



GANDHARA UNIVERSITY KABIR MEDICAL COLLEGE



FINAL YEAR MBBS 2024-2025

BLOCK – 14 (Module 27 & 28)

**DEPARTMENT OF MEDICAL EDUCATION
GHANDHARA UNIVERSITY PESHAWAR**

FROM THE DESK OF PRINCIPAL

Kabir Medical College has evolved, since its inception, as an exceptionally outstanding facility to provide quality education to the students.

I must appreciate the hard work of our well experienced and dedicated faculty members and staff in maintaining high standards of medical education and the efforts they have put in Kabir Medical College to be a distinguished center of excellence.

By the grace of Almighty, we are starting the integrated curriculum for Final year MBBS. We meet international standards of professional education by installing the system of integrated curriculum and system-based teaching of basic medical sciences. We advocate interactive sessions to improve comprehension of students as well as training them with skills of communication and self-expression.

Since the establishment of Kabir Medical College, we have been working constantly to upgrade services and facilities at the campus and the attached Naseer Teaching Hospital for our students and patients.

We would like our graduates to excel as confident, responsible, and self-learning medical practitioners. With a state-of-the-art campus, experienced faculty, an up-to-date digital library, I assure that your decision to study at Kabir Medical College will surely be a wise one, your experience here will be profoundly enriching and you will become a valuable asset to the nation and international community health care professionals.



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Welcome

Dear Final Year MBBS Students,

It is my pleasure to welcome you to the cardiorespiratory & reproduction and MSK module. This is a key component of your journey toward becoming a competent and compassionate physician. Throughout this course, you will build upon your previous medical knowledge and further hone the clinical skills that are essential for your professional growth. We encourage you to actively engage with the material, participate in discussions, and apply your knowledge during clinical rotations.

Your journey through this module will be challenging but immensely rewarding, as you gain the tools necessary to understand and treat some of the most intricate and critical systems of the human body. We look forward to supporting you every step of the way!

Director DME: Dr. Marina Khan



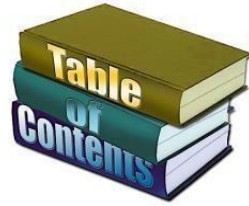


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STUDY GUIDE:

This study guidebook was designed by combining the efforts of all topics throughout the year to give medical students at Gandhara University a resource material that highlights significant components of the curriculum. By providing students control over their learning, the study guide aims to promote self-regulated lifelong learning.

Regarding the course content, the study guide provides an overview of the anticipated course outcomes and objectives. The assessment approach is also customized to the intuitional strategy.

A successful curriculum has a significant impact on the final product, as well as on society. This study guide was carefully designed with the PMDC curriculum and rules in mind, and Gandhara University stakeholders and faculty members worked hard to personalize it to the needs of students. They are further working to build, implement, and exercise a well-built curriculum considering changing demographic needs and disease prevalence in our society. Throughout the construction of the study guide, students' feedback was received and included. Curriculum is a living, dynamic entity that is constantly changing. With each passing day, we hope to improve it.

Each module in this block has been created to cater the gap between basic and clinical subjects through pre-clinical learning. The block is divided into two modules in which the students are exposed to a variety of basic and clinical subjects. The integrated curriculum is enforced through interactive lectures, small group discussion, community outreach programs along with rotations at preclinical laboratory. There will be formative as well as summative assessment of the block throughout the modules.



AIMS OF THE STUDY GUIDE

- Inform students how student learning program of the BLOCK-wise module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules, and regulations
- Communicates information on organization and management of the module. This will help the student to contact the right person in case of difficulty.
- Defines the objectives which are expected to be achieved at the end of the module.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills and demonstration, tutorial that will be implemented to achieve the module objectives.
- Provides a list of learning resources such as books, computer assisted learning programs, web- links, and journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous and block examinations on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focuses on information pertaining to examination policy, rules, and regulations.

It is an aid to:



ORGANIZATION OF MODULAR CURRICULUM

FINAL YEAR MBBS

<u>Block-13</u>		<u>Exam Block 13</u>	<u>Block-14</u>		<u>Exam Block 14</u>	<u>Block-15</u>		<u>Exam Block 15</u>	<u>Final Exam</u>
<u>Module 25</u> Foundation	<u>Module 26</u> Neurosciences & GIT		<u>Module 27</u> Cardiorespiratory and reproduction module	<u>Module 28</u> MSK		<u>Module 29</u> Renal & blood	<u>Module 30</u> Endocrinology		

INTRODUCTION TO BLOCK-13:

Welcome to the Final Year MBBS Module on Cardiorespiratory, Reproduction, and Musculoskeletal (MSK) Systems. This module is designed to build upon your foundational knowledge and clinical skills, equipping you with the expertise necessary to manage complex cases in these key organ systems. As a final-year medical student, this module emphasizes integrating clinical knowledge with practical skills, critical thinking, and evidence-based decision-making to prepare you for your role as a competent healthcare professional.

The module offers a comprehensive approach to understanding the anatomy, physiology, pathophysiology, and clinical management of diseases related to the cardiorespiratory, reproductive, and MSK systems. Through interactive lectures, hands-on sessions, case-based learning, and clinical rotations, you will refine your ability to diagnose, manage, and treat patients effectively.

