmonary Defense Mechanisms against Infections	B,H	A-J	-	B-G,J-P
2. Lymphocyte- and Macrophage-Mediated Inflammation in the Lung	B,H	A-J	-	B-G,J-P
3. Mast Cells and Eosinophils	B,H	A-J	-	B-G,J-P
4. Antibody-Mediated Lung Defenses and Humoral Immunodeficiency	B,H	A-J	-	B-G,J-P
Section 2: Lung Injury and Repair	B,H	A-J	-	B-G,J-P
1. Cytokines and Chemokines in Lung Inflammation and Injury	B,H	A-J	-	B-G,J-P
2. Leukocyte Accumulation in Pulmonary Disease	B,H	A-J	-	B-G,J-P
3. Oxidative and Nitrosative Lung Injury	B,H	A-J	-	B-G,J-P
4. The Pathogenesis of Pulmonary Fibrosis	B,H	A-J	-	B-G,J-P
Section 3: SYMPTOMS AND SIGNS OF RESPIRATORY DISEASE	B,H	A-J	-	A-P
A. Clinical Approach to the Patient	B,H	A-J	-	A-P

1. Approach to the Patient with Respiratory Symptoms	B	A-J	A	A-P
2. Skin Disease in Patients with Pulmonary Disease	B,H	A-J	A	A-P
3. Pulmonary-Systemic Interactions	B,H	A-J	-	B-G,J-P
4. Evaluation of Impairment and Disability Due to Lung Disease	B,H	A-J	-	B-G,J-P
Section 4: OBSTRUCTIVE LUNG DISEASES	A-I	A-J	A-L	A-P
A. Chronic Obstructive Pulmonary Disease	A -I	A-J	A-L	A-P
1. Pathologic Features of Chronic Obstructive Pulmonary Disease: Diagnostic Criteria and Differential Diagnosis	B,H	A-J	-	B-G,J-P
2. Chronic Obstructive Pulmonary Disease: Epidemiology, Pathophysiology, and Pathogenesis	B,H	A-J	-	B-G,J-P
3. Chronic Obstructive Pulmonary Disease: Clinical Course and Management	A,B,D-I	A-J	A-L	A-P
4. Cigarette Smoking and Disease	B.H	A-J		B-G,J-P
5. Rehabilitation in Chronic Obstructive Pulmonary Disease and Other Respiratory Disorders	B,H	A-J	-	B-G,J-P
B. Bronchial Asthma	A-I	A-J	A-L	A-P
1. The Biology of Asthma	B,H	A-J	-	B-G,J-P
2. Asthma: Epidemiology	B,H	A-J	-	B-G,J-P
3. Aspirin- and Exercise-Induced Asthma	B,H	A-J	-	A-P
4. Asthma: Clinical Presentation and Management	A,D-I	A-J	A-L	A-P
5. Allergic Bronchopulmonary	A,D-I	A-J	A-L	A-P

Aspergillosis (Mycosis)				
C. Other Obstructive Disorders	A,C-I	A-J	A-L	A-P
1. Upper Airway Obstruction in Adults	A,D-I	A-J	A-L	A-P
2. Cystic Fibrosis	C-I	A-J	A-L	A-P
3. Bronchiolitis	C-I	A-J	A-L	A-P
4. Bullous Disease of the Lung	C-I	A-J	A-L	A-P
Section 5: OCCUPATIONAL AND ENVIRONMENTAL DISORDERS	A-I	A-J	A-L	A-P
A. Occupational Disorders	A-I	A-J	A-L	A-P
1. Occupational Lung Disorders: General Principles and Approaches	B	A-J	-	B-G,J-P
2. Asbestos-Related Lung Disease	C-I	A-J	A-L	A-P
3. Chronic Beryllium Disease and Hard-Metal Lung Diseases	C-I	A-J	A-L	A-P
4. Coal Workers' Lung Diseases and	C-I	A-J	A-L	A-P
5. Occupational Asthma, Byssinosis, and Industrial Bronchitis	A,D-I	A-J	A-L	A-P
6. Acute and Chronic Responses to Toxic Inhalations	C-I	A-J	A-L	A-P
B. Environmental Disorders	A,C-I	A-J	A-F, I,K,L	A-P
1. Indoor and Outdoor Air Pollution	C-I	A-J	A-F, I,K,L	A-P
2. High-Altitude Physiology and Clinical Disorders	C-I	A-J	A-F, I,K,L	A-P
3. Diving Injuries and Air Embolism	C-I	A-J	A-F, I,K,L	A-P
4. Thermal Lung Injury and Acute Smoke Inhalation	A,D-I	A-J	A-G, J,,L,M	A-P
Section 6: DRUG-INDUCED LUNG DISEASES	A,D-I	A-J	A-I,,K,L	A-P

1. Pulmonary Toxicity Associated with Chemotherapeutic Agents	A,D-I	A-J	A-I,,K,L	A-P
2. Drug-Induced Lung Disease Due to Non chemotherapeutic Agents	A,D-I	A-J	A-I,,K,L	A-P
Section 7: INTERSTITIAL AND INFLAMMATORY LUNG DISEASES	A-I	A-J	A-L	A-P
A. Immunologic and Interstitial Diseases	A,B,D-I	A-J	A-L	A-P
1. Interstitial Lung Disease: A Clinical Overview and General Approach	B,H	A-J	A	B-G,J-P
2. Systemic Sarcoidosis	A,D-I	A-J	A-L	A-P
3. Idiopathic Pulmonary Fibrosis	A,D-I	A-J	A-L	A-P
4. Hypersensitivity Pneumonitis	A,D-I	A-J	A-L	A-P
5. Radiation Pneumonitis	A,D-I	A-J	A-L	A-P
6. Pulmonary Manifestations of the Collagen Vascular Diseases	A,D-I	A-J	A-L	A-P
7. The Eosinophilic Pneumonias	A,D-I	A-J	A-L	A-P
B. Depositional and Infiltrative Disorders	C-I	A-J	A-I,,K,L	A-P
1. Depositional Diseases of the Lungs	C-I	A-J	A-I,,K,L	A-P
2. Pulmonary Langerhan's-Cell Histiocytosis	C-I	A-J	A-I,,K,L	A-P
3. Pulmonary Lymphangiomyomatosis	C-I	A-J	A-I,,K,L	A-P
4. The Lungs in Patients with Inborn Errors of Metabolism	C-I	A-J	A-I,,K,L	A-P
Section 8: ALVEOLAR DISEASES	B-I	A-J	A-I,,K,L	A-P
1. Alveolar Hemorrhage Syndromes	C-I	A-J	A-I,,K,L	A-P
2. Mechanisms of Aspiration	B	A-J	-	B-G,J-P

