



## Course Syllabus - MBBCh

1. Course title: Respiratory Module		Course Code:RES22
2. Credit/contact hours:	159	
3. Number of weeks	5 weeks	
4. Level/year at which this course is offered:	Y2S2	
5. Pre-requisites for this course (if any): cardiovascular Module, General Module		
6. Co-requisites for this course (if any):		

### Course Description

The Respiratory Module is a 5 week module you will follow during semester 2 of your second year medical curriculum. You will learn about the normal structure and function of the respiratory tract. After which you will be in a position to appreciate the abnormalities of this system and how it affects the human body. Respiratory diseases are a major cause of morbidity and mortality globally. Recurrent and chronic respiratory problems result in a significant loss of productivity and man hours in a country. During this module we will cover the important areas of respiratory problems in adults and children. Meanwhile, all disorders of this system will not be covered in such a short time period. Therefore, the emphasis should be on active learning and self study by the student, using the respiratory module as a guide. A list of suggested reading material is annexed at the end of each course handouts and we suggest that you use the internet and other supplementary readers where necessary to further your knowledge. Teaching of this module will be in the form of lectures, tutorials, problem based learning, practical sessions and others. At the end of this module, you will have a comprehensive exam.

### Course Learning Outcomes

CLOs		Aligned-PLOs
1		
K1	Describe normal structure and function of the lungs	A1
K2	Enumerate the most common disorders of the respiratory tract	A1,

CLOs		Aligned-PLOs
K3	Describe the etiology and the pathogenesis of common respiratory disorders and basic management of the respiratory disorders	A1
K4	Describe principles of the pharmacological basis in the treatment of respiratory disorders	A1
K5	Correlate clinical features to the pathophysiology of the respiratory diseases	A2
K6	Describe the impact of social, occupational and environmental factors in respiratory disorders	A2
K7	Outline epidemiology of preventable respiratory diseases	A1
K8	Plan out investigations to diagnose and manage respiratory disorders	A3
S1	perform a clinical examination to diagnose respiratory tract disorders in simulated environment.	B1
S2	Perform under supervision simple bed side and laboratory investigations to confirm/ assist clinical diagnosis.	B1
A1	Demonstrate respect to Academic integrity	C4

### Course Delivery plan:

Session Title	Time	Teaching Method	Name of Teaching Faculty	Department	No.	Week
<b>Introduction to Respiratory system</b>	1	L	Dr. Shifan	<b>Anatomy</b>	8	<b>week 1: Upper respiratory tract diseases (21st March)</b>
<b>Nose</b>	1	SBIL	Dr. Shifan			
<b>Paranasal sinuses</b>	1	SGD	Dr. Shifan			
<b>Nose and palate</b>	1	P	Dr. Shifan			
<b>Larynx</b>	1	SBIL	Dr. Shifan			
<b>Trachea</b>	1	L	Dr. Shifan			
<b>Paranasal sinuses, Larynx &amp; Trachea</b>	2	P	Dr. Shifan			
<b>Nose and paranasal sinuses</b>	1	L	Prof.Nadia	<b>Histology</b>	2	
<b>Pharynx, larynx and trachea</b>	1	SDL	Prof.Nadia			
<b>Structure and function of respiratory system</b>	1	L	Dr. Rasha		7	

Pulmonary circulation	1	SDL	Dr Rasha	<b>Physiology</b>		
Mechanics of breathing	1	L	Dr Rasha			
Respiratory Pressures	1	SBIL	Dr Rasha			
Surfactant, Pulmonary Compliance	1	SBIL	Dr Rasha			
Lung Volumes and Capacities	1	CBL	Dr Rasha			
<b>Spirometry</b>	<b>1</b>	<b>P</b>	prof. Abeer/ Dr. Eman			
Diseases of the Nose and Nasopharynx	1	L	Dr Mariam	<b>Pathology</b>	3	
Diseases of the Larynx	1	SDL	Dr Mariam			
<b>PRACTICAL-DISEASES OF UPPER AIRWAYS</b>	<b>1</b>	<b>P</b>	Dr Mariam			
<b>Respiratory Tract Infections: Introduction</b>	<b>1</b>	<b>L</b>	Prof. Magda	<b>Microbiology</b>	4	
<b>Rhinovirus, Corona Virus, VZ Virus</b>	<b>1</b>	<b>SDL</b>	Prof. Magda			
<b>Paramyxovirus 1</b>	<b>1</b>	<b>L</b>	Prof. Magda			
<b>Paramyxovirus 2</b>	<b>1</b>	<b>SDL</b>	Prof. Magda			
<b>Paragonimiasis</b>	<b>1</b>	<b>SBIL</b>	Dr. Dina	<b>Parasitology</b>	2	
<b>Tropical Pulm Eosinophilia &amp; Loffler's Sundrome</b>	<b>1</b>	<b>SP</b>	Dr. Dina			
<b>Epidemiology &amp; Prevention of Measles</b>	<b>1</b>	<b>CBL</b>	Dr. Sahar	<b>Community</b>	4	
<b>Epidemiology &amp; Prevention of Rubella</b>	<b>1</b>	<b>SBIL</b>	Dr. Sahar			
<b>Epidemiology &amp; prevention of Chicken pox</b>	<b>1</b>	<b>SP</b>	Dr. Sahar			
<b>Epidemic curve of the pandemic</b>	<b>1</b>	<b>CBL</b>	Dr Sahar			
<b>Upper respiratory tract infection vs Covid-19 disease</b>	<b>2</b>	<b>PBL</b>		<b>PBL, SA,EP</b>	2	
<b>Student activity</b>	<b>3</b>	<b>SA</b>			3	
<b>Elective project</b>	<b>2</b>	<b>EP</b>			2	
<b>Total week 7</b>	<b>37</b>					
<b>Intercostal space: muscles</b>	<b>1</b>	<b>L</b>	Dr. Shifan	<b>Anatomy</b>	4	<b>Week 2:Infectious and allergic pulmonary diseases</b>
<b>Intercostal space: nerves &amp; vessels</b>	<b>1</b>	<b>SBIL</b>	Dr Shifan			
<b>Branchial Arches</b>	<b>1</b>	<b>L</b>	Dr Shifan			
<b>Pleurae</b>	<b>1</b>	<b>L</b>	Dr Shifan			