RATIONALE

The Cardiorespiratory, Reproductive, and Musculoskeletal Systems are integral to understanding human health and disease, making this module essential for final-year medical students. These systems account for a significant burden of disease globally, including conditions such as cardiovascular disease, respiratory infections, reproductive health issues, and musculoskeletal disorders, all of which contribute to high morbidity and mortality rates. A deep understanding of the interplay between these systems is critical, as many diseases, such as autoimmune disorders, infections, and malignancies, often involve multiple organ systems. This module not only enhances your knowledge of anatomy, physiology, and pathophysiology but also focuses on clinical diagnosis, management, and the development of practical skills. By providing a strong foundation in evidence-based medicine and patient-centered care, the module ensures you are well-prepared to manage acute and chronic conditions effectively, perform essential clinical procedures, and address the multifaceted needs of patients in diverse healthcare settings. It is a vital step in your journey toward becoming a competent, empathetic, and skilled physician.

BLOCK - 14

MODULE -27

CARDIORESPIRATORY AND REPRODUCTION

MODULE

LEARNING METHODOLOGIES

The following teaching / learning methods are used to promote better understanding:

- Large Group Interactive Lectures
- Small Group Discussion
- Practical
- Skills session
- E-Learning
- Self-Directed Learning

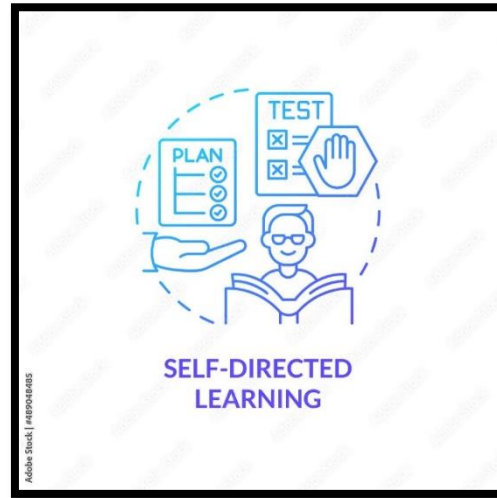
LARGE GROUP INTERACTIVE LECTURES (LGIS)



In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients'

SELF DIRECTED LEARNING SDL:

Students assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers, and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.



E-LEARNING:

E-Learning is a strategy by which learning occurs through the utilization of electronic media, typically the Internet. The basic aspects of medical professionalism and ethics will be addressed through an e-learning course.



RULES AND REGULATIONS

We will be making the journey through BLOCK 10 in 12 weeks. Therefore, this course includes an intensive coursework load. Class attendance and participation are extremely important to your learning and are considered in the evaluation of your course grade. If there is anything that the module team can do to assist you during the course, please feel free to contact them. Attendance will be monitored during the different teaching activities. If your attendance is less than 75%, you will not be allowed to sit for both block and annual examination.



All examinations must be taken on the date scheduled. No student will be allowed to sit for a block exam at the end of each block and each block will contain two modules. There will be a total of 3 block examinations and the 30% weightage of these block examinations will be added to the 70% of the annual professional exam as an internal assessment.

There will be a break area after the examination starts. There will be



MODULE – 27

FOUNDATION



GENERAL OUTCOME

By end of this module the students of final year BDS will be able to

COGNITIVE DOMAIN:

- ❖ Anatomy and physiology of thorax
- ❖ Investigations of chest pathologies
- ❖ Role of surgery in various esophageal diseases
- ❖ Surgical oncology as applied to esophageal tumors
- ❖ To understand the surgical anatomy of scrotum
- ❖ Pathophysiology of various scrotal and testicular diseases
- ❖ Surgical anatomy of scrotum and testis
- ❖ Clinical presentation of various scrotal swelling
- ❖ Staging and classification of testicular tumors
- ❖ Investigations and management
- ❖ Define Angina
- ❖ Enumerate the different types of Angina
- ❖ Explain briefly the clinical presentation and management of each type
- ❖ Know about skin features of cutaneous TB, their mode of transmission and treatment
- ❖ Know about skin features of common STDs. their causative agents and treatment
- ❖ Define ACS
- ❖ Enumerate the different etiological factors for ACS
- ❖ Classify the various types of ACS
- ❖ Explain and construct briefly their clinical presentation, diagnosis and management
- ❖ Define Arrhythmias
- ❖ Explain the pathophysiology of Arrhythmias
- ❖ Discuss the clinical presentation and defend management of different types of Arrhythmias
- ❖ Define CCF
- ❖ Enumerate causes
- ❖ Describe clinical presentation of CCF
- ❖ Explain briefly the management protocol
- ❖ Define Constrictive Pericarditis
- ❖ Explain the signs and symptoms of pericardial diseases
- ❖ Enlist the diagnostic tests for different types
- ❖ Explain the clinical presentation and management