3. Pulmonary Alveolar Proteinosis	C-I	A-J	A-I,,K,L	A-P
Section 9: DISORDERS OF THE PULMONARY CIRCULATION	A-I	A-J	A-L	A-P
1. The Pulmonary Circulation	B	A-J	-	B-G,J-P
2. Pulmonary Hypertension and Cor Pulmonale	A,D-I	A-J	A-I,L	A-P
3. Pulmonary Thromboembolic Disease	A,D-I	A-J	A-L	A-P
4. Pulmonary Vasculitis	A,D-I	A-J	A-I,,K,L	A-P
5. Pulmonary Arteriovenous Malformations	C-I	A-J	A-I,,K,L	A-P
Section 13: DISORDERS OF THE PLEURAL SPACE	A,D-I	A-J	A-I,,K,L	A-P
1. Non-Malignant Pleural Effusions	A,D-I	A-J	A-I,,K,L	A-P
2. Malignant Pleural Effusions	A,D-I	A-J	A-I,,K,L	A-P
3. Pneumothorax	A,D-I	A-J	A-I,,K,L	A-P
4. Malignant Mesothelioma and Other Primary Pleural Tumors	A,D-I	A-J	A-I,,K,L	A-P
Section 10: DISEASES OF THE MEDIASTINUM	A,C-I	A-J	A-I,,K,L	A-P
1. Nonneoplastic Disorders of the Mediastinum	A,D-I	A-J	A-I,,K,L	A-P
2. Congenital Cysts of the Mediastinum: Bronchopulmonary Foregut Anomalies	C-I	A-J	A-I,,K,L	A-P
3. Acquired Lesions of the Mediastinum: Benign and Malignant	A,D-I	A-J	A-I,,K,L	A-P
Section 11: DISORDERS OF THE CHESTWALL, DIAPHRAGM, AND SPINE	A,B,D-I	A-J	A-I,,K,L	A-P
1. Nonmuscular Diseases of the Chest Wall	A,D-I	A-J	A-I,,K,L	A-P

2. Effects of Neuromuscular Diseases on Ventilation.	B,H	A-I	-	B-G,J-P
3. Management of Neuromuscular Respiratory Muscle Dysfunction	A,D-I	A-J	A-I,,K,L	A-P
Section 12: SURGICAL ASPECTS OF PULMONARY MEDICINE	B,H	A-J	A-I,,K,L	A-P
1. Perioperative Care of the Patient Undergoing Lung Resection	B,H	A-J	-	B-G,J-P
2. Thoracic Trauma	B,H	A-J	A-I,,K,L	A-P
3. Lung Transplantation	B,H	A-J	-	B-G,J-P
Section 13: NEOPLASMS OF THE LUNGS	A-I	A-J	A-L	A-P
A. Cancer of the Lungs	A-I	A-J	A-L	A-P
1. Genetic and Molecular Changes of Human Lung Cancer	B,H	A-J	-	B-G,J-P
2. The Solitary Pulmonary Nodule: A Systematic Approach	B,H	A-J	-	B-G,J-P
3. The Pathology of Non–Small Cell Lung Carcinoma	B,H	A-J	-	B-G,J-P
4. Treatment of Non–Small-Cell Lung Cancer: Surgical	A,D-I	A-J	F-H	A-P
5. Treatment of Non-Small-Cell Lung Cancer: Chemotherapy	A,D-I	A-J	F-H	A-P
6. Treatment of Non–Small-Cell Lung Cancer: Radiation Therapy	A,D-I	A-J	F-H	A-P
7. Small Cell Lung Cancer: Diagnosis, Treatment, and Natural History	A,D-I	A-J	A-L	A-P
8. Primary Lung Tumors Other Than Bronchogenic	C-I	A-J	A- I,K,L	A-P

Carcinoma: Benign and Malignant				
9. Extrapulmonary Syndromes Associated with Lung Tumors	B,H	A-J	-	B-G,J-P
10. Pulmonary Metastases	B,D-I	A-J	A- I,K,L	A-P
B. Lymphoproliferative Disorders	C-I	A-J	A- I,K,L	A-P
1. Lymphoproliferative and Hematologic Diseases Involving the Lung and Pleura	C-I	A-J	A- I,K,L	A-P
Section 14: INFECTIOUS DISEASES OF THE LUNGS	A-I	A-J	A-L	A-P
1. Pulmonary Clearance of Infectious Agents	B,H	A-J	-	B-G,J-P
2. Approach to the Patient with Pulmonary Infection	B,H	A-J	A-L	B-G,J-P
3. The Radiology of Pulmonary Infection	B,H	A-J	B,C	B-G,J-P
4. The Pathology of Pulmonary Infection	B,H	A-J	-	B-G,J-P
5. Principles of Antibiotic Use and the Selection of Empiric Therapy for Pneumonia	B,H	A-J	G-H	B-G,J-P
6. Vaccination against Pulmonary Infections	B,H	A-J	J	B-G,J-P
7. Microbial Virulence Factors in Pulmonary Infections	B,H	A-J	-	B-G,J-P
Common Syndromes in Pulmonary Infectious Diseases	A,C-I	A-J	A-L	A-P
1. Infections of the Upper Respiratory Tract	A,D-I	A-J	A-L	A-P
2. Acute Bronchitis and Community-Acquired Pneumonia	A,D-I	A-J	A-L	A-P
3. Acute Exacerbations of Chronic Obstructive Pulmonary Disease	A,D-I	A-J	A-L	A-P

