UNIVERSITI SULTAN ZAINAL ABIDIN

FACULTY OF MEDICINE

Student Guide Semester 2 Year 1

COURSE CODE: BMM10505
Session 2023/2024

COURSE 5:
Respiratory System

DATE OF COURSE:
19th MAY 2024– 27th JUNE 2024

Prepared by:

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FACULTY OF MEDICINE

VISION

The Faculty of Medicine aspires to be a reputable institution in producing virtuous, high-quality health professionals and researchers and providing excellent health services for sustainable communities.

MISSION

The Faculty of Medicine shall produce virtuous, proficient, globally competitive health professionals and researchers, producing high impact research and providing sustainable high-quality healthcare.

LOCATION

BT1	: Bilik Tutorial 1
BT2	: Bilik Tutorial 2
BT3	: Bilik Tutorial 3
BT4	: Bilik Tutorial 4
BT5	: Bilik Tutorial 5
BT6	: Bilik Tutorial 6
CL1	: Makmal Komputer 1
CL3	: Makmal Komputer 3
DKA	: Dewan Kuliah A
DKB	: Dewan Kuliah B
MA 1	: Makmal Anatomi 1
MA 2	: Makmal Anatomi 2
MBiokim	: Makmal Biokimia
MHisto	: Makmal Histologi
MMikro	: Makmal Mikrobiologi
MKK 1	: Makmal Kemahiran Klinikal 1
MKK 2	: Makmal Kemahiran Klinikal 2

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COURSE 5: RESPIRATORY SYSTEM

Course 2 Coordinator: Dr. Norhidayah Badya H/P: +601116129660

CONTENT SYNOPSIS:

This course emphasizes on the fundamental knowledge of respiratory system and the mechanics of breathing. It covers the gross anatomy, histology, embryology, physiology, bio-chemistry and radiological anatomy of the respiratory system. The aetiology, pathogenesis, patho-logical changes and clinical manifestations of common diseases affecting the system as well as the related microbiological problems and pharmacological treatment will be explained. The student shall be able to correlate the knowledge to clinical disturbances and diseases related to the respiratory system.

COURSE LEARNING OUTCOMES VS PLO/ MQF AND TEACHING DELIVERIES:

After completing this course, the students will be able to:

CLO	Description	PLO	Tax	MQF	Weightage (100%)	Delivery
CLO1	Demonstrate how the structures, functions, disease mechanisms and drug actions are inter-related in the respiratory system.	PLO1 (C3)	C3	MQF1 - Knowledge and Understanding	75	Interactive lecture, PBL, SGD, e-learning
CLO2	Perform basic medical examination and procedures to identify the structures and functions of the respiratory system.	PLO3 (P4)	P3	MQF3a - Practical Skills	15	Practical, ECE
CLO3	Demonstrate effective communication with peers during collaborative learning.	PLO5(A4)	A3	MQF3c - Communication Skills	5	PBL, SGD
CLO4	Demonstrate good teamwork with peers during collaborative learning.	PLO8(A3)	A3	MQF3f - Leadership, autonomy and responsibility	5	PBL, SGD

ASSESSMENTS:

CLO1 (C3)	MQF1: Knowledge and Understanding	**75 %**	
Category Title	Tool	Examination Format	Weight (%)
Final Exam	Structured Essay	Final Assessment	20
Final Exam	MCQ	Final Assessment	30
Quiz	MCQ	Continuous Assessment	25
CLO2 (P4)	MQF3a: Practical Skills	**15 %**	
Category Title	Tool	Examination Format	Weight (%)
Final Exam	OSPE	Final Assessment	10
Practical assessment	Supervisor report	Continuous Assessment	5
CLO3 (A3)	MQF3c: Communication Skills	**5 %**	
Category Title	Tool	Examination Format	Weight (%)
Group work assessment	Supervisor report	Continuous Assessment	5
CLO4 (A3)	MQF3f: Leadership, autonomy and responsibility	**5 %**	
Category Title	Tool	Examination Format	Weight (%)
Group work assessment	Supervisor report	Continuous Assessment	5