- ❖ Define Rheumatic Fever
- ❖ Describe clinical presentation of Rheumatic Fever and diagnostic criteria
- ❖ Explain briefly the management protocol
- ❖ Explain & defend management of Rheumatic Fever
- ❖ Define Hypertension
- ❖ Describe the causes of hypertension
- ❖ Explain briefly the management protocol for it
- ❖ Define COPD and its types
- ❖ Enumerate the causes of COPD
- ❖ Explain briefly the clinical presentation and its management
- ❖ Define Infective endocarditis
- ❖ Describe the etiology of Infective endocarditis
- ❖ Explain briefly the clinical presentation and management protocol for Infective endocarditis
- ❖ Enlist VHD
- ❖ Describe clinical presentation of different types of vHD
- ❖ Explain briefly the management protocol for them
- ❖ Define Bronchial Asthma
- ❖ Enumerate the different etiological factors for Bronchial Asthma.
- ❖ Classify the various types of Asthma
- ❖ Explain and construct briefly the clinical presentation, diagnosis and its management
- ❖ Define pulmonary embolism/Infarction
- ❖ Enumerate its causes
- ❖ Explain briefly the clinical presentation
- ❖ Discuss the investigations and its management
- ❖ Define Cardiomyopathy
- ❖ Describe clinical presentation of different types of Cardiomyopathy
- ❖ Explain briefly the management protocol for each type
- ❖ Define Pleural Effusion / Empyema/pneumothorax
- ❖ Discuss clinical & symptoms
- ❖ Enlist investigations required to diagnose pleural effusion
- ❖ Describe management of pleural effusion
- ❖ Define Bronchial Asthma
- ❖ Discuss classification & clinical features of asthma.
- ❖ Enlist investigations of child with recurrent cough/wheeze
- ❖ Describe steps of management of an asthmatic child
- ❖ Outline management plan for status asthmaticus
- ❖ Define Bronchiolitis

- ❖ Discuss causes & symptoms
- ❖ Enlist investigations
- ❖ Describe management of an infant with bronchiolitis
- ❖ Discuss Congenital Heart Disease (CHD)
- ❖ Discuss approach to a child with suspected CHD
- ❖ Define Myocarditis & CCF
- ❖ Discuss pathophysiology & etiology
- ❖ Discuss clinical features with signs & symptoms
- ❖ Discuss diagnostic tests
- ❖ Describe a detailed management plan
- ❖ Able to screen for hypertension
- ❖ Know the different types
- ❖ Fetal and maternal effect
- ❖ Definition Types of hypertension
- ❖ Management
- ❖ Know about fetal and maternal complications and treatment options for safe fetal and maternal outcome
- ❖ Able to differentiate different types of miscarriages and treatment available
- ❖ Types of miscarriage
- ❖ Management
- ❖ Able to diagnose and investigate this condition and treatment options available
- ❖ Clinical features of benign and malignant tumors
- ❖ Management

SURGERY

S.NO	TOPICS	LEARNING OBJECTIVE
1.	<u>Esophagus</u> <ul style="list-style-type: none">❖ Tumors❖ Perforation❖ Reflux❖ Achalasia❖ Hiatal hernia	<ul style="list-style-type: none">❖ Anatomy and physiology of thorax❖ Investigations of chest pathologies❖ Role of surgery in various esophageal diseases❖ Surgical oncology as applied to esophageal tumors
2.	<u>Acute Scrotum</u> <ul style="list-style-type: none">● Torsion● Trauma● Orchitis	<ul style="list-style-type: none">● To understand the surgical anatomy of scrotum● Pathophysiology of various scrotal and testicular diseases
3.	<u>Differential Diagnosis of Scrotum Swelling</u> <ul style="list-style-type: none">❖ Hydrocele❖ Epididymal cyst❖ Tumors❖ Spermatocele❖ Cryptorchidism	<ul style="list-style-type: none">❖ Surgical anatomy of scrotum and testis❖ Clinical presentation of various scrotal swelling❖ Staging and classification of testicular tumors❖ Investigations and management

MEDICINE

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Ischemic heart disease Angina Pectoris, Unstable Angina	<ul style="list-style-type: none"> ❖ Define Angina ❖ Enumerate the different types of Angina ❖ Explain briefly the clinical presentation and management of each type
2.	DERMATOLOGY Cutaneous TB Sexually Transmitted Diseases	<p>Know about skin features of cutaneous TB, their mode of transmission and treatment</p> <p>Know about skin features of common STDs. their causative agents and treatment</p>
3.	Acute Coronary Syndrome & Infarction	<ul style="list-style-type: none"> ❖ Define ACS ❖ Enumerate the different etiological factors for ACS ❖ Classify the various types of ACS ❖ Explain and construct briefly their clinical presentation, diagnosis and management
4.	Arrhythmias	<p>Define Arrhythmias</p> <p>Explain the pathophysiology of Arrhythmias</p> <p>Discuss the clinical presentation and defend management of different types of Arrhythmias</p>
5.	Congestive cardiac failure	<p>Define CCF</p> <p>Enumerate causes</p> <p>Describe clinical presentation of CCF</p> <p>Explain briefly the management protocol</p>
6.	Diseases of Pericardium	<p>Define Constrictive Pericarditis</p> <p>Explain the signs and symptoms of pericardial diseases</p> <p>Enlist the diagnostic tests for different types</p> <p>Explain the clinical presentation and management</p>
7.	Rheumatic Fever	<p>Define Rheumatic Fever</p> <p>Describe clinical presentation of Rheumatic Fever and diagnostic criteria</p> <p>Explain briefly the management protocol</p> <p>Explain & defend management of Rheumatic Fever</p>
8.	Hypertension	<p>Define Hypertension</p> <p>Describe the causes of hypertension</p> <p>Explain briefly the management protocol for it</p>
9.	COPD	<p>Define COPD and its types</p> <p>Enumerate the causes of COPD</p> <p>Explain briefly the clinical presentation and its management</p>
10.	Infective endocarditis	<p>Define Infective endocarditis</p> <p>Describe the etiology of Infective endocarditis</p>