4. Pneumonia in Childhood	A,D-I	A-J	A-L	A-P
5. Aspiration, Empyema, Lung Abscesses, and Anaerobic Infections	A,D-I	A-J	A-L	A-P
6. Mediastinitis	C-I	A-J	A-I,J	A-P
7. Microbiology and Infection in Cystic Fibrosis	C-I	A-J	A-I,J	A-P
8. Bronchiectasis	A,D-I	A-J	A-I,J	A-P
Pulmonary Infections in Special Hosts	A,C-I	A-J	A-L	A-P
1. Pneumonia in Surgery and Trauma	A,D-I	A-J	A-L	A-P
2. Pulmonary Infection in Immunocompromised Hosts	C-I	A-J	A-L	A-P
3. Human Immunodeficiency Virus and Pulmonary Infections	C-I	A-J	A-L	A-P
Major Pathogens in Pulmonary Infections	A,C-I	A-J	A-L	A-P
1. Pneumonia Caused by Gram-Positive Bacteria	A,D-I	A-J	A-L	A-P
2. Nosocomial Pneumonia	A,D-I	A-J	A-L	A-P
3. <i>Aspergillus</i> , <i>Candida</i> , and Other Opportunistic Mold Infections of the Lung	C-I	A-J	A-L	A-P
4. Cryptococcosis and the Endemic Mycoses	C-I	A-J	A-L	A-P
5. <i>Pneumocystis</i> Pneumonia	C-I	A-J	A-L	A-P
6. Viral Infections of the Lung and Respiratory Tract	A,D-I	A-J	A-L	A-P
7. Protozoan Infections of the Thorax	C-I	A-J	A-L	A-P
8. Helminthic Diseases of the Lungs	C-I	A-J	A-L	A-P
9. Zoonotic and Other Unusual Bacterial Pneumonias	C-I	A-J	A-L	A-P

Mycobacterial Infections	A-I	A-J	A-L	A-P
1. The Epidemiology, Prevention, and Control of Tuberculosis	B,H	A-J	J	B-G,J-P
2. The Microbiology, Virulence, and Immunology of Mycobacteria	B,H	A-J	-	B-G,J-P
3. Clinical Presentation and Treatment of Tuberculosis	A,D-I	A-J	A-L	A-P
4. Mycobacterial Infections and HIV Infection	C-I	A-J	A-L	A-P
5. Diseases due to Non-Tuberculous Mycobacteria	C-I	A-J	A-L	A-P
Section 15: ACUTE RESPIRATORY FAILURE	A,D-I	A-J	A-L	A-P
A. Lung Failure	A,B,D-I	A-J	A-L	A-P
1. Respiratory Failure: An Overview	B,H	A-J	-	B-G,J-P
2. Acute Respiratory Distress Syndrome: Pathogenesis	B,H	A-J	-	B-G,J-P
3. Acute Lung Injury and the Acute Respiratory Distress Syndrome: Clinical Features, Management, and Outcomes	B,D-I	A-J	A-L	B-G,J-P
4. Sepsis, Systemic Inflammatory Response Syndrome, and Multiple Organ Dysfunction Syndrome	B,D-I	A-J	-	B-G,J-P
5. Acute Respiratory Failure in the Surgical Patient	B,D-I	A-J	A-I,K, L	B-G,J-P
B. Respiratory Pump Failure	A,B,D-I	A-J	A-L	A-P
1. Pump Failure: The Pathogenesis of Hypercapnic Respiratory Failure in Patients with Lung and Chest Wall Disease	B,D-I	A-J	-	B-G,J-P
C. Management and Therapeutic	B,H	A-J	-	B-H,J-P

Interventions				
1. Oxygen Therapy and Pulmonary Oxygen Toxicity	B	A-J	E-H	B-H,J-P
2. Pulmonary Pharmacotherapy	B	A-J	E-I	B-G,J-P
3. Nutrition in Acute Respiratory Failure	B,H	A-J	-	B-HJ-P
Section 16: Updates in pulmonary medicine	B,D-I	A-J	-	B-G,J-P
Unit 2 Respiratory Intensive Care Medicine				
Section 1: Basic and advanced life support	B	A-J	E,F	I
Section 2: Preventive practice in critically ill	B	A-J	A-L	
1. Infection control in ICU	B	A-J	J	I
2. Alimentary prophylaxis	B	A-J	-	
3. Venous thromboembolism	B,H	A-J	A-L	A-P
Section 3: Indications of admission to ICU	B	A-J	-	
Section 4: Vascular access:	B	A-J	-	I
Section 5: Airway management	B	A-J	-	I
1. Nasal and oral airways	B	A-J	B,C	G,I
2. Laryngeal mask airway	B	A-J	-	-
3. Endotracheal tube	B	A-J	E-G,L	G,I
4. Suction	B	A-J	K	G,I
Section 6: Haemodynamic monitoring	B	A-J	C,D	G,I
1. Arterial blood pressure	B	A-J	C,D	G,I
2. Pulmonary artery pressure	B	A-J	-	G,I
3. Central venous pressure and pulmonary artery wedge pressure.	B	A-J	D	G,I
4. Cardiac output	B	A-J	-	-
5. Oxygen delivery & tissue oxygenation	B	A-J	-	-

6. Arrhythmias	B	A-J	C,D	-
7. Haemodynamic drug infusion	B	A-J	C,D	G,I
Section 7: Invasive& noninvasive assessment of arterial blood gases	B	A-J	-	-
1. Acid base status	B	A-J	-	G,I
2. Hypoxaemia and hypercapnia	B	A-J	-	-
3. Pulse oximetry	B	A-J	-	G,I
4. End tidal CO2	B	A-J	-	-
5. Transcutaneous O2 and CO2.	B	A-J	-	-
Section 8: The most common electrolyte disorders	B	A-J	A	-
1. Hypokalemia	B	A-J	A	-
2. Hypomagnesaemia	B	A-J	A	-
3. Hyponatremia	B	A-J	A	-
4. Hypocalcemia.	B	A-J	A	-
Section 9: Infection in ICU	A,B,D-I	A-J	A	A-P
1. Ventilator associated pneumonia	A,D-I	A-J	A	A-P
2. Sepsis syndrome.	B	A-J	A	A-P
3. Empirical antibiotic therapy	B	A-J	-	-
Section 10: Mechanical ventilation	B	A-J	B,D-F,G,H	-
1. Objectives of mechanical ventilation	B	A-J	-	-
2. Indications of mechanical ventilation	B	A-J	-	-
3. Modes and settings of mechanical ventilation	B,H	A-J	B,D,G,H	A-P
4. Weaning from mechanical ventilation	B,H	A-J	B,D,G,H	
5. Non invasive positive pressure ventilation	B,H	A-J	E,F	A-P
6. Complications of mechanical	B	A-J	-	-