Bronchi & bronchioles	1	L	Prof.Nadia	<b>Histology</b>	2	(4th April)
lung alveoli & Lung Macrophages	1	L	Prof.Nadia			
pulmonary function test	1	L	Dr Rasha	<b>Physiology</b>	5	
Work of breathing	1	SDL	Dr Rasha			
Gas Exchange	1	L	Dr Rasha			
Spirometry	1	P	prof. Abeer/ Dr. Eman			
Flow volume curves	1	P	prof. Abeer/ Dr. Eman			
Introduction to COPD	1	L	Prof.Ghazala	<b>Pathology</b>	4	
Chronic Bronchitis	1	SBIL	Prof.Ghazala			
Emphysema	1	SBIL	Prof.Ghazala			
Bronchiectasis	1	L	Prof.Ghazala			
Orthomyxovirus (Influenza virus)	1	CBL	Prof. Magda	<b>Microbiology</b>	4	
Strp. Pyogenes (phayngitis)	1	CBL	Prof. Magda			
Hemophilus influenza (Epiglottitis)	1	SBIL	Prof. Magda			
Bordetella petrusis	1	SBIL	Prof. Magda			
Drug treatment of bronchial asthma I	1	SBIL	Dr. Eslam	<b>Pharmacology</b>	4	
Drug treatment of bronchial asthma II	1	L	Dr. Eslam			
Drug treatment of bronchial asthma III	1	L	Dr. Eslam			
Case-based prescription writing	1	P	Dr. Eslam			
Epidemiology & Prevention of Mumps	1	CBL	Dr. Sahar	<b>Community</b>	4	
Epidemiology & Prevention of Influenza	1	L	Dr. Sahar			
Epidemiology & prevention of Pertussis	1	CBL	Dr Sahar			
Epidemiology & prevention of Bronchial asthma	1	L	Dr Sahar			

History taking for respiratory system	1	L	Prof.Samia	Clinical Skills	2	
Examination of the respiratory system	1	p	Prof.Samia			
Bronchial Asthma	2	PBL		PBL, SA,EP	2	
Elective project	0	EP			0	
Student activity	3	SA			3	
<b>Total week 8</b>	<b>34</b>					
Lungs	1	SBIL	Dr Shifan	Anatomy	3	
Respiratory movements	1	SDL	Dr Shifan			
Joints of thoracic cage, lymphatics	1	SDL	Dr Shifan			
Pleura, adult lung and foetal lung	1	SDL	Prof.Nadia	Histology	1	
Ventilation Perfusion relationship	1	L	Dr Rasha	Physiology	5	
O2 transport	1	L	Dr Rasha			
O2 dissociation curve & its shift	1	SBIL	Dr Rasha			
CO2 transport	1	SDL	Dr Rasha			
Regulation of respiration	1	L	Dr Rasha			
Diseases of pleura	1	SDL	Prof. Ghazala	Pathology	4	
Restrictive Lung Diseases-1	1	L	Dr Mariam			
Restrictive Lung Diseases-2	1	L	Dr Mariam			
Pathology of Pulmonary Infections	1	SBIL	Dr Mariam			
Corynebacterium Diphtheria I	1	SDL	Prof. Magda	Microbiology	4	
Corynebacterium Diphtheria 2	1	CBL	Prof. Magda			
Diphtheria, Bordetella, H Influenza	1	P	Prof. Magda			
Mycobacterium Tuberculosis	1	L	Prof. Magda			
Dust Mites Allergy	1	L	Dr. Dina	Parasitology	3	
Practical para	1	P	Dr. Dina			
Hydatid Disease & VLM	1	SP	Dr. Dina			
Mucolytics, Cough Suppressants, Demulsants	1	L	Dr. Eslam	Pharmacology	1	
Epidemiology & Prevention of Streptococcal Pharyngitis	1	SP	Dr. Sahar	Community	3	