		Explain briefly the clinical presentation and management protocol for Infective endocarditis
11.	Valvular Heart Disease	Enlist VHD Describe clinical presentation of different types of vHD Explain briefly the management protocol for them
12.	Bronchial Asthma	Define Bronchial Asthma Enumerate the different etiological factors for Bronchial Asthma. Classify the various types of Asthma Explain and construct briefly the clinical presentation, diagnosis and its management
13.	Pulmonary Embolism/Pulmonary	Define pulmonary embolism/Infarction Enumerate its causes Explain briefly the clinical presentation Discuss the investigations and its management
14.	Cardiomyopathy	Define Cardiomyopathy Describe clinical presentation of different types of Cardiomyopathy Explain briefly the management protocol for each type
15.	Pneumonia	Define pneumonia and enlist its types. Enumerate the different causative organisms for pneumonia. Explain briefly the clinical presentation, diagnosis and its management
16	Bronchogenic carcinoma	Explain the clinical features of Bronchogenic Carcinoma Discuss the investigations Explain the management of bronchogenic ca
17.	Pulmonary Tuberculosis	Define Pulmonary Tb and its types. Describe clinical presentations of Tb and diagnostic tests. Explain briefly the management protocol for Tb.
18.	Interstitial lung Disease	Define ILD Describe clinical presentations of ILD Explain briefly the management protocol for ILD
19.	Sarcoidosis	Define Sarcoidosis Describe clinical presentation of sarcoidosis Explain briefly the management protocol for it
20.	Bronchiectasis	Define Bronchiectasis Describe clinical presentations Explain briefly the management protocol for it
21.	Occupational Lung Diseases	Define Occupational lung diseases Describe clinical presentations of different types Explain briefly the management protocol for them
22.	Pneumothorax	Define Pneumothorax Describe clinical presentation of different types of pneumothorax Explain briefly the management protocol for them

23.	Respiratory Failure	Define Respiratory Failure Describe its types Discuss presentations Explain briefly the management protocol for it
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PEADS

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Pneumonia	Define pneumonia Discuss causes of pneumonia Discuss approach to a child with acute respiratory infection. Enlist danger sign Describe management protocol of a child with ARI
2.	Pleural Effusion/ Empyema/ Pneumothorax	Define Pleural Effusion / Empyema/pneumothorax Discuss clinical & symptoms Enlist investigations required to diagnose pleural effusion Describe management of pleural effusion
3.	Bronchial Asthma	Define Bronchial Asthma Discuss classification & clinical features of asthma. Enlist investigations of child with recurrent cough/wheeze Describe steps of management of an asthmatic child Outline management plan for status asthmaticus
4.	Bronchiolitis	Define Bronchiolitis Discuss causes & symptoms Enlist investigations Describe management of an infant with bronchiolitis
5.	Diseases of Upper Airway	Define Common Cold Tonsillitis/pharyngitis Croup/epiglottitis Discuss causes & symptoms of upper airway diseases Enlist investigations & differential diagnosis of child with stridor Describe management of croup/epiglottitis
6.	Recurrent Chest Infections	Define recurrent chest infections Discuss pathophysiology, clinical features, diagnostic criteria and management of cystic fibrosis & bronchiectasis
7.	Fetal Circulation	Discuss fetal circulation and transition at birth
8.	Congenital heart disease	Discuss Congenital Heart Disease (CHD) Discuss approach to a child with suspected CHD
9.	ASD	Detailed discussion of ASD
10.	VSD	Detailed discussion of VSD
11.	PDA	Detailed discussion of PDF
12.	TOF	Detailed discussion of TOF
13	TGA	Detailed discussion of TGA
14	Myocarditis & CCF	Define Myocarditis & CCF

		<p>Discuss pathophysiology & etiology</p> <p>Discuss clinical features with signs & symptoms</p> <p>Discuss diagnostic tests</p> <p>Describe a detailed management plan</p>
15	Infective Endocarditis	<p>Define infective endocarditis</p> <p>Discuss pathophysiology & etiology</p> <p>Discuss clinical features with signs & symptoms</p> <p>Discuss diagnostic criteria</p> <p>Describe a detailed management plan</p>
16	Rheumatic Fever & Rheumatic Heart Disease	<p>Define Rheumatic Fever & RHD</p> <p>Discuss pathophysiology & etiology</p> <p>Discuss clinical features with signs & symptoms</p> <p>Mention diagnostic criteria</p> <p>Describe detailed management</p>
17	ECG + Arrhythmias	<p>Discuss ECG</p> <p>Discuss common tachy/ bradyarrhythmias</p> <p>Discuss SVT in detail</p>
18	Shock	<p>Define Shock, classify its types</p> <p>Discuss pathophysiology & etiology</p> <p>Discuss clinical features with signs & symptoms</p> <p>Mention diagnostic criteria</p> <p>Describe detailed management, especially for cardiogenic shock</p>
19	Terminologies	<p>Define term, preterm & post-term gestation; LBW, VLBW, ELBW; SGA, LGA; still birth, Perinatal/neonatal/infant/maternal mortality rates</p>
20	History + Examination of Newborn	<p>Discuss in detail neonatal history taking and examination</p>
21	Care of Newborn + Feeding & temperature Regulation	<p>Discuss in detail the normal new born care, feeding and temperature regulation</p>
22	Neonatal Jaundice	<p>Define jaundice</p> <p>Discuss classification of direct & indirect hyperbilirubinemia</p> <p>Discuss investigations & management of jaundice neonatorum</p> <p>Discuss complications of jaundice</p>
23	Neonatal Sepsis	<p>Define neonatal sepsis</p> <p>Discuss predisposing & environmental factors leading to neonatal sepsis</p> <p>Describe etiology & clinical features of neonatal sepsis</p> <p>Discuss diagnostic criteria & investigations for sepsis</p> <p>Describe management of neonatal sepsis</p>
24	Birth Asphyxia / HIE	<p>Define birth asphyxia/HIE</p> <p>Describe etiology & clinical features of HIE</p> <p>Discuss diagnostic criteria & investigations for HIE</p>