OUTLINE OF COURSE CONTENT

LECTURE			
Lecture	**Lecturer**	**Title**	**Learning outcome**
ANATOMY			
Anatomy 1 (E-learning)	**NM**	Muscles of respiration and diaphragm	1. State the muscles of respiration and their actions. 2. Describe the diaphragm under the following headings: - Attachments - blood supply - innervation and actions 3. State the major openings of the diaphragm and name the structures passing through them. 4. Describe the clinical application of the muscles of respiration and diaphragm.
Anatomy 2	**NASR**	Nose and paranasal sinuses	1. State the anatomical components of the conducting and respiratory parts of the respiratory system. 2. Describe the anatomy of nose (nasal septum and lateral wall). 3. State the paranasal sinuses and describe their anatomy. 4. Describe clinical application of nose and paranasal sinuses.
Anatomy 3	**NM**	Larynx and tracheobronchial tree	1. Describe the larynx and its cartilages. 2. Describe the vocal cord and their functions. 3. Describe clinical application of all the components of the upper respiratory tract. 4. Describe the anatomy of the tracheobronchial tree. 5. Describe clinical application of larynx and tracheobronchial tree.
Anatomy 4	**NFMN**	Lungs and pleura	1. Describe the pulmonary segments. 2. Describe the surface anatomy of the pleura and lungs. 3. Describe the pleura, pleural cavity, pleaural reflections and its recesses. 4. Describe the external features of the lungs, blood supply, innervation and lymphatic drainage. 5. Describe the clinical application of the lungs and pleura.

Anatomy 5 (E-learning)	**TFM**	Embryology of respiratory system	1. Describe the development of tracheobronchial tree. 2. Explain the process of development of lungs and stages of maturation of lungs. 3. Describe the development of diaphragm. 4. Discuss the congenital anomalies of respiratory system.
Anatomy 6 (E-learning) 1hr	**NFMN**	Histology of Respiratory System	1. Describe the microscopic anatomy of upper and lower respiratory tracts (nose, larynx and tracheobronchial tree). 2. Describe microscopic features of the lung including the inter-alveolar septum.
PHYSIOLOGY			
Physiology 1 (E-learning) 1hr	**SAM**	Introduction to respiratory system and mechanics of breathing	1. Describe the process of breathing. 2. Explain the pressure gradients that cause air flow into and out of lungs. 3. Explain how the respiratory muscles produce these pressure changes and the volume changes. 4. Describe the consequence of abnormal breathing.
Physiology 2	**SAM**	The pulmonary and alveolar ventilation	1. Define pulmonary and alveolar ventilation. 2. Describe the various lung volumes and capacities. 3. Explain the relationship between pulmonary ventilation and alveolar ventilation and dead spaces. 4. State the difference between static and dynamic lung volumes. 5. State the role of surfactant.
Physiology 3 (E-learning) 1hr	**MAM**	Pulmonary circulation	1. Describe the functions of the pulmonary circulation. 2. Describe the key physiological features of the pulmonary circulation. 3. Contrast the pulmonary circulation with the systemic circulation. 4. Explain the principle lung being kept “dry”.
Physiology 4	**ZAO**	Gas transport-Oxygen	1. Describe the composition of air, transport of oxygen (O_2) – concept of diffusion, pressure gradients (O_2) from atmosphere to lowest part of respiratory tract and tissues,

			pressures of O_2 on oxygenated and deoxygenated blood. 2. Describe the role of haemoglobin in transport of oxygen, forms in which oxygen is transported and factors affecting delivery of O_2 to the tissue – Bohr effect. 3. Explain the signs and symptoms, prevention and treatment of high altitude illness including acute mountain sickness, high altitude pulmonary edema and high altitude cerebral edema. 4. Discuss the respiratory functions in relation to high altitude.
Physiology 5 (E-Learning - 1hr)	**NAS**	Gas transport - Carbon dioxide	1. Describe the transport of carbon dioxide (CO_2) – concept of diffusion, pressure gradients (CO_2) from atmosphere to lowest part of respiratory tract and tissues and pressures of CO_2 on oxygenated and deoxygenated blood. 2. Describe the role of haemoglobin in transport of CO_2, forms in which CO_2 is transported and factors affecting CO_2 transport – Haldane effect. 3. Relate the mechanism of gaseous exchange to the respiratory acidosis and alkalosis.
Physiology 6	**CMN**	The ventilation - perfusion ratio	1. Define and understand the concepts of ventilation-perfusion ratio (VPR). 2. Explain the regional variation in VPR and abnormalities of VPR.
Physiology 7	**MAM**	Control of breathing	1. Explain the neural and chemical regulation of breathing. 2. Describe the factors affecting the breathing. 3. Discuss the sensitivity of the chemoreceptors- Hypoxia, hypercapnia and acidosis. 4. Explain the effects of Hypoxia, hypercapnia, and acidosis in ventilation. 5. Understand the respiratory changes in metabolic and respiratory acidosis.
Physiology 8	**CMN**	Cardiovascular and respiratory responses to exercise	1. Describe the cardiorespiratory adaptations to exercise – degree of exercise and its influence on heart rate, cardiac output, blood pressure, blood flow, respiration – pulmonary ventilation changes, arteriovenous

