STUDY GUIDE
4th YEAR MBBS
Y4 – B2

DEPARTMENT OF MEDICAL EDUCATION

CMH KHARIAN MEDICAL COLLEGE

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MISSION

Our mission is to educate and produce exemplary doctors who practice ethical patient centered health care, discover and advance knowledge and are responsive to the community needs.

VISION

To produce competent doctors equipped with sound knowledge based on scientific principles, imbued with ethics and moral values primed to serve the community through the profession.

Our aim is to

- Provide outstanding educational environment for medical students.
- Develop exemplary clinicians who are lifelong learners and provide the highest quality compassionate care and serve the needs of their community and the nation in the best traditions of medical profession.
- Ensure the highest ethical and professional standards in all of our deeds.

Exit Outcomes for the CKMC Graduate

At the end of five years MBBS degree program graduate of CMH Kharian Medical College should be able to:

Knowledge

- Integrate knowledge of basic and clinical sciences in disease prevention and promotion of health and well-being of community.
- Able to appraise varied information they would come across during professional work and testify innovative ideas to benefit human society through evidence-based health care practice

- Demonstrate scientific knowledge in all professional activities
- Demonstrate research skills which bring innovation and significance to health care practices.

Skills

- Able to perform physical examinations, formulate provisional diagnosis with appropriate investigations to identify specific problems.
- Perform various common procedures to diagnose and manage non critical clinical problems.
- Demonstrate competency in life saving procedures.
- Exhibit propensity of critical thinking, problem solving and lifelong self-directed learning skills.

Attitude

- Manifest ethical values and professionalism.
- Demonstrate professional attitude towards patients, their families, seniors and colleagues.
- Demonstrate dedication and professionalism when faced natural disasters in country.
- Demonstrate communication skills, inter professional skills and leadership.

knowledge	Skill	Attitude
Integrated knowledge of basic & clinical sciences	Communication skills	Ethical values
Patient centered care	Research skills	
Health promotion & disease prevention	Patient management skills	Professionalism
Community needs	Leadership skills	
	Critical thinking skills	

Introduction to the Study Guide

Dear Students,

We, at the Department of Medical Education, CMH Kharian Medical College, have developed this study guide especially for you. This study guide is an aid to

- Inform you how this part of your syllabus has been organized.
- Inform you how your learning programs have been organized in this block.
- Help you organize and manage your studies throughout the block
- Guide you on assessment methods, rules and regulations.
- Communicate information on organization and management of the block. This will help you to contact the right person in case of any difficulty.
- Define the objectives which are expected to be achieved at the end of the block.
- Identify the learning strategies such as lectures, small group discussions, clinical skills, demonstration, tutorial and case-based learning that will be implemented to achieve the block objectives.
- Provide a list of learning resources such as books, and journals for students to consult in order to maximize their learning.

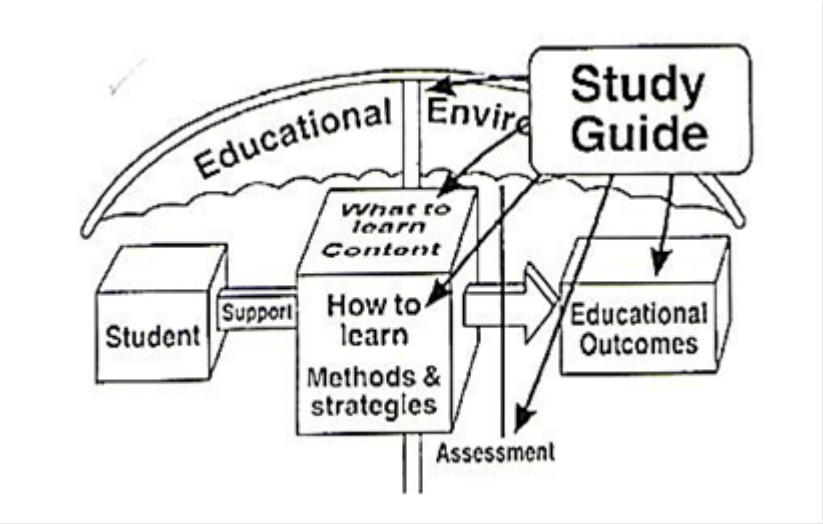


Figure 1 Objectives of study guide by Harden

Curriculum Integration

Medical college curriculum shall be organized in blocks of modules. The modules are named after body system for example a module of blood in a block. The key details are as follows:

1. There shall be three blocks in 4th year MBBS comprising modules.
2. The blocks shall be labeled as1, 2 and 3.
3. Each module in a block shall have a title. The name of the module shall represent the content taught and learned the majority of time in that module. Module shall be named after body systems.
4. The duration of three blocks shall vary between 10-12 weeks according to syllabus.
5. The syllabus shall be integrated horizontally around systems of the body.
6. There shall be vertical integration to the extent decided by the curriculum coordination committee.
7. Vertical integration shall be in case based learning sessions and in clinical lectures of basic sciences, scheduled in the structured training program.

Teaching and Learning Methods

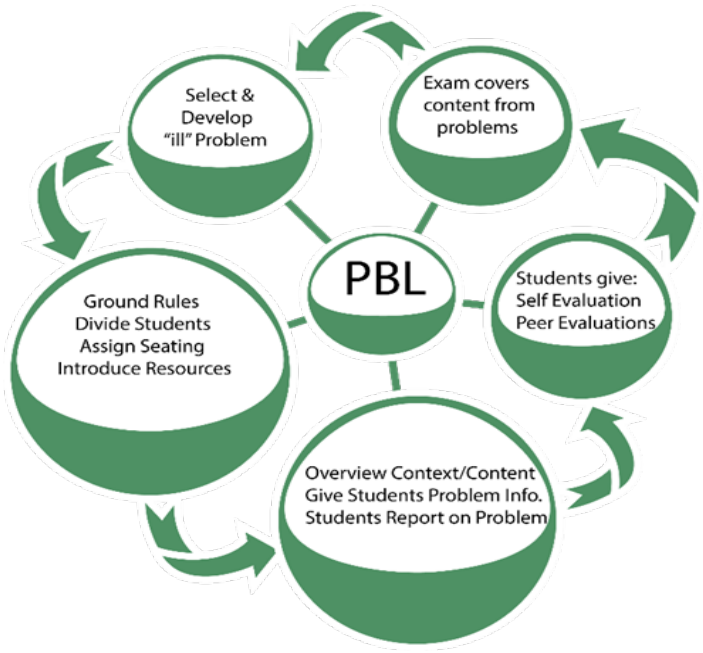
1: Small Group Discussions (SGD)

The topic will be taught in groups with the help of models and audiovisual aids. Pre-planned topics would help students to combine their wisdom in achieve learning objectives. Facilitator would be guiding to achieve learning objectives and making them on right track by clarify any misconception.

“Small group learning provides more active learning, better retention, higher satisfaction, and facilitates development of problem-solving and team-working abilities (Jahan, Siddiqui, AlKhouri, Ahuja, & AlWard, 2016).

2: Problem Based Learning (PBL)

This is group learning comprising of 8-10 students guided by a facilitator. For a specific problem given to students two sessions of 2 hours would be scheduled to achieve the learning objectives. In the first session students will discuss problem based upon their existing knowledge among the group and will produce a list of their learning objectives for further study. In the second session students share, discuss with each other to build new knowledge.



PBL is a self-directed learning and that type of educational strategy most likely produce doctors who are prepared for lifelong learning and able to meet the changing needs of their patients (Spencer & Jordan, 1999).

3: Large Group Interactive Session (LGIS)

These are meant to give overview of certain course content. They should be interactive so that students can not only gain knowledge but should completely understand it. Students may clarify the difficult concepts in these sessions. The lecturer introduces a topic and explains the

underlying phenomena through questions, pictures, videos of patient's interviews, exercises, etc. Students are actively involved in the learning process.