		Describe management of HIE
25	Neonatal Seizures	Define neonatal seizures Discuss predisposing & environmental factors Discuss diagnostic criteria & investigations Describe management of neonatal seizures
26	Prematurity	Define prematurity Discuss incidence & etiology of prematurity Describe complications of prematurity Assess gestational age by Ballard Scoring Manage a case of prematurity
27	HDN	Define HDN Describe etiology & clinical features of HDN Discuss diagnostic criteria & investigations for HDN Describe management of HDN
28	Hypoglycemia /IDM	Define hypoglycemia Discuss pathophysiology, clinical presentation, complications, prevention and treatment of neonatal hypoglycemia

GYNAE

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Hypertensive Disorders in Pregnancy	Able to screen for hypertension Know the different types Fetal and maternal effect Definition Types of hypertension Management
2.	Breach Presentation	Know about fetal and maternal complications and treatment options for safe fetal and maternal outcome
3.	Brow/Face Presentation	Know about fetal and maternal complications and treatment options for safe fetal and maternal outcome
4.	Transverse Lie	Know about fetal and maternal complications and treatment options for safe fetal and maternal outcome
5.	Poly/oligo hydramnios	Know the fetal effect and maternal complication Etiology Investigation Management
6.	Obstetric Ultrasound	Ultrasound in 1 st ,2 nd ,3 rd trimester for fetal well being Diagnostic and therapeutic ultrasound
7.	Gynecological Ultrasound	Indication Diagnostic ultrasound Know the clinical application of ultrasound in different conditions
8.	Ectopic Pregnancy	Able to differentiate between normal and ectopic pregnancy symptoms and investigation Causes Diagnosis Management
10.	Miscarriage	Able to differentiate different types of miscarriages and treatment available Types of miscarriage Management
11.	Infertility	Know the causes and baseline investigation in infertility Types of infertility Male and female factors Management
12.	Gestational Trophoblastic Tumor	Able to diagnose and investigate this condition and treatment options available Clinical features of benign and malignant tumors

		Management
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PHYSIO

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Review of Cardiorespiratory System	<ul style="list-style-type: none">• The heart works in a continuous cycle of contraction and relaxation known as the cardiac cycle• Blood vessels are tubes that carry blood throughout the body. The major types include• Regular physical activity enhances cardiovascular and respiratory health by improving heart efficiency, lung capacity, and overall oxygen delivery to tissues.

PATHO

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Myocardial Infarction	<ul style="list-style-type: none">• A temporary reduction in blood flow can also be caused by a spasm in a coronary artery, which may occur due to drug use (e.g., cocaine), stress, or other factors.• A blood clot that forms at the site of a ruptured plaque can completely block the artery, leading to myocardial infarction.• Can raise blood pressure and contribute to other heart disease risk factors.• Unusual tiredness or weakness, especially in women• Maintain a healthy weight and manage stress.• Regular health check-ups to monitor heart health.

ANATOMY

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Anatomy of Lungs	<ul style="list-style-type: none">• The right lung is divided into three lobes: the upper, middle, and lower lobes.• The lungs are surrounded by a double-layered membrane called the pleura• The apex of the lungs is the uppermost part, located near the clavicle (collarbone).• The trachea is a tube that extends from the larynx (voice box) to the bronchi.
2.	Conducting System of Heart	<ul style="list-style-type: none">• The SA node is located in the right atrium, near the opening of the superior vena cava.• The electrical impulse generated by the SA node spreads through the atria, leading to atrial contraction (atrial systole).• Impulse Generation by the SA Node:• The heart rate is influenced by the autonomic nervous system:

MODULE – 28

MSK

OUTCOME

GENERAL OUTCOME

By end of this module the students of final year BDS will be able to

COGNITIVE DOMAIN:

- ❖ Define fx and dislocations
- ❖ Diagnose different types of fx Manage fx
- ❖ Identify complications of fx
- ❖ Identify and classify upper limbs fractures
- ❖ Manage fractures of upper limb
- ❖ Describe the complications of upper limb fractures
- ❖ Clavicle fracture.
- ❖ Shoulder dislocation.
- ❖ Humerus fracture.
- ❖ Radius/Ulna fracture.
- ❖ Colles, Monteggia, Galeazzi fracture.
- ❖ Identify and classify lower limb fractures