			differences in gases and anticipatory response. 2. Explain other physiological effects of exercise. 3. Describe the cardiorespiratory adaptation to exercise and training
Physiology 9 (E-learning -2 hrs)	**ZAO**	Hypoxia and cyanosis	1. Define hypoxia and classify its types. 2. Discuss the likely causes, characteristic features and consequences of hypoxia. 3. Define cyanosis and classify its types. 4. Discuss the causes, criteria, and clinical relevance of cyanosis.
BIOCHEMISTRY			
Biochemistry 1	**USMR**	Biochemical basis of respiratory diseases	1. Explain the synthesis and function of surfactant in the newborn. 2. Explain the biochemical basis of acute respiratory distress syndrome. 3. Explain the biochemical basis of asthma. 4. Explain the effect of smoking and nicotine metabolism.
Biochemistry 2	**SNRK**	Oxygen toxicity and antioxidants	1. Explain the mechanisms of oxygen toxicity and free radical injury. 2. Outline the characteristics and major sources of reactive oxygen species and reactive nitrogen species. 3. Describe the cellular and molecular antioxidant mechanisms and the role of dietary nutrients.
MICROBIOLOGY			
Microbiology 1	**SIS**	**Upper respiratory tract infection I**	1. Define upper respiratory tract infections (epiglottitis, pharyngitis and laryngitis). 2. Describe the clinical findings. 3. List the causative organisms. 4. Describe the pathogenesis and complications. 5. Explain the microbiological investigation. 6. Outline the management of the infection.

Microbiology 2 (E-learning)	**NIAR**	**Upper respiratory tract infection II**	1. Define upper respiratory tract infections (laryngotracheobronchitis, pertussis and diphtheria). 2. List the causative organisms. 3. Describe the pathogenesis, clinical findings and complications. 4. Explain the microbiological investigation. 5. Outline the management of the infection
Microbiology 3	**NIAR**	**Lower respiratory tract infection**	1. Define lower respiratory tract infections (Pneumonia, PTB). 2. Describe the clinical findings. 3. List the causative organisms. 4. Describe the pathogenesis and complications. 5. Explain the microbiological investigation 6. Outline the management of the infection.
Microbiology 4	**SIS**	**Influenza**	1. Define influenza and its antigenic shift and drift. 2. List the causative organism and its epidemiology. 3. Describe the the pathogenesis, clinical findings and their complications. 4. Explain the microbiological investigation. 5. Outline the management and prevention of the infection..
Microbiology 5 (E-learning - 1hr)	**KAJ**	**COVID-19**	1. Define COVID-19 and explain its causative organism. 2. Describe the clinical findings. 3. Describe the pathogenesis and complications. 4. Explain the microbiological investigation. 5. Outline the management of the infection
PATHOLOGY			
Pathology 1	**AA**	**Bronchial asthma**	1. Outline asthma regarding to two classifications (extrinsic and intrinsic). 2. Explain the aetiopathogenesis of asthma. 3. Describe the gross and microscopic features of asthma.