ventilation				
7. Sedation and muscle relaxants	B	A-J	-	G,I
Section 11: Nutrition	B	A-J		-
1. Metabolic substrate requirements	B	A-J	-	-
2. Enteral tube feeding	B	A-J	-	-
3. Total parenteral nutrition	B	A-J	-	-
Section 12: Specific management and ventilatory strategies in pulmonary syndromes	A-I	A-J	A-L	A-P
1. ARDS	A,D-I	A-J	A-L	A-P
2. Cardiogenic pulmonary oedema	A,D-I	A-J	A-L	A-P
3. Acute exacerbation of COPD	A,D-I	A-J	A-L	A-P
4. Status asthmaticus	A,D-I	A-J	A-L	A-P
5. Acute pulmonary embolism	A,D-I	A-J	A-L	A-P
6. Idiopathic pulmonary fibrosis	A,C-I	A-J	A-L	A-P
7. Bullous Disease of the Lung	A,C-I	A-J	A-L	A-P
8. Pulmonary Lymphangiomyomatosis	A,C-I	A-J	A-L	A-P
9. Alveolar Hemorrhage Syndromes	A,C-I	A-J	A-L	A-P
Section 13: Management and Therapeutic Interventions	B	A-J	-	G,I
4. Agitation in the Intensive Care Unit	B	A-J	-	G,I
5. Decision Making in the Intensive Care Unit	B,H	A-J	-	G,I
3. Ethics in the Intensive Care Unit	B	A-J	-	-
Unit 3 Pulmonary Function Testing				
Bronchial Asthma	A,D-I	A-J	A-L	A-P
COPD	A,D-I	A-J	A-L	A-P

Interstitial lung diseases	A,D-I	A-J	A-L	A-P
Occupational lung diseases	C-I	A-J	A-L	A-P
Respiratory failure	A,D-I	A-J	A-L	A-P
Pulmonary dysfunction in different chest disease	B,H	A-E,G-J	-	A-P
Indication of pulmonary function testing	B	A-E,G-J	-	A-P
Spirometry and flow volume loop	B,H	A-E,G-J	B-D,H,I,K,L	A-P
Reversibility testing	B,H	A-E,G-J	B	A-P
Blood gases and its disturbances	B,H	A-E,G-J	B-D,H,I,K,L	A-P
Diffusions	B,H	A-E,G-J	B-D,H,I,K,L	A-P
Lung volumes	B,H	A-E,G-J	B-,H,I,K,L	A-P
Airway resistance	B,H	A-E,G-J	B-,H,I,K,L	A-P
Exercise testing	B,H	A-J	B-,H,I,K,L	A-P
Ventilation/perfusion matching	B,H	A-E,G-J	-	A-G,J-P
Disability evaluation	B	A-E,G-J	K	A-P
Compliance	B,H	A-E,G-J	H	A-G,J-P
Pre-operative evaluation of PF	B	A-E,G-J	K	A-P
Respiratory muscle function	B,H	A-E,G-J	H	A-G,J-P
PFT in ICU	B,H	A-E,G-J	-	A-G,J-P
Small airway function	B,H	A-E,G-J	-	A-G,J-P
Bronchial provocation testing	B,H	A-J	-	A-G,J-P
Unexplained dyspnea	B,H	A-E,G-J	F-H	A-P

Unit 4 Diagnostic & Interventional Bronchology & Medical Thoracoscopy

Indications of Diagnostic Bronchoscopy,	B	A-E,G-J	-	A-G,J-P
Bronchial tumors	A,C-I	A-E,G-J	A-L	A-P
Mediastinal space occupying lesions	A,D-I	A-J	A-L	A-P
Early detection of lung cancer.	A,D-I	A-J	A-L	A-P

Pleural diseases	A,D-I	A-J	A-L	A-P
The principles & physics for Fibro-optic Bronchoscopy,	B,H	A-E,G-J	A-C,E, F-L	A-G,J-P
Each interventional modality including that of Laser, Autofluorescence bronchoscopy, Argon plasma coagulation, cryotherapy, electrocautery, photodynamic therapy and endobronchial ultrasound.	B,H	A-J	A-L	A-P
Diagnostic medical thoracoscopy.	B,H	A-J	A-C,E, F-L	A-P
Rigid Bronchoscopy	B,H	A-J	A-C,E, F-L	A-P
Unit 5 Sleep Medicine				
Obstructive sleep apnea	A,B, D-I	A-J	A-L	A-P
Central sleep apnea	A,B, D-I	A-J	A-L	A-P
Nocturnal hypoventilation in other diseases (COPD, restrictive disease, asthma)	A,B, D-I	A-J	A-L	A-P
Overlap syndrome	C-I	A-J	A-L	A-P
Preoperative care and management of patients with Obstructive sleep apnea	B	A-E,G-J	-	A-G,J-P
Ploysomnography	B,D -I	A-J	A-L	A-P
CPAP therapy	B,D -I	A-IJ	A,E-L	A-P

5. Course methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Outpatient
3. Inpatient
4. Clinical rounds
5. Clinical rotations

6. Service teaching
7. Direct observation
8. Post graduate teaching
9. Hand on workshops
10. Perform under supervision of senior staff
11. Simulations
12. Present a case (true or simulated) in a grand round
13. Case Taking
14. journal club,
15. Critically appraised topic,
16. Educational prescription
17. Observation & supervision
18. Written & oral communications

6. Course methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

- Clinical examination
- Written
- Oral examination
- Check list
- log book & portfolio
- Procedure/case presentation
- One MCQ examination in the second year and one in the third year
- Objective structured clinical examination
- Check list evaluation of live or recorded performance
- Record review (report)