- ❖ Manage
- ❖ Fractures of lower limb
- ❖ Describe the complications of lower limbs fracture
- ❖ Neck of femur fracture.
- ❖ I/T fracture.
- ❖ SOF fracture.
- ❖ Patella fracture.
- ❖ Tibia/Fibula fracture.
- ❖ Ankle fracture.
- ❖ define osteomyelitis and septic arthritis
- ❖ Describe the signs and symptoms
- ❖ Diagnose osteomyelitis and septic arthritis
- ❖ Describe the treatment plans
- ❖ At the end of this lecture the students should be able to:
- ❖ Enumerate the causes of Rheumatoid Arthritis
- ❖ Explain its clinical presentation and defend, diagnosis and management.
- ❖ Defend the management plan for a case of Rheumatoid Arthritis
- ❖ At the end of this lecture the students should be able to:
- ❖ Define SLE
- ❖ Enumerate its causes.
- ❖ Explain its clinical presentation, diagnosis and management.
- ❖ Defend the management plan for a case of SLE
- ❖ At the end of this lecture the students should be able to:
- ❖ Explain the clinical presentation and management of polymyositis, dermatomyositis
- ❖ At the end of this lecture the students should be able to:
- ❖ Define Systemic Sclerosis
- ❖ Enumerate its causes.
- ❖ Explain its clinical presentation, diagnosis
- ❖ Defend management plan for a case of systemic sclerosis
- ❖ At the end of this lecture the students should be able to:
- ❖ Define Polymyalgia Rheumatica & GCA
- ❖ Describe clinical presentation and diagnosis of Polymyalgia Rheumatica
- ❖ Defend its management
- ❖ At the end of this lecture the students should be able to:
- ❖ Define Reactive Arthritis
- ❖ Explain the clinical presentation, diagnosis and management of reactive arthritis
- ❖ Explain the clinical presentation, diagnosis and management of reactive arthritis
- ❖ At the end of this lecture the students should be able to:
- ❖ Define septic arthritis
- ❖ Describe clinical presentation of septic arthritis
- ❖ Interpret its diagnosis and management.

- ❖ Construct a management plan for a patient of septic arthritis
- ❖ Define JRA
- ❖ Describe diagnostic criteria
- ❖ Enlist clinical features
- ❖ Discuss classification of JIA
- ❖ Discuss investigations in child with arthritis
- ❖ Discuss differential diagnosis
- ❖ Discuss management of disease
- ❖ Discuss prognosis of JRA
- ❖ Define HSP
- ❖ Enlist clinical features of HSP
- ❖ Discuss prognosis and management of disease
- ❖ Define Osteomyelitis & Septic Arthritis
- ❖ Discuss etiology & epidemiology
- ❖ Enlist clinical features & investigations for diagnosis
- ❖ Discuss prognosis and management of disease
- ❖ Define DDH/TEV
- ❖ Discuss etiology & epidemiology
- ❖ Enlist clinical features & investigations for diagnosis
- ❖ Discuss prognosis and management of disease
- ❖ Define Muscular Dystrophies
- ❖ Discuss general consideration & etiology
- ❖ Discuss clinical features & investigations for DMD
- ❖ Describe treatment options for DMD
- ❖ Mention complications & prognosis of DMD
- ❖ Define hypotonia Discuss common causes of hypotonia in children
- ❖ Describe etiology, clinical features & diagnosis for SMA
- ❖ Devise a management plan for SMA
- ❖ Able to differentiate between symptoms of different proplapse and know the treatment option

SURGERY

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Fracture and Dislocation	<ul style="list-style-type: none"> • Define fx and dislocations • Diagnose different types of fx Manage fx • Identify complications of fx • Definition. • Signs and symptoms. • Diagnosis. • Management. • Complications.
2.	Trauma of Upper Limb	<ul style="list-style-type: none"> • Identify and classify upper limbs fractures • Manage fractures of upper limb • Describe the complications of upper limb fractures • Clavicle fracture. • Shoulder dislocation. • Humerus fracture. • Radius/Ulna fracture. • Colles, Monteggia, Galeazzi fracture.
3.	Trauma of Lower Limb	<ul style="list-style-type: none"> • Identify and classify lower limb fractures • Manage • Fractures of lower limb • Describe the complications of lower limbs fracture • Neck of femur fracture. • I/T fracture. • SOF fracture. • Patella fracture. • Tibia/Fibula fracture. • Ankle fracture.
4.	Bone & Joint Infections	<ul style="list-style-type: none"> • define osteomyelitis and septic arthritis • Describe the signs and symptoms • Diagnose osteomyelitis and septic arthritis • Describe the treatment plans
5.	Tumors	<ul style="list-style-type: none"> • Define tumors • Classify tumors • Enlist the signs and symptoms • Describe the treatment options of different tumors

6.	Hernias	<ul style="list-style-type: none">• Students should be able to know:• Anatomy• Classification and types• Causes• Clinical features• Diagnosis and investigations• Treatment options• General and surgical complications
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MEDICINE

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Rheumatoid Arthritis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Enumerate the causes of Rheumatoid Arthritis • Explain its clinical presentation and defend, diagnosis and management. • Defend the management plan for a case of Rheumatoid Arthritis
2.	Systemic Lupus Erythematosus	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Define SLE • Enumerate its causes. • Explain its clinical presentation, diagnosis and management. • Defend the management plan for a case of SLE
3.	Polymyositis, Dermatomyositis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Explain the clinical presentation and management of polymyositis, dermatomyositis
4.	Systemic Sclerosis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Define Systemic Sclerosis • Enumerate its causes. • Explain its clinical presentation, diagnosis • Defend management plan for a case of systemic sclerosis
5.	Sjogren Syndrome	<ul style="list-style-type: none"> • Primary Sjögren's Syndrome: This form occurs on its own, without being associated with any other autoimmune disease. • Secondary Sjögren's Syndrome: This form occurs in association with other autoimmune diseases, such as rheumatoid arthritis, lupus, or scleroderma.
6.	Polymyalgia Rheumatic & Giant Cell Arthritis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Define Polymyalgia Rheumatica & GCA • Describe clinical presentation and diagnosis of Polymyalgia Rheumatica • Defend its management
7.	Behcet's Disease	<ul style="list-style-type: none"> • Genetic predisposition: There is a strong association with certain genetic markers, especially the HLA-B51 gene, which is more common in individuals from regions like the Middle East, Asia, and the Mediterranean. However, not everyone with this gene will develop Behçet's disease, indicating other factors are also involved.
8.	Reactive Arthritis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Define Reactive Arthritis • Explain the clinical presentation, diagnosis and management of reactive arthritis • Explain the clinical presentation, diagnosis and management of reactive arthritis
9.	Septic Arthritis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Define septic arthritis • Describe clinical presentation of septic arthritis