			4. Describe the clinical features of asthma. 5. Outline the investigations for asthma.
Pathology 2 (E-learning)	**AA**	**Obstructive pulmonary diseases**	1. List the diseases grouped as obstructive pulmonary diseases 2. Describe chronic bronchitis regarding to its pathogenesis, pathology and clinical features. 3. Describe emphysema regarding to its types, pathogenesis, pathology, and clinical features. 4. Describe bronchiectasis regarding to its pathogenesis based on the types, pathology and complications.
Pathology 3 (E-learning-1hr)	**AA**	**Restrictive lung diseases**	1. Describe the general effects of restrictive lung disease on lung function. 2. List the common causes of diffuse infiltrative lung disease. 3. Describe pneumoconiosis including anthracosis, silicosis, asbestosis. 4. Describe sarcoidosis regarding to the aetiopathogenesis, pathology, and clinical features. 5. Describe hypersensitivity pneumonitis regarding to the aetiopathogenesis, pathology and clinical features.
Pathology 4 (E-learning-1hr)	**NHAB**	**Pathology of pulmonary infections**	1. Describe pneumonia regarding to its aetiology, morphological features and predisposing factors, pathological changes and complications. 2. Describe the pathology of PTB 3. Describe the pathological changes of interstitial pneumonia caused by virus, mycoplasma and fungus. 4. List the causes of pneumonia in immunocompromised patients 5. Describe the aetiology and complications of lung abscess.

Pathology 5	**NHAB**	**Pulmonary embolism, infarction and haemorrhage**	1. Describe pulmonary embolism regarding to the aetiology, pathogenesis, morphology and clinical manifestations. 2. Describe pulmonary haemorrhage regarding to the aetiology, pathogenesis, morphology and clinical manifestations. 3. Describe pulmonary infarction regarding to the aetiology, pathogenesis, morphology and clinical manifestations.
Pathology 6 (E-learning)	**NHAB**	**Pulmonary Hypertension, Cor-pulmonale and oedema**	1. Describe pulmonary hypertension (PH) regarding to the aetiology, pathogenesis, pathology and clinical manifestations. 2. Correlate between PH and cor-pulmonale. 3. Discuss acute and chronic cor-pulmonale 4. Describe pulmonary oedema regarding to the aetiology, pathogenesis, pathology and clinical manifestations.
Pathology 7	**NHAB**	**Neoplasms of respiratory tract**	1. Describe the histologic subtypes of lung carcinoma. 2. Describe the main subtypes of lung carcinoma regarding to the pathogenesis, pathology, and clinical features. 3. Outline the complications of lung carcinoma. 4. Describe the nasopharyngeal carcinoma regarding to the aetiopathogenesis, pathology, and clinical features. 5. Describe the laryngeal carcinoma regarding to the predisposing factors, pathological and clinical features.
Pathology 8 (E-learning-1hr)	**AA**	**Pneumothorax and pleural diseases**	1. Describe pneumothorax regarding to the types, aetiology, clinical manifestations and investigation methods. 2. Describe pleural effusion regarding to the classification, aetiology, pathogenesis, clinical manifestations and investigation methods.

CLINICAL			
Clinical 1	**SA**	**Common respiratory disorders**	1. List the common respiratory disorders. 2. Describe the pathophysiology of the common respiratory disorders. 3. Relate the pathophysiology of these disorders to their clinical manifestation. 4. Briefly explain the signs and symptoms of common respiratory disorders. 5. Outline the investigations for respiratory systems.
Clinical 2	**AM**	**Investigations in respiratory problems**	1. Describe the basic investigations in respiratory system. 2. Relate between the abnormal results and their altered physiology.
PHARMACOLOGY			
Pharmacology 1 (E-learning)	**SYNJ**	**Agents used in bronchial asthma and COPD**	1. Classify agents used in bronchial asthma. 2. Explain the mechanism of action of agents used in bronchial asthma. 3. Describe pharmacokinetic, uses and side effects of agents used in bronchial asthma.
Pharmacology 2	**SDA**	**Anti-tuberculous agents**	1. Classify anti-tuberculous agents. 2. Explain the mechanism of action of anti-tuberculous agents. 3. Describe pharmacokinetic, uses and side effects of antituberculosis agents. 4. Discuss the rationale of combination therapy.
Pharmacology 3	**SHN**	**Antitussives, mucolytic and antihistamines**	1. Classify antitussives and antihistamines. 2. Explain the mechanism of action of antitussives and antihistamines. 3. Describe pharmacokinetic, uses and side effects of antitussives and antihistamines.
Pharmacology 4 (E-learning)	**MSAA**	**Oxygen therapy**	1. Relate the types of oxygen therapy to their corresponding therapeutic use in respiratory failure. 2. Enumerate the Indications of short-term O2 therapy using: a) High concentration of O2. b) low concentration of O2.