- Patient survey
- 360o global rating

ii. Time schedule: At the end of the second part

iii. Marks: 1000 marks

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies
- Principles of Chest Diseases Book by Staff Members of the Department of Chest Diseases-Assiut University

ii. Essential books

- Fishman' s Pulmonary Diseases and Disorders , fourth edition, 2015
- The ICU Book (Paul L Marino Fourth Edition ,2017)

iii. Recommended books

- Mechanical Ventilation - MacIntyre N R Branson R D – 2nd edition 2009
- Current Diagnosis & Treatment in Pulmonary Medicine, 2004
- Murray and Nadel's Textbook of Respiratory Medicine 5th ed. [edited by] Robert J. Mason, V. Courtney Broaddus, John F. Murray, Jay A. Nadel p. cm, 7th edition 2021
- Tuberculosis - Schaaf H S Zumla A L - 2009
- Chest Medicine Essentials of Pulmonary and Critical Care Medicine Fifth Edition by Ronald B. George, 2006
- *Clinical Respiratory Medicine - Albert R K Spiro S G – 4th ed. 2012*

iv. Periodicals, Web sites, ... etc

➤ **Periodicals**

- American Journal of Respiratory & Critical Care Medicine
- Chest

- Thorax
- BMJ
- European Journal of Chest Diseases
- Egyptian Journal of Chest Diseases & Tuberculosis
- Journal of Egyptian Society of Bronchology
- American academy of Sleep medicine

➤ **Web Sites:**

- www.ersnet.org, www.ERS-education.org,
- www.erj.ersjournals.com, <http://err.ersjournals.com>
- <http://www.ncbi.nlm.nih.gov/pubmed/>

v. Others

- None

9. Signatures

Course Coordinator	
Course Coordinator:	Head of the Department:
Date:	Date:

ANNEX 2

Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate in Chest Diseases and Tuberculosis

The Graduate (after residence training and medical doctorate years of study) must:

- 1-** Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Chest Diseases and Tuberculosis.
- 2-** Have continuous ability to add knowledge to Chest Diseases and Tuberculosis through research and publication.
- 3-** Appraise and utilise relevant scientific knowledge to continuously update and improve clinical practice.
- 4-** Acquire excellent level of medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific research.
- 5-** Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.
- 6-** Identify and create solutions for health problems in Chest Diseases and Tuberculosis.
- 7-** Acquire an in depth understanding of common areas of Chest Diseases and Tuberculosis, from basic clinical care to evidence based clinical application, and possession of

required skills to manage independently all problems in these areas.

- 8-** Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.
- 9-** Function as teacher in relation to colleagues, medical students and other health professions.
- 10-** Master decision making capabilities in different situations related to Chest Diseases and Tuberculosis.
- 11-** Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.
- 12-** Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.
- 13-** Show model attitudes and professionalism.
- 14-** Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Chest Diseases and Tuberculosis or one of its subspecialties.
- 15-** Use recent technologies to improve his practice in Chest Diseases and Tuberculosis
- 16-** Share in updating and improving clinical practice in Chest Diseases and Tuberculosis.

2- Competency based Standards for medical doctorate in Chest Diseases and Tuberculosis

22.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

- 2-1-A-** Established, updated and evidence- based theories, basics and developments of Chest Diseases and Tuberculosis and relevant sciences.
- 2-1-B-** Basics, methods and ethics of medical research.
- 2-1-C-** Ethical and medicolegal principles of medical practice related to Chest Diseases and Tuberculosis.
- 2-1-D-** Principles and measurements of quality in Chest Diseases and Tuberculosis.
- 2-1-E-** Principles and efforts for maintainance and improvements of public health.

2- Intellectual skills

By the end of the program, the graduate should be able to demonstrate the following

- 2-2-A-** Application of basic and other relevant science to solve Chest Diseases and Tuberculosis related Problems.
- 2-2-B-** Problem solving based on available data.
- 2-2-C-** Involvement in research studies related to Chest Diseases and Tuberculosis.
- 2-2-D-** Writing scientific papers.
- 2-2-E-** Risk evaluation in the related clinical practice.
- 2-2-F-** Planning for performance improvement in Chest Diseases and Tuberculosis.
- 2-2-G-** Creation and innovation in Chest Diseases and Tuberculosis.
- 2-2-H-** Evidence – based discussion.
- 2-2-I-** Decision making in different situations related to Chest Diseases and Tuberculosis.

2.3- Clinical skills

By the end of the program, the graduate should be able to

+ Competency-based outcomes for Patient Care:-

2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Chest Diseases and Tuberculosis.

2-3-B- Master patient care skills relevant to Chest Diseases and Tuberculosis for patients with all diagnoses and procedures.

2-3-C- Write and evaluate reports for situations related to the Chest Diseases and Tuberculosis.

2.4- General skills

By the end of the program, the graduate should be able to

+ Competency-based outcomes for Practice-based Learning and Improvement

2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management

2-4-B- Use competently all information sources and technology to improve his practice.

2-4-C- Master skills of teaching and evaluating others.

+ Competency-based objectives for Interpersonal and Communication Skills

2-4-D- Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

 **Competency-based objectives for Professionalism**

2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

 **Competency-based objectives for Systems-based Practice:**

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

2-4-G- Participate in improvement of the education system.

2-4-H- Demonstrate skills of leading scientific meetings including time management

2-4-O- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient care	Medical knowledge	Practice-based learning/Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- ❖ Didactic (lectures, seminars, tutorial)
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

Teaching methods for patient care

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job” training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes

both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for MD students.

Method	Practical skills	K	Intellectual	General skills			
	Patient care	K	I	Practice-based learning/Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/case log	X	X					
OSCE	X	X	X	X	X	X	X

Annex 4, Glossary of MD students assessment methods

- ❖ Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- ❖ Chart Stimulated Recall – Uses the MD doctor’s patient records in an oral examination to assess clinical decision-making.
- ❖ Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- ❖ Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor’s performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor’s performance.
- ❖ Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

- ❖ Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- ❖ Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.
- ❖ 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.
- ❖ Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- ❖ Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- ❖ Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

Annex 6, Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدكتوراه مع المعايير الأكاديمية
المعتمدة من كلية الطب □ جامعة أسيوط لدرجة الدكتوراه في الأمراض الصدرية
والتدرن