		<ul style="list-style-type: none"> • Interpret its diagnosis and management. • Construct a management plan for a patient of septic arthritis
10.	Gouty Arthritis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Define gouty arthritis • Explain the clinical presentation and management of gouty arthritis • Defend the management plan for a case of gouty arthritis
11.	Ankylosing Spondylitis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Explain the clinical presentation and management of Ankylosing Spondylitis
12.	Psoriatic Arthritis	<ul style="list-style-type: none"> • At the end of this lecture the students should be able to: • Explain the clinical presentation and diagnosis • Defend the management plan for a psoriatic arthritis
13.	Psoriasis	<ul style="list-style-type: none"> • Learning objectives: • Know about skin features of psoriasis, Treatment and complications

PEADS

S.NO	TOPICS	LEARNING OBJECTIVE
1.	JRA	<ul style="list-style-type: none"> • Define JRA • Describe diagnostic criteria • Enlist clinical features • Discuss classification of JIA • Discuss investigations in child with arthritis • Discuss differential diagnosis • Discuss management of disease • Discuss prognosis of JRA
2.	SLE	<ul style="list-style-type: none"> • Define SLE • Enlist clinical features and diagnostic criteria • Discuss prognosis and management and prognosis of SLE
3.	HSP	<ul style="list-style-type: none"> • Define HSP • Enlist clinical features of HSP • Discuss prognosis and management of disease
4.	Osteomyelitis / Septic arthritis	<ul style="list-style-type: none"> • Define Osteomyelitis & Septic Arthritis • Discuss etiology & epidemiology • Enlist clinical features & investigations for diagnosis • Discuss prognosis and management of disease
5.	DDH/TEV	<ul style="list-style-type: none"> • Define DDH/TEV • Discuss etiology & epidemiology • Enlist clinical features & investigations for diagnosis • Discuss prognosis and management of disease
6.	Muscular Dystrophies / DMD	<ul style="list-style-type: none"> • Define Muscular Dystrophies • Discuss general consideration & etiology • Discuss clinical features & investigations for DMD • Describe treatment options for DMD • Mention complications & prognosis of DMD
7.	AFP	<ul style="list-style-type: none"> • Define AFP • Discuss approach to a child with acute flaccid paralysis/AFP surveillance • Discuss etiology, clinical features & diagnosis of GBS • Compare & contrast GBS and Poliomyelitis • Devise a management plan for GBS
8.	Hypotonia / Floppy infant	<ul style="list-style-type: none"> • Define hypotonia Discuss common causes of hypotonia in children • Describe etiology, clinical features & diagnosis for SMA • Devise a management plan for SMA

9.	Myasthenia Gravis	<ul style="list-style-type: none">• Discuss in detail myasthenia gravis
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GYNAE

S.NO	TOPICS	LEARNING OBJECTIVE
1.	Uterovaginal Prolapse	<ul style="list-style-type: none">• Able to differentiate between symptoms of different prolapse and know the treatment option



ASSESSMENT METHODS FOR BLOCK EXAM:

Evaluation is a continuous process comprising of block examination and annual university examination. Students will be evaluated throughout the year. The internal assessment will contribute towards the final examination scores.

Multiple examination methods including MCQs, SAQs, OSPE and viva will be used. In line with PMC stipulation, the pass/fail marks for the test and examination will be 50%. There will be a block exam at the end of each block.

Theory (knowledge):

MCQs (Multiple Choice Questions) and SAQs (Short Answer Questions) are used to assess the theory part for the block exam.

MCQ:

A MCQ has a statement or clinical scenario followed by four options (likely answers).

After reading the statement/scenario student select ONE, the most appropriate answer/response from the given list of options.

Correct answer carries one mark, and incorrect 'zero mark'. There is NO negative marking.

SAQ:

SAQ are open ended questions that requires students to create an answer. They are commonly used in examinations to access the basic knowledge and understanding of a topic.

OSPE:

Objective Structured Practical Examination (See the proposed plan of OSPE)

It may comprise between 12- 25 stations.

The content may assess application of knowledge, or practical skills.

Student will complete task in define time at one given station.

All the students are assessed on the same content by the same examiner in the same allocated time.

A structured examination will have observed, unobserved, interactive and rest stations.

OBSERVED AND INTERACTIVE STATIONS:

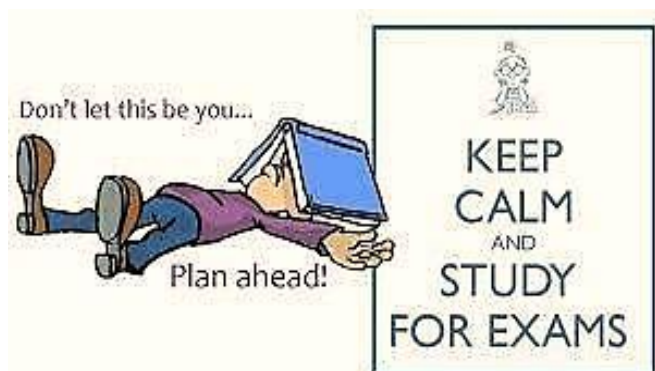
They will be assessed by internal or external examiners through the task or viva.