			3. State the Indications of long-term O2 therapy. 4. Explain the complications of O2 therapy. 5. Explain the principle and indications of hyperbaric oxygen therapy.
RADIOLOGY			
Radiology 1	**SAAM**	**Radiological anatomy of respiratory system**	1. Normal radiological respiratory anatomy on the CXR and CT Thorax. 2. Basic radiographic views of CXR.

SMALL GROUP DISCUSSION (SGD)		
SGD Anatomy	**NM, NFMN, NFCL, TFM**	1. Apply the knowledge of anatomy of respiratory system to the clinical scenario 2. Demonstrate effective communication and good teamwork
SGD Physiology 1	**NAAB, NAS, MAM, ZAO**	1. Apply the physiological knowledge of hypoxia to the clinical cases. 2. Demonstrate effective communication and good teamwork.
SGD Physiology 2	**MAM, ZAO, CMN, SAM**	1. Apply the physiological knowledge of control of respiration to the clinical cases. 2. Demonstrate effective communication and good teamwork.
SGD Pathology 1	**Pathology lecturers**	1. Apply the knowledge gained from different pathology lectures to discuss the findings in the given clinical scenarios 2. Demonstrate effective communication and good teamwork
SGD Microbiology 1	**SIS, NIAR, KAJ**	1. Apply the knowledge of medical microbiology with the given clinical scenario. 2. Demonstrate effective communication and good teamwork.
SGD Biochemistry 1	**USMR,NSMS, SNRK,LHMA**	1. Apply the knowledge of biochemistry of respiratory system to the clinical scenario 2. Demonstrate effective communication and good teamwork.

PRACTICAL			
Unit	**Lecturers**	**Topic**	**Learning Outcomes**
Anatomy 1	**NFMN, YIAB**	**Gross anatomy of the respiratory system**	1. Trace the surface marking of lungs and pleura. 2. Identify the intercostal spaces, muscles and its contents. 3. Identify the structures of the nose, paranasal sinuses, larynx, trachea and main bronchi. 4. Identify the external features of lungs including surfaces, borders, fissures and lobes, hilum and its contents. 5. Identify the diaphragm and study its anatomical features including its major openings.
Anatomy 2	**NFMN**	**Histology of respiratory system**	1. Identify the histological features of the larynx, trachea and lung.
Physiology 1	**MAM, ZAO, SAM, CMN**	**Peak flow and spirometry test**	1. Define the peak expiratory flow rate. 2. Measure the peak expiratory flow rate by using spirometer. 3. Determine the peak expiratory flow rate.
Microbiology 1	**SIS, NIAR, KAJ**	**Laboratory diagnosis of respiratory tract infections**	1. Explain the procedure for sample collection, processing and reporting of results of respiratory specimens. 2. Interpret the laboratory result of respiratory specimens. 3. Identify the causative organisms of respiratory infections. 4. Describe the microscopic appearance and colony morphology of the causative organisms.

PROBLEM BASED LEARNING (PBL)	
	Person in-charged
1. PBL 1	**NAS, NHAB, MA, SIS, NB, MSAA**
2. PBL 2	**ZAO, CMN, SNRK, NFMN, TFM, NAAB**
3. PBL 3	**SMAR, KAJ, SIS, SDA, NFCL, SAM**

Early Clinical Exposure (ECE)				
ECE	**Topic**	**Learning outcome**	**Learning activities**	**Lecturers in-charged**
ECE 1	Common symptoms in respiratory disease	1. Perform basic history taking for common symptoms in respiratory disease - Shortness of breath - Cough - Haemoptysis - Wheezing/ Stridor	Demonstration and role play. Students will be divided into 4 groups.	**NFMN, KAJ, SHN, MA**
ECE 2	Physical examination of respiratory system	1. Display the ability to perform respiratory examination: • Chest (Posterior and anteriorly): • Inspection: shape, symmetry • Palpation: Chest expansion • Percussion • Auscultation of breath sounds 2. Apply the surface anatomy of the lungs and pleura.	Demonstration and role play, video on example of patient's appearance/ signs Students will be divided into 4 groups.	**NFMN, KAJ, SHN, MA**