Week 3: Chronic lung/ pulmonary diseases (11th April)

Epidemiology & Prevention of Meningococcal Meningitis	1	SBIL	Dr. Sahar			
Epidemiology & Prevention of Diphtheria	1	L	Dr. Sahar			
Emphysema / COPD	2	PBL		PBL, SA,EP	2	
Student activity	4	SA			4	
COPD/ BA	2	ICM			2	
Elective Project	4	EP			4	
<b>Total week 9</b>	<b>36</b>					
Development of respiratory system	1	L	Dr Shifan	Anatomy	5	Week 4: Tuberculosis (18th April)
Contents of Intercostal space	1	P	Dr Shifan			
Lungs	1	P	Dr Shifan			
Ear	1	SBIL	Dr Shifan			
Ear	1	SGD	Dr. Shifan			
Practical	1	P	Prof.Nadia	Histology	1	
Neural control of ventilation	1	SBIL	Dr. Rasha	Physiology	4	
Chemical control of respiration	1	L	Dr. Rasha			
Non chemical control of respiration	1	SBIL	Dr. Rasha			
Hypoxia & cyanosis	1	SDL	Dr. Rasha			
Pulmonary Vascular Disorders	1	L	Dr. Mariam	Pathology	4	
practical	1	p	Dr Mariam			
practical	1	P	Dr. Mariam			
Atelectasis	1	SBIL	Prof.Ghazala			
Mycobacterium Tuberculosis	1	CBL	Prof. Magda	Microbiology	4	
Mycobacterium pct	1	P	Prof. Magda			
Legionella pneumophillia	1	CBL	Prof. Magda			
Pneumococci & pneumonia	1	SBIL	Prof. Magda			
Anti TB Drugs I	1	CBL	Dr. Eslam		3	
Anti TB Drugs II	1	L	Dr. Eslam			

<b>PRESCRIPTION Criticism, Correct &amp; Rewrite: (CCR)</b>	<b>1</b>	<b>P</b>	Dr. Eslam	<b>Pharmacology</b>		
<b>Epidemiology of Tuberculosis</b>	<b>1</b>	<b>CBL</b>	Dr Sahar	<b>Community</b>	<b>2</b>	
<b>Prevention of Tuberculosis</b>	<b>1</b>	<b>L</b>	Dr Sahar			
<b>Procedures PFM/Vetilogram</b>	<b>1</b>	<b>P</b>	Prof.Samia	<b>Clinical Skills</b>	<b>2</b>	
<b>History taking &amp; physical examination</b>	<b>1</b>	<b>P</b>	Prof.Samia			
<b>Student activity</b>	<b>2</b>	<b>SA</b>		<b>PBL, SA,EP</b>	<b>2</b>	
<b>Comprehensive exam</b>	<b>6</b>	<b>Comprehensive exam</b>			<b>6</b>	
<b>Tuberculosis</b>	<b>2</b>	<b>PBL</b>			<b>2</b>	
<b>Total week 10</b>	<b>35</b>					
<b>Ear</b>	<b>1</b>	<b>P</b>	Dr. Shifan	<b>Anatomy</b>	<b>1</b>	
<b>Effect of exercise on respiration , High altitude and deep sea diving</b>	<b>1</b>	<b>SP</b>	Dr Rasha	<b>Physiology</b>	<b>2</b>	
<b>Dyspnea, periodic breathing &amp; artificial respiration</b>	<b>1</b>	<b>SP</b>	Dr Rasha			
<b>Tumours of the Lung</b>	<b>1</b>	<b>SBIL</b>	Dr Mariam	<b>Pathology</b>	<b>2</b>	
<b>practical</b>	<b>1</b>	<b>P</b>	Dr Mariam			
<b>Klebsiella pneumonia &amp; Pseudomonas</b>	<b>1</b>	<b>CBL</b>	Prof. Magda	<b>Microbiology</b>	<b>5</b>	<b>Week 5: Tumors and Misc. infections of lung (25th April)</b>
<b>Mycoplasma pneumonia &amp; Chlamydia pneumonia</b>	<b>1</b>	<b>SDL</b>	Prof. Magda			
<b>Coxiella Burnetti &amp; Bacillus anthracis</b>	<b>1</b>	<b>SBIL</b>	Prof. Magda			
<b>Fungal Infections</b>	<b>1</b>	<b>SDL</b>	Prof. Magda			
<b>Klebsiella &amp; Pseudomonas &amp; Clamydia &amp; Mycoplasma and Fungi</b>	<b>1</b>	<b>P</b>	Prof. Magda			
<b>Review of Parasitic diseases affecting Resp System</b>	<b>1</b>	<b>L</b>	Dr. Dina	<b>Parasitology</b>	<b>1</b>	
<b>Epidemiology of ARI &amp; Child Preventive Health Programs</b>	<b>1</b>	<b>CBL</b>	Dr Sahar	<b>Community</b>	<b>2</b>	
<b>Pneumoconiosis</b>	<b>1</b>	<b>L</b>	Dr Sahar			
<b>Lung cancer</b>	<b>2</b>	<b>PBL</b>			<b>2</b>	