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for postgraduate Programs
1- Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Chest Diseases and Tuberculosis.	1- إتقان أساسيات و منهجيات البحث العلمي
2- Have continuous ability to add knowledge new developments to Chest Diseases and Tuberculosis through research and publication.	2- العمل المستمر علي الإضافة للمعارف في مجال التخصص
3- Appraise and utilise scientific knowledge to continuously update and improve clinical practice and relevant basic sciences.	3- تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة
4- Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific	4- دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطا و مطورا للعلاقات البينية بينها
5- Function as a leader of a team to provide patient care that is appropriate, compassionate for dealing with effective and health Problems and health promotion. 7- Acquire an in depth understanding of common areas of speciality, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	5- إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص
6- Identify and create solutions for health problems in Chest Diseases and Tuberculosis.	6- تحديد المشكلات المهنية و إيجاد حلولاً مبتكرة لحلها

<p>5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.</p> <p>7- Acquire an in depth understanding of common areas of Chest Diseases and Tuberculosis, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.</p>	<p>7- إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص</p>
<p>16- Share in updating and improving clinical practice in Chest Diseases and Tuberculosis.</p> <p>9- Function as teacher in relation to colleagues, medical students and other health professions.</p>	<p>8- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية</p>
<p>15- Use recent technologies to improve his practice in Chest Diseases and Tuberculosis.</p>	<p>9- استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية</p>
<p>8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.</p> <p>5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.</p>	<p>10- التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة</p>
<p>10- Master decision making capabilities in different situations related to Chest Diseases and Tuberculosis.</p>	<p>11- اتخاذ القرار في ظل المعلومات المتاحة</p>
<p>11- Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.</p>	<p>12- توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة</p>

<p>12- Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.</p>	<p>13- الوعي بدوره في تنمية المجتمع والحفاظ على البيئة</p>
<p>13- Show model attitudes and professionalism.</p>	<p>14- التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة</p>
<p>14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Chest Diseases and Tuberculosis or one of its subspecialties.</p> <p>15- Use recent technologies to improve his practice in Chest Diseases and Tuberculosis..</p>	<p>15- الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين</p>

2- Academic standards

Faculty ARS	NAQAAE General ARS for postgraduate Programs
2.1. A- Established, updated and evidence- based theories, basics and developments of Chest Diseases and Tuberculosis and relevant sciences.	2-1-1-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
2.1. B- Basic, methods and ethics of medical research.	2-1-2-ب- أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة
2.1. C- Ethical and medicological principles of medical practice related to Chest Diseases and Tuberculosis.	2-1-2-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص
2.1. D- Principles and measurements of quality in Chest Diseases and Tuberculosis.	2-1-2-د- مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. E- Principles and efforts for maintains and improvements of public health.	2-1-2-هـ- - المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها
2.2. A- Application of basic and other relevant science to solve Chest Diseases and Tuberculosis related problems.	2-2-1-أ - تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها
2.2.B- Problem solving based on available data.	2-2-ب - حل المشاكل المتخصصة استنادا علي المعطيات المتاحة
2.2.C- Involvement in research studies related to Chest Diseases and Tuberculosis.	2-2-ج -إجراء دراسات بحثية تضيف إلى المعارف
2.2. D- Writing scientific papers.	2-2-د- صياغة أوراق علمية
2.2. E- Risk evaluation in the related clinical practice.	2-2-هـ- تقييم المخاطر في الممارسات المهنية
2.2.F- Planning for performance improvement in Chest Diseases and Tuberculosis.	2-2-و -التخطيط لتطوير الأداء في مجال التخصص
2-2-G- Creation and innovation in the Chest Diseases and Tuberculosis.	2-2-ز- الابتكار /الإبداع

2.2. H- Evidence – based discussion.	2-2-2-ح- الحوار والنقاش المبني علي البراهين والأدلة
2.2.I- Discussion making in different situations related to Chest Diseases and Tuberculosis.	2-2-2-ط -اتخاذ القرارات المهنية في سياقات مهنية مختلفة
2.3. A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Chest Diseases and Tuberculosis. 2.3. B- Master patient care skills relevant to Chest Diseases and Tuberculosis or patients with all diagnoses and procedures.	2-3-2-أ - إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص
2.3. C- Write and evaluate reports for situations related to the field of Chest Diseases and Tuberculosis.	2-3-2-ب- كتابة و تقييم التقارير المهنية.
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-3-2-ج -تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص
2.4.B- Use competently all information sources and technology to improve his practice.	2-3-2-د - استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.G- Participate in improvement of the education system.	2-3-2-هـ -التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين

II-Program ARS versus program ILOs

Comparison between ARS- ILOS for medical doctorate for Chest Diseases and Tuberculosis

(ARS)	(ILOs)
<u>2-1- Knowledge and understanding</u>	<u>2-1- Knowledge and understanding</u>
2-1-A- Established, updated and evidence-based Theories, Basics and developments of Chest Diseases and Tuberculosis and relevant sciences.	2-1-A- Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to patient care.
2-1-B Basic, methods and ethics of medical research.	2-1-B- Explain basics, methodology, tools and ethics of scientific medical, clinical research.
2-1-C- Ethical and medicological principles of medical practice related to Chest Diseases and Tuberculosis field.	2-1-C- Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Chest Diseases and Tuberculosis.
2-1-D- Principles and measurements of quality in the Chest Diseases and Tuberculosis field.	2-1-D- Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Chest Diseases and Tuberculosis.
2-1-E- Principles and efforts for maintains and improvements of public health.	2-1-E- Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of Chest Diseases and Tuberculosis
<u>2-2- Intellectual skills:</u>	<u>2-2- Intellectual skills:</u>
2-2-A- Application of basic and other relevant science to solve Chest	2-2-A- Apply the basic and clinically supportive sciences which are

Diseases and Tuberculosis related problems.	appropriate to Chest Diseases and Tuberculosis related conditions / problem / topics.
2-2-B -Problem solving based on available data.	2-2-B - Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Chest Diseases and Tuberculosis.
2-2-C - Involvement in research studies related to the Chest Diseases and Tuberculosis.	2-2-C - Plan research projects.
2-2-D Writing scientific papers.	2-2-D - Write scientific paper.
2-2-E -Risk evaluation in the related clinical practice.	2-2-E - Participate in clinical risk management as a part of clinical governance.
2-2-F -Planning for performance improvement in the Chest Diseases and Tuberculosis field.	2-2-F - Plan for quality improvement in the field of medical education and clinical practice in Chest Diseases and Tuberculosis..
2-2-G -Creation and innovation in the speciality field.	2-2-G - Create / innovate plans, systems, and other issues for improvement of performance in his practice.
2-2-H -Evidence – based discussion.	2-2-H - Present and defend his / her data in front of a panel of experts.
2-2-I -Decision making in different situations related to Chest Diseases and Tuberculosis fields.	2-2-I - Formulate management plans and alternative decisions in different situations in the field of the Chest Diseases and Tuberculosis.