4: Self Directed Learning (SDL)

In this modern era of medical education, students assume responsibilities of their own learning according to the principles of adult learning. They can study independently, can share and discuss with peers, can take information from the sources of information college have like library, internet and teachers. Students will be provided time within the scheduled college hours for self-study.

5: Hands on Training

- **Lab session**

Practical, being the most basic and effective tool for imparting knowledge, goes hand in hand with theory for better understanding and concept building. In view of the complexities in the basics and fundamentals of Medical sciences, a good practical demonstration of the underlying concept is a must

to simplify the subject. Pharmacology, microbiology and forensic medicine practical will build skills in students of 3rd year and there would be test of these skills in OSPE exam.

- **Clinical Rotations**

The students will rotate in the clinical departments to see integration of knowledge into clinical practices.

Teaching and learning activities are meant to help students to gain new knowledge. It should be kept in mind that they are not meant to fully cover the objectives of the subject. It is therefore responsibility of students to attain more information to cover all objectives given in the overall objectives.

Class attendance and participation is of most important in gaining knowledge. If any help is needed module team can be contacted without any hesitation. Attendance will be strictly checked in different teaching activities. If attendance is less than 75%, students would not be allowed to sit for the examination.

Attendance in the examination is must and no students would be allowed to enter the examination area after starting the examination. In case of sickness, sick leaves from government/private hospitals or the emergency of the college hospital will only be entertained.

Assessment Format

Assessment is a goal-oriented process (Angelo, 1995). We assess in order to check whether the learning objectives set at the initiation of the program are met or not and to what extent (Amin, 2007).

No student will be allowed to sit in the annual examination if attendance is below 75% in theory and practical separately.

Assessment types

The assessment will be continuous. The purpose of continuous assessment is formative and summative.

Summative Assessment:

The marks of this type of assessment contribute in the final university result through internal assessment. It comprises:

- CBL/tutorial assessment
- Scheduled tests
- Sub-stages
- End of block exam
- Pre-annual exam

Scheduled tests and sub-stages will be conducted intermittently throughout the block. Their schedule will be intimated through the time tables.

The end of the block exam will be conducted after completion of weeks of instruction. It will comprise one theory paper and one practical exam for Special Pathology, Community Medicine, Eye & Ent. (Table of specifications (TOS) for exam has been provided)

Formative Assessment: Tests may be quizzes, surprise tests/written assignments/self-reflection by students during the teaching time but their marks will not be added to internal evaluation marks. The purpose of formative assessment is to provide feedback to the students, for the purpose of improvement and to teachers to identify areas where students need further guidance.

Internal Assessment

(Will be submitted to the university before professional exam)

- The weightage of internal assessment shall be 10 % in the annual professional examination (or 10 marks for 100 marks in theory and practical each)

- Scheduled tests, sub-stages, CBLs/tutorials, block examinations and pre-annual examinations, conducted by the college shall contribute towards internal assessment for professional examination.

Annual Professional Examination:

- The professional examinations schedule will be provided by NUMS.
- There will be two components of the final result

  (i) Examination-90 % (ii) Internal Assessment- 10 %
- There will be one theory paper and one Practical exam for Special Pathology, Community Medicine, Eye & Ent each. For practical the class will be divided into batches. Each batch will have practical exam of one subject on the specified day, according to schedule.
- Annual Theory & Practical Examination shall be of 300 marks each in Special Pathology, Community Medicine and 200 marks for Eye & Ent. The pass score shall be 50% in theory and practical separately
- The Annual Theory paper shall be of 135 marks for each Community Medicine and Special Pathology. 15 marks of internal assessment papers, conducted throughout the year will be added to it, to make annual theory assessment of 150 marks.
  Similarly, the annual practical examination will be of 135 marks. 15 marks of internal evaluation of practical exams, conducted throughout the year will be added to it, to make annual practical assessment of 150 marks.
- The pass score shall be 75 out of 150, in theory and practical separately.
- The Annual Theory paper shall be of 90 marks for Eye & Ent. 10 marks of internal assessment papers, conducted throughout the year will be added to it, to make annual theory assessment of 100 marks.
  Similarly, the annual practical examination will be of 90 marks. 10 marks of internal evaluation of practical exams, conducted throughout the year will be added to it, to make annual practical assessment of 100 marks.
- The pass score for Eye & Ent shall be 50 out of 100, in theory and practical separately.