UNOBSERVED STATION:

It will be static station in which students will have to answer the questions related to the given pictures, models or specimens on the provided response sheet.

REST STATION:

It is a station where no task is given, and during this time student can organize his/her thoughts.



ASSESSMENT PLAN FINAL YEAR MBBS

FINAL YEAR MBBS BLOCK THEORY FORMAT

<u>CLASS ROLL NO</u>	<u>BLOCK – (---)</u>			<u>TOTAL</u>
	<u>MCQs</u>	<u>SAQs</u>	<u>TOTAL</u>	<u>PERCENTAGE</u>
	28	12	40	5%
	28 MCQs each subject	4 SAQs out of which One is optional i.e., to be attempted 3 SAQs. Each SAQ carries 4 marks. 4 x 3 = 12		MARKS OBTAINED / 40 X 5

FINAL YEAR MBBS END OF SESSION THEORY FORMAT

<u>BLOCK X</u>	<u>BLOCK XI</u>	<u>BLOCK XII</u>	<u>ASSIGNMENTS</u>	<u>ATTENDANCE</u>	<u>TOTAL</u>
5%	5%	5%	3%	2%	20%
			<p>1 Assignment per subject each block</p> <p>1 mark per Assignment</p> <p><u>SCORING</u></p> <p>Assignment submitted on time = 01</p> <p>Late submission / Not Submitted = 0</p>	<p>Obtained Attendance % /100 x 2</p>	<p><u>NOTE:</u></p> <p><u>FOR MED, SURGERY AND GYNAE</u></p> <p>(Marks obtained out of 20 x 2 = ___)</p>

FINAL YEAR MBBS BLOCK PRACTICAL FORMAT

<u>CLASS ROLL NO</u>	<u>BLOCK (-----)</u>				<u>TOTAL</u>
	<u>DISTRIBUTION</u>				5%
	<u>OSPE</u>	<u>VIVA</u>	<u>PRACTICAL LOGBOOK</u>	<u>TOTAL</u>	OBATINED MARKS / 40 x 5 = ____%
	5 OSPE STATIONS (4 MARKS EACH) = 20 MARKS	3 VIVA STATIONS (5 MARKS EACH) = 15 MARKS	5 MARKS Complete & timely signed = 5 Complete but late submission = 3 Incomplete logbook = 1	40 TOTAL MARKS	

			No logbook = 0		
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FINAL YEAR MBBS END OF SESSION PRACTICAL FORMAT

<u>BLOCK X</u>	<u>BLOCK XI</u>	<u>BLOCK XII</u>	<u>BEHAVIOUR</u>	<u>ATTENDANCE</u>	<u>TOTAL</u>
5%	5%	5%	3%	2%	20%
			<p style="text-align: center;">No misbehave or written warning = 3</p> <p style="text-align: center;">Written warning given to student = 0</p>	<p>Obtained Attendance % /100 x 2</p>	<p><u>NOTE:</u></p> <p><u>FOR GYNAE</u> (Marks obtained out of 20 x 2 =___)</p> <p><u>FOR MED AND SURGERY</u> (Marks obtained out of 20 x 4 =___)</p>

FINAL YEAR MBBS FINAL PROF FORMAT (1000 MARKS)

CLASS ROLL NO	THEORY (500 MARKS)				PRACTICAL (500 MARKS)				TOTAL
	MCQs	SAQs	I.A	TOTAL	OSCE	VIVA	I.A	TOTAL	GRAND TOTAL
SUBJECT	30 / 60	50 / 100	20 / 40	100 / 200	40 / 160	40 / 160	20 / 40 / 80	100 / 400 / 200	200 / 300
PAEDS	30	7 SAQs out of which TWO will be optional i.e., to be attempted 5 SAQs. Each SAQ carries 10 marks. 5 x 10 = 50	20	100	10 OSPE Stations 4 marks each	20 MARKS INTERNAL 20 MARKS EXTERNAL	20	100	200
MED – A / B	30 – 30	7 SAQs out of which TWO will be optional i.e., to be attempted 5 SAQs. Each SAQ carries 10 marks. 5 x 10 = 50	40	200	16 OSPE Stations 10 marks each	80 MARKS INTERNAL 80 MARKS EXTERNAL	80	400	600
SURGERY- A/B		(50 – 50) (A-B)	(20x2)				(Marks obtained out of 20 x 4 = __)		

GYNAE					8 OSPE Stations 10 marks each	40 MARKS INTERNAL	40		
						40 MARKS EXTERNAL	(Marks obtained out of 20 x 2 = __)	200	400

OTHER LEARNING RESOURCES

<u>Hands-on Activities/ Practical</u>	Students will be involved in Practical sessions and hands-on activities that link with the foundation module to enhance the learning.
<u>Labs</u>	Utilize the lab to relate the knowledge to the specimens and models available.
<u>Skill Labs</u>	A skills lab provides the simulators to learn the basic skills and procedures. This helps build the confidence to approach the patients.
<u>Videos</u>	Video familiarize the student with the procedures and protocols to assist patients.
<u>Computer Lab/CDs/DVDs /Internet Resources</u>	To increase the knowledge students should utilize the available internet resources and CDs/DVDs. This will be an additional advantage to increase learning.
<u>SDL</u>	SDL is scheduled to search for information to solve cases, read through different resources and discuss among the peers and with the faculty to clarify the concepts.