Personal and Professional Development (PPD)		
Lecturer	**Topic**	**Learning outcome**
HMY	History of Medicine	1. To discuss the evolution and significant events in the history of medicine. 2. Discuss the significant individual responsible for the advances in medicine.
MFMN/ YIAB	Career pathway as a doctor (Group project) Method -group seminar project (student find subspecialty in medical doctors' professions i.e paed, ent, etc) - assessment: project	1. Discuss the pathway to become a medical officer. 2. Discuss career and challenges as a doctor, which is regarded as a noble profession. 2. Explain medical specialties for future career 3. Describe the criteria to become an excellent medical professional.
RAR	Introduction to e-portfolio	1. To create portfolio for PPD course.

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ECE

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BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1 (SEMESTER 2, YEAR 1)

WEEK 1

COURSE 5: Respiratory System

Course Coordinator:
Dr. Norhidayah bt. Badya

DATE / TIME	8.30 – 9.30 AM	9.30– 10.30 AM	10.30 -11.00 AM	11.00 - 12.00 PM	12.00 – 1.00 PM	1.00 - 2.30 PM	2.30 – 3.30 PM	3.30- 4.00 PM	4.00 - 4.30 PM	4.30 - 5 PM
SUNDAY 19.05.2024	Introduction to the course Webex online **NB**	Muscles of respiration and diaphragm e-Learning **NM**		English for Communication II (PBI 10202) **Pn. Nabilah & Pn. Hanifah (FUPL)** **(DKB & DKC)**			Nose and paranasal sinuses **DKB** **NASR**	**Self study**	Integriti Dan Anti Rasuah (MPU34011) **(DKB)**	
MONDAY 20.05.2024	Larynx and tracheo-bronchial tree **DKB** **NM**	Lungs and pleura **DKB** **NFMN**		Introduction to respiratory system and mechanics of breathing e-Learning (1h) **SAM**	The pulmonary and alveolar ventilation **DKB** **SAM**		**Self study**	**Self study**	**Self study**	
TUESDAY 21.05.2024	The ventilation - perfusion ratio **DKB** **CMN**	Control of breathing **DKB** **MAM**		Gas transport- Oxygen **DKB** **ZAO**	**Self study**		Gas transport - Carbon dioxide e-Learning (1h) **NAS**	**Self study**	**Self study**	
WEDNESDAY 22.05.2024	**WESAK DAY**									
THURSDAY 23.05.2024	**Self study**	Histology of Respiratory System e-Learning (1h) **NFMN**		Pulmonary circulation e-Learning (1h) **MAM**	**Self study**		Hypoxia and cyanosis e-Learning (2hrs) **ZAO**			

BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1 (SEMESTER 2, YEAR 1)

WEEK 2

COURSE 5: Respiratory System

Course Coordinator:
Dr. Norhidayah bt. Badya

DATE / TIME	8.30 – 9.30 AM	9.30– 10.30 AM	10.30 -11.00 AM	11.00 - 12.00 PM	12.00 – 1.00 PM	1.00 - 2.30 PM	2.30 – 3.30 PM	3.30- 4.00 PM	4.00 - 4.30 PM	4.30 - 5 PM
SUNDAY 26.05.2024	**PBL 1** (Case 1 Session 1) **BT1,2,3,4,5,6** **NAS, NHAB, MA, SIS, NB, MSAA**			English for Communication II (PBI 10202) **Pn. Nabilah & Pn. Hanifah (FUPL)** **DKB & DKC**			Upper respiratory tract infection **I** **DKB** **SIS**	**Self study**	Integriti Dan Anti Rasuah (MPU34011) **(DKB)**	
MONDAY 27.05.2024	Biochemical basis of respiratory diseases **DKB** **USMR**	Oxygen toxicity and antioxidants **DKB** **SNRK**		**SGD Anatomy DKB, DT, MKK2, BT1 NM/NFMN/ NFCL/TFM**	Cardiovascular and respiratory responses to exercise **DKB** **CMN**		Bronchial asthma **DKB** **AA**	**Self study**	**Self study**	
TUESDAY 28.05.2024	**Self study**	History of Medicine **DKB** **HMY**		Embryology of respiratory system **e-Learning (1h)** **TFM**	**Self study**		Upper respiratory tract infection II **e-Learning (2hrs)** **NIAR**			**Self study**
WEDNESDAY 29.05.2024	Obstructive pulmonary diseases **e-Learning (2hrs)** **AA**			Penghayatan Etika dan Peradaban (MPU31072) **DKB & MKK2**			**Self study**	**Self study**	**Self study**	
THURSDAY 30.05.2024	Lower respiratory tract infection **DKB** **NIAR**	**SGD Physiology I** Hypoxia and respiratory failure **BT5, BT6, MKK2, DKB** **NAAB,NAS,MAM, ZAO**		**PRACTICAL ANATOMY 1** Gross anatomy of the respiratory system **MDA 1 & MDA 2** **NFMN/YIAB** **Faizzul,faradi,khairul,rostamizi**			**PBL 1** (Case 1 Session 2) **BT1,2,3,4,5,6** **NAS, NHAB, MA, SIS, NB, MSAA**		**Self study**	

BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1 (SEMESTER 2, YEAR 1)

WEEK 3	COURSE 5: Respiratory System	Course Coordinator: Dr. Norhidayah bt. Badya

DATE / TIME	8.30 – 9.30 AM	9.30– 10.30 AM	10.30 -11.00 AM	11.00 - 12.00 PM	12.00 – 1.00 PM	1.00 - 2.30 PM	2.30 – 3.30 PM	3.30- 4.00 PM	4.00- 4.30PM	4.30 - 5 PM
SUNDAY (2.06.2023)	**PBL 2** (Case 2 Session 1) BT1,2,3,4,5,6 **ZAO, CMN, SNRK, NFMN, TFM, NAAB**			English for Communication II (PBI 10202) **Pn. Nabilah & Pn. Hanifah (FUPL) DKB & MKK2**			Influenza **DKB SIS**	**Self study**	Integriti Dan Anti Rasuah (MPU34011) **(DKB)**	
MONDAY (3.06.2023)	**HARI KEPUTERAAN YDP AGONG**									
TUESDAY (4.06.2023)	**COVID-19** e-Learning (1h) **KAJ**	Pulmonary embolism, infarction and haemorrhage **DKB NHAB**		Pulmonary Hypertension, Cor-pulmonale and oedema e-Learning (2hrs) **NHAB**			Restrictive lung diseases e-Learning (1h) **AA**	Pathology of pulmonary infections e-Learning (1h) **NHAB**		**Self study**
WEDNESDAY (5.06.2023)	**PRACTICAL ANATOMY 2** Histology of respiratory system MDA 1 & MDA 2 **NFMN Faizzul,faradi,khairul,rostamizi**			Penghayatan Etika dan Peradaban (MPU31072) **DKB & MKK2**			**ECE 1** Common symptoms in lung disease **DKB, DKC, BT11, BT13 NFMN/KAJ/SHN/MA**			**Self study**
THURSDAY (6.06.2023)	**PRACTICAL PHYSIOLOGY 1** Peak flow and spirometry test MKK 1 & MKK 3 **MAM,ZAO,CMN,SAM Faizal, Afif**			**PBL 2** (Case 2 Session 2) BT1,2,3,4,5,6 **ZAO, CMN, SNRK, NFMN, TFM, NAAB**			**PRACTICAL MICROBIOLOGY 1** Laboratory diagnosis of respiratory tract infections MMikro **SIS / NIAR / KAJ Faizzul, Azlina, Tajul**			**Self study**

BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1 (SEMESTER 2, YEAR 1)