Schedule of examinations:

a) Continuous assessments schedule
Schedule provided by each department in Time table.

b) Formative tests: Throughout the block

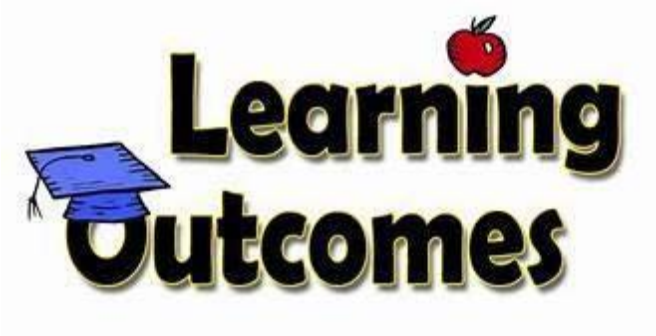
Block Development Committee

Chairperson curriculum committee	Principal Brig (Retd) Shoaib Nayyar Hashmi
Director Medical education	Dr Aasma Qaiser
Block Planner	Dr Aasma Qaiser
Resource Persons	**Community Medicine: Dr. Ifat Naiyar** **S. Pathology: Dr. Urwa Sarwar** **Eye: Dr Kainat** **Ent: Dr Jawad** **Medicine: Brig. Khalid** **Surgery: Col Nisar**
Study Guide Developed By	Department of Medical Education CMH Kharian Medical College Kharian

Structured Summery of Y4B2

Block Code	Y4B2
Pre requisite Block	Y4B1
Duration	10 weeks
Rationale	The Y4B2 block is taught after the students clear their Y4B1 modular exam. In a period of 12 weeks, the block aims to form a basis for knowledge and skills related to health and disease status of community, identify ethical issues and malpractices related to health care delivery and health research, knowledge of structure and function of Eye & Ent and diagnosis of diseases in pediatrics.
Community Medicine	Demography and family planning, Emerging & reemerging infections/ Hospital acquired Infections, Travel medicine , General Immunology , Communicable diseases including Parasitology & Entomology , Non-communicable diseases , Injuries and accidents , Disaster management, Social and Behavioral sciences, Mental health ,Drug Addiction, Smoking, Current Health Programs in Pakistan Personal hygiene, Unsafe injections
Special Pathology	Urinary System, Male genital tract, Female genital tract, Breast, Bone / Joints / Soft tissue, Skin, Vascular disorders of kidney, Glomerular diseases, Tubulointerstitial diseases, Cystic diseases of kidney and obstructive uropathy, Neoplasms of Kidney, Renal function testsand Fluid and electrolyte disorders, Neoplastic and non-Neoplastic disorders of Urinary bladder, Female genital system (Vulva, Vagina and Cervix), Female Genital system (Endometrium, and myometrium), Female Genital system (Fallopian tube and Ovary), Gestational and Placental disorders, Breast (Benign and Malignant Epithelial Lesions), Breast (Stromal neoplasms), Breast (Biochemical markers of importance), Musculo-skeletal system, Skin.
Eye	cornea and corneal ulcers. Corneal Diseases, Refractive Errors, Refractive Surgery, Glaucoma