continuous (ARS)	continuous (ILOs)
<p><u>2-3- Clinical skills:</u></p> <p>2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.</p> <p>2-3-B- Master patient care skills relevant to Chest Diseases and Tuberculosis for patients with all diagnoses and procedures.</p>	<p><u>2/3/1/Practical skills (Patient care :)</u></p> <p>2-3-1-A- Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. <i>p.s.</i> Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.</p> <p>2-3-1-B- Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Chest Diseases and Tuberculosis.</p> <p>2-3-1-C- Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.</p> <p>2-3-1-D- Perform diagnostic and therapeutic procedures considered essential in the field of Chest Diseases and Tuberculosis</p> <p>2-3-1-E- Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.</p> <p>2-3-1-F- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Chest Diseases and Tuberculosis related</p>

situations.

- 2-3-1-G-** Gather essential and accurate information about patients of the Chest Diseases and Tuberculosis related conditions.
- 2-3-1-H** Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the Chest Diseases and Tuberculosis related conditions.
- 2-3-1-I-** Develop and carry out patient management plans for Chest Diseases and Tuberculosis related conditions.
- 2-3-1-J-** Counsel and educate patients and their families about Chest Diseases and Tuberculosis related conditions.
- 2-3-1-K-** Use information technology to support patient care decisions and patient education in all Chest Diseases and Tuberculosis related clinical situations.
- 2-3-1-L-** Perform competently all medical and invasive procedures considered essential for the Chest Diseases and Tuberculosis related conditions / area of practices.
- 2-3-1-M-** Provide health care services aimed at preventing the Chest Diseases and Tuberculosis related health problems.
- 2-3-1-N-** Lead health care professionals, including those from other disciplines, to provide patient-focused care in Chest Diseases and Tuberculosis

	related conditions.
2-3-C- Write and evaluate reports for situations related to the field of Chest Diseases and Tuberculosis.	2-3-1-O- Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive timely and legible medical records).
<p><u>2-4- General skills</u></p> <p>2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management</p>	<p><u>2/3/2 General skills</u></p> <p>2-3-2-A- Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of Chest Diseases and Tuberculosis.</p> <p>2-3-2-B- Appraise scientific evidence.</p> <p>2-3-2-C- Continuously improve patient care based on constant self-evaluation and <u>life-long learning</u>.</p> <p>2-3-2-D. Participate in clinical audit and research projects.</p> <p>2-3-2-E- Practice skills of evidence-based Medicine (EBM).</p> <p>2-3-2-G- Design logbooks.</p> <p>2-3-2-H- Design clinical guidelines and standard protocols of management.</p> <p>2-3-2-I- Appraise evidence from scientific studies related to the patients' health problems.</p>

<p>2-4-B- Use competently all information sources and technology to improve his practice.</p>	<p>2-3-2-J- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.</p> <p>2-3-2-K- Use information technology to manage information, access on-line medical information; for the important topics.</p>
<p>2-4-C- Master skills of teaching and evaluating others.</p>	<p>2-3-2-F- Educate and evaluate students, residents and other health professionals.</p>
<p>2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.</p>	<p>2-3-2-L- Master interpersonal and communication skills that result in the effective <u>exchange of information and collaboration</u> with patients, their families, and health professionals, including:-</p> <ul style="list-style-type: none"> • <u>Present</u> a case. • <u>Write</u> a consultation note. • <u>Inform patients</u> of a diagnosis and therapeutic plan Completing and maintaining comprehensive. • Timely and legible <u>medical records</u>. • Teamwork skills. <p>2-3-2-M- Create and sustain a therapeutic and ethically sound relationship with patients.</p> <p>2-3-2-N- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.</p> <p>2-3-2-O- Work effectively with others as a member or leader of a health care team or other professional group.</p>
<p>2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities,</p>	<p>2-3-2-P- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.</p>

<p>adherence to ethical principles, and sensitivity to a diverse patient population.</p>	<p>2-3-2-Q- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.</p> <p>2-3-2-R- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.</p>
<p>2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.</p> <p>2-4-G- Participate in improvement of the education system.</p>	<p>2-3-2-S- Work effectively in health care delivery settings and systems related to Chest Diseases and Tuberculosis including good administrative and time management.</p> <p>2-3-2-T- Practice cost-effective health care and resource allocation that does not compromise quality of care.</p> <p>2-3-2-U- Advocate for quality patient care and assist patients in dealing with system complexities.</p> <p>2-3-2-V- Design, monitor and evaluate specification of under and post graduate courses and programs.</p>
<p>2-4-H- Demonstrate skills of leading scientific meetings including time management</p>	<p>2-3-2-W- Act as a chair man for scientific meetings including time management</p> <p>2-3-2-S- Work effectively in health care delivery settings and systems related to Chest Diseases and Tuberculosis including good administrative and time management.</p>
<p>2-4-O- Demonstrate skills of self and continuous learning .</p>	<p>From A to H</p>

**III-Program matrix
Knowledge and understanding**

Course	Program covered ILOs				
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E
Course 1 : Medical statistics		✓			
Course 2 : Research Methodology		✓			
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research			✓		
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)	✓				
Course 5 : “Chest diseases & Tuberculosis 2”	✓	✓	✓	✓	✓

Intellectual

Course	Program covered ILOs								
	2/2/A	2/2/B	2/2/C	2/2/D	2/2/E	2/2/F	2/2/G	2/2/H	2/2/I
Course 1 : Medical statistics			✓	✓				✓	
Course 2 : Research Methodology			✓	✓				✓	
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research								✓	
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)	✓	✓							
Course 5 : "Chest diseases & Tuberculosis 2"	✓	✓	✓	✓	✓	✓	✓	✓	✓

Practical Skills (Patient Care)