Elective Project	0	EP		PBL, SA,EP	0	
Student activity	2	SA			2	

No	List of Topics	Contact Hours
1	Upper respiratory tract diseases	36
2	Infectious and allergic pulmonary diseases	37
3	Chronic lung/Pulmonary diseases	35
4	Tuberculosis	35
5	Tumours and Misc.infections of the lung	17
<b>Total</b>		

## Teaching and Assessment

### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	<b>Skills</b>		
K1	Describe normal structure and function of the lungs	<ul style="list-style-type: none"> <li>➤ Problem based Learning</li> <li>➤ Lectures</li> <li>➤ SDL</li> <li>➤ SBIL</li> <li>➤ CBL</li> <li>➤ ICM</li> <li>➤ Clinical skills</li> <li>➤ SP</li> <li>➤ Comprehensive exam</li> <li>➤ Formative assesments</li> <li>➤ Class sharing</li> <li>➤ PBL discussion</li> <li>➤ Elective projects</li> <li>➤ Final Exam in form of written, oral and OSPE</li> </ul>	
K2	Enumerate the most common disorders of the respiratory tract		
K3	Describe the etiology and the pathogenesis of common respiratory disorders and basic management of the respiratory disorders		
K4	Describe principles of the pharmacological basis in the treatment of respiratory disorders		
K5	Correlate clinical features to the pathophysiology of the respiratory diseases		
K6	Describe the impact of social, occupational and environmental factors in respiratory disorders		
K7	Outline epidemiology of preventable respiratory diseases		



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
K8	Plan out investigations to diagnose and manage respiratory disorders		
S1	perform a clinical examination to diagnose respiratory tract disorders in simulated environment.		
S2	Perform under supervision simple bed side and laboratory investigations to confirm/ assist clinical diagnosis.		
A1	Demonstrate respect to Academic integrity		

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score	Date
2	Final exam (written, Oral and OSPE)	At the end of S2	70	June 2023
3	Year Assessments	Throughout the year	30	Midterm on 10 April 2023

\*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

## Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	<p>TEXTBOOKS &amp; OTHER RESOURCES</p> <ul style="list-style-type: none"> <li>• Agur, A. M., &amp; Dalley, A. F. (2009). Grant's atlas of anatomy. Lippincott Williams &amp; Wilkins. Pathology: Kumar, V., Abbas, A. K., &amp;</li> <li>• Anthony, L. M. (2013). Junqueira's basic histology: text and atlas.</li> <li>• ErosocPhysiology: Hall, J. E., &amp; Hall, M. E. (2020, June 16). Guyton and Hall Textbook of Medical Physiology.</li> <li>• Kumar, V., Abbas, A. K., &amp; Aster, J. C. (2017). Robbins Basic Pathology (10th ed.). Elsevier - Health Sciences Division.</li> <li>• Walter, J. B., &amp; IC, T. (1996). Walter &amp; Israel General Pathology 1996. Chp, 52, 831.</li> </ul>
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- KIM, M. K., MOORE, J. H., KIM, J. K., CHO, K. H., CHO, Y. W., KIM, Y. S., ... & SHIN, M. H. (2011). Goodmann & Gilman's The Pharmacological Basis of Therapeutics Goodmann & Gilman's The Pharmacological Basis of Therapeutics, 521-547, 2001. Journal of human genetics, 56(1), 71-76.
- Breslow, L. Encyclopedia of Public Health (AG).
- Community Medicine: Control of Communicable Diseases Manual. (2022, February 28). In D. L. Heymann (Ed.), An Official Report of the American Public Health Association. APHA Press.

<b>References Materials</b>	•
<b>Electronic Materials</b>	<ul style="list-style-type: none"> <li>• <a href="https://accesspharmacy.mhmedical.com/">https://accesspharmacy.mhmedical.com/</a></li> <li>• AMBOSS</li> <li>• Access Medicine</li> <li>• UptoDate</li> </ul>
<b>Other Learning Materials</b>	

## 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

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Instructors:

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