Ent	Congenital condition of nose, Disorder of external Nose, Facial trauma, Inflammatory condition of Nose, Epistaxis, Nasal allergy, Vasomotor Rhinitis & nasal polypi, Sinusitis
Surgery	Introduction urinary symptoms, Investigation, AC+ Chronic Infections urinary tract, Kidney & Ureter, Urinary Bladder, Prostate + seminal Vesicles, Urolithiasis , Urogenital Trauma, Testes & scrotum, Penis & urethra, Impotence & erectile dysfunction Anesthesia: Post of Care, Recovery from Anesthesia, ICU & Essential Monitoring Ventilator Care Orthopedics: Bone Tumors & Soft tissue tumors, Metabolic bone conditions, General Surgery: Breast I, II, Imaging in Chest Diseases/ Trauma,
Medicine	Renal diseases, Glomerulonephritis, Acute renal failure, UGT and pyelonephritis, Pulmonary tuberculosis, Extra Pulmonary tuberculosis, Fluid and Electrolyte Balance, Pyogenic meningitis, Osteo & Rheumatoid Arthritis, S.L.E, Osteomalacia & Rickets, Osteoporosis, Dermatology: Dis orders of pigmentation, Chronic inflammatory Dermatoses, Blistering diseases
Gynae & Obs.	Fetal malpresentation, Post term pregnancy and induction of labour, Caesarean section, Operative vaginal delivery, Perinatal infections Benign ,premalignant & Malignant conditions of cervix, Endometrial hyperplasia and endometrial carcinoma, Benign & malignant ovarian tumors, Obstetrical emergencies, Medical disorders in pregnancy, Postpartum hemorrhage (PPH)
Pediatrics	Non-EPI disease, EPI disease, Nephrology: Urinary Tract Infection and VUR, Child with edema+ Proteinuria, Child with edema+ Deranged vinal Function, Child with Hematuri
Behave. sciences	Introduction to behavioral science, Professionalism and its attributes, Ethics,



Knowledge	• Explain the epidemiology of common communicable and non-communicable diseases in the global and local context and apply the knowledge for the control and prevention of the diseases in the community in parallel with the public health system. • Identify the demographic changes in the community by accessing the demographic data sources and critically appraise the causal factors and implications of such changes pertaining to public health. • Describe the etiology, clinical features, pathogenesis, laboratory findings, morphological features and clinic-pathologic consequences of major diseases related to the Urinary System, Male & Female genital tract, Breast, Bone / Joints / Soft tissue and skin. • Describe the clinical features, pathogenesis, laboratory findings, morphological features and clinico-pathologic consequences of major diseases related to Kidney & Collecting system, Female genital system and Breast. • Compose differential diagnosis of nasal and sinus disease symptoms i.e. nasal obstruction, discharge, sneezing, snoring, bleeding, speech disorders due in nasal diseases, smell abnormalities, headache/facial pains, nasal

	deformity and so on. • Justify management plan of nasal/sinus pathologies. • Recommend referral and intervention from concerned specialties, if required • . Identify different corneal diseases and summarize principles of corneal disease management. • Identify cataract and lens related pathologies. • Justify different treatment options for cataract. • Identify common refractive conditions and discuss their management. • Differentiate between various types of Glaucoma. • Justify different treatment options of Glaucoma. •
Skill	• Establish diagnosis of given slides of Special Pathology lesions included in the block, correlating histopathological findings. • Establish diagnosis of given topics of Kidney and collecting system, Female Genital system and Breast by correlating findings of given slides with gross morphology. • Able to diagnose a case of Meniere's disease based on proper history and suggest appropriate treatment including rehabilitation after the interpretation of investigations. • Diagnose a case of otosclerosis based on history and knowledge of etiology, pathology, presentation, investigations and managements along with counseling. •
Attitude	• Demonstrate the effective attitude towards the colleagues • Analyze and address problems collaboratively. • Execute analytic, communicative and collaborative skills along with content knowledge

	• Demonstrate a professional attitude, team building spirit and good communication skills • Observe lab safety rules

Course