Course	Program covered ILOs							
	2/3/1/A	2/3/1/B	2/3/1/C	2/3/1/D	2/3/1/E	2/3/1/F	2/3/1/G	2/3/1/H
Course 1 : Medical statistics								
Course 2 : Research Methodology								
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research				✓				✓
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)								
Course 5 : "Chest diseases & Tuberculosis 2"	✓	✓	✓	✓	✓	✓	✓	✓

Practical Skills (Patient Care)

Course	Program covered ILOs						
	2/3/1/I	2/3/1/J	2/3/1/K	2/3/1/L	2/3/1/M	2/3/1/N	2/3/1/O
Course 1 : Medical statistics							
Course 2 : Research Methodology							
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research	✓	✓					
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)							
Course 5 : “Chest diseases & Tuberculosis 2”	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs							
	2/3/2/A	2/3/2/B	2/3/2/C	2/3/2/D	2/3/2/E	2/3/2/F	2/3/2/G	2/3/2/H
Course 1 : Medical statistics		✓						
Course 2 : Research Methodology		✓		✓	✓			
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research								
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)								
Course 5 : "Chest diseases & Tuberculosis 2"	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs							
	2/3/2/I	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/M	2/3/2/N	2/3/2/O	2/3/2/P
Course 1 : Medical statistics	✓	✓	✓					
Course 2 : Research Methodology	✓	✓						
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research				✓				
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)			✓	✓				
Course 5 : “Chest diseases & Tuberculosis 2”	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs						
	2/3/2/Q	2/3/2/R	2/3/2/S	2/3/2/T	2/3/2/U	2/3/2/V	2/3/2/W
Course 1 : Medical statistics							
Course 2 : Research Methodology							
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research							
Course 4: Chest Diseases and Tuberculosis 1 (Applied chest physiology & pathology)	✓		✓				
Course 5 : “Chest diseases & Tuberculosis 2”	✓	✓	✓	✓	✓	✓	✓

Annex 7,
Additional information:

Department information

Equipments and Specialized Units:

- Pulmonology and TB patients' wards: 64 beds.
- Daily 2 Chest out patients' clinics (new patients, follow up post discharge appointments, discharged critical care patients Follow up clinic)
- Weekly TB out patient clinic.
- Respiratory ICU (26 beds)
- Pulmonary Function Tests Laboratory (equipped with computerized spirometry device, Body Box, Diffusion tests, Cardio-pulmonary exercise testing.
- Sleep Lab
- Diagnostic and therapeutic Bronchoscopy and Thoracoscopy Unit.
- Radiology and chest ultrasonography section.
- Scientific Library (Chest Text Books and periodicals), MD, MSc thesis,
- Seminar room with data show
- Electronic Library of Scientific Seminars, case presentations.
- Minor procedures skill teaching unit (Inter costal tube insertion (ICT), pleural aspiration and biopsy, transthoracic lung biopsy
- Data base filing of all the cases, procedures and out patient clinic data.

Staff members

Head of the Department: Prof. Suzan Salama

Prof. Hammad El Shahaat

Prof. Ahmed Hamaed Osman

Prof. Tarek Mahfouz Abd El-Megeed

Prof. Olfat M. N. Elshinawy

Prof. Atef Farouk Al-Karn

Prof. Suzan Salama

Prof. Ashraf Zin El- Abdeen

Prof. Abd El- Azeem Abou El-Fadle

Prof. Raafat Talaat

Prof. Gamal Rabie Agmy

Prof. Maha Elkholy

Prof. Maha Kamel Ghanem

Prof. Amany Omar

Prof. Safaa Mokhtar Wafy

Prof. Mohamed Mostafa Metwally

Prof. Aliae Abd Rabou Mohamed

Prof. Hoda Ahmed Makhoul

Prof. Wafaa Ali Hassan

Prof. Khaled Hussein

Prof. Lamiaa H Shaban

Prof. Ali Abdel Azeem Hasan

Prof. Yousef Ahmad Yousef

Prof. Sherif Ahmed Abd El - Wahab

Dr. Yaser Ahmed Gad

Dr. Alaa Thabet

Dr. Samiaa Hamdy

Dr. Shereen Farghaly

Dr. Randa Ezz El-Din

Dr. Reham Abel Elmorshedy

Dr. Mohamed Fawzy Abel El-Ghany

Dr. Mohamed Fawzy Adam

Dr. Ahmed Metwally

Dr. Hassan Abel El-Latif

Dr. Nermen Ali Mahmoud

Dr. Sahar Farghally

Dr. Manal Ahmed

Dr. Doaa M.Magdy

Dr. Mostafa Kamal

Dr. Marwan Nasr

Dr. Ahmed Shadad

Dr Waleed Gamal

Dr. Mayada Kamal

Dr Mohamed Gamal

Dr. Mohamed Saad

Dr. Arafa Aboelhassan

Dr. Marwa Salah

Dr.Doaa Bahgat

Dr.Montaser Gamal

Dr. Sahar Refaat

Dr. Sara Mohammed Hashem

Dr. Hend Mohamed Sayed

Dr. Nermeen Mohammed Aboelkassem

Opportunities within the department

- Pulmonology and TB patients' wards: 64 beds.
- Respiratory ICU (26 beds)
- Pulmonary Function Tests Laboratory
- Sleep Lab
- Diagnostic and therapeutic Bronchoscopy and Thoracoscopy Unit.
- Radiology and chest ultrasonography section.
- Scientific Library
- Seminar room with data show
- Electronic Library of Scientific Seminars, case presentations.
- Minor procedures skill teaching unit, pleural aspiration and biopsy, transthoracic lung biopsy
- Data base filing of all the cases, procedures and out patient clinic data.

- Pulmonary Function Tests Laboratory
- Sleep Lab
- Diagnostic and therapeutic Bronchoscopy and Thoracoscopy Unit.
- Radiology and chest ultrasonography section.
- Scientific Library
- Seminar room with data show
- Electronic Library of Scientific Seminars, case presentations.
- Minor procedures skill teaching unit (Inter costal tube insertion (ICT), pleural aspiration and biopsy, transthoracic lung biopsy
- Data base filing of all the cases, procedures and out patient clinic data.

Department quality control insurance for completing the program

- + Evaluation by the Department head and staff members.
- + Regular assessments.
- + Log book monitoring.
- + Recent equipments and Specialized Units.

(End of the program specifications)