WEEK 4	COURSE 5: Respiratory System	Course Coordinator: Dr. Norhidayah bt. Badya

DATE / TIME	8.30 – 9.30 AM	9.30– 10.30 AM	10.30 - 11.00 AM	11.00 - 12.00 PM	12.00 – 1.00 PM	1.00 - 2.30 PM	2.30 – 3.30 PM	3.30- 4.00 PM	3.30 – 4.00PM	4.00 – 4.30 PM	4.30 – 5PM
SUNDAY (9.06.2024)	**PBL 3** (Case 3 Session 1) BT1,2,3,4,5,6 **SMAR, KAJ, SIS, SDA, NFCL, SAM**			English for Communication II (PBI 10202) **Pn. Nabilah & Pn. Hanifah (FUPL) DKB & MKK2**			**Self study**	**Self study**		Integriti Dan Anti Rasuah (MPU34011) **(DKB)**	
MONDAY (10.06.2024	**Self study**	**SGD Physiology 2** Common Respiratory Control disorders BT1,2,3,4 **MAM,ZAO,CMN,SAM**		Agents used in bronchial asthma and COPD **e-Learning (2hrs) SYNJ**			Anti-tuberculous agents **DKB SDA**	**Self study**		**Self study**	
TUESDAY (11.06.2024)	Antitussive, mucolytic and antihistamines **DKB SHN**	**SGD Microbiology DKB,MKK2, DT SIS/NIAR/KAJ**		Introduction to e-portfolio **DKB RAR**	Neoplasms of respiratory tract **DKB NHAB**		**ECE 2** Clinical examination of respiratory system **DKB, MKK1, MKK2, MKK3 NFMN/KAJ/SHN/MA**			**Self study**	
WEDNESDAY (12.06.2024)	Common respiratory disorders **DKB SA**	Investigations in respiratory problems **DKB AM**		Penghayatan Etika dan Peradaban (MPU31072) **DKB & MKK2**			**PBL 3** (Case 3 Session 2) BT1,2,3,4,5,6 **SMAR, KAJ, SIS, SDA, NFCL, SAM**			**Self study**	
THURSDAY (13.06.2024)	**Self study**	Pneumothorax and pleural diseases **e-Learning (1h) AA**		Oxygen therapy **e-Learning MSAA**			**Self study**	**Self study**		**Self study**	

BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1 (SEMESTER 2, YEAR 1)

WEEK 5

COURSE 5: Respiratory System

Course Coordinator:
Dr. Norhidayah bt. Badya

DATE / TIME	8.30 – 9.30 AM	9.30– 10.30 AM	10.30 -11.00 AM	11.00 - 12.00 PM	12.00 – 1.00 PM	1.00 - 2.30 PM	2.30 – 3.30 PM	3.30-4.30 PM	4.30 - 5.30 PM
SUNDAY (16.06.2024)									
MONDAY (17.06.2024)	**EID ADHA**								
TUESDAY (18.06.2024)	**MID-SEMESTER BREAK**								
WEDNESDAY (19.06.2024)									
THURSDAY (20.06.2024)									

BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1 (SEMESTER 2, YEAR 1)

WEEK 6

COURSE 5: Respiratory System

Course Coordinator:
Dr. Norhidayah bt. Badya

DATE / TIME	8.30 – 9.30 AM	9.30– 10.30 AM	10.30 - 11.00 AM	11.00 - 12.00 PM	12.00 – 1.00 PM	1.00 - 2.30 PM	2.30 – 3.30 PM	3.30 - 4.00 PM	4.00- 4.30 PM	4.30 - 5 PM
SUNDAY (23.06.2024)	**Self study**	**SGD** **Biochemistry** ABG analysis **BT1,BT2,BT3,BT4** **USMR,NSMS, SNRK,LHMA**		**English for Communication II (PBI 10202)** **MKK2 & DKB**			**Self study**		Integriti Dan Anti Rasuah (MPU34011) **(DKB)**	
MONDAY (24.06.2024)	Radiological anatomy of respiratory system **DKB** **SAAM**	Career Pathway as a Doctor (group project) **DKB** **MFMN/YIAB**		**Self study**			**SGD Pathology** **DKA,DKB,MKK2** **Pathology lecturers**		**Self study**	
TUESDAY (25.06.2024)	**Self study**	**Self study**		**QUIZ 1** **Anatomy, Physiology, Biochemistry** **Comp Lab 1 & 3**			**Self study**	**Self study**		**Self study**
WEDNESDAY (26.06.2024)	**QUIZ 2** **Pathology, Microbiology, Pharmacology** **Comp Lab 1 & 3**			Penghayatan Etika dan Peradaban (MPU31072) **DKA & DKB**			**Self study**	**Self study**		**Self study**
THURSDAY (27.06.2024)	**Self study**	**Meeting Preclinical School (online)**		**Self study**	**Self study**		**Feedback session** Medical Education **DKB**	**Self study**		**Self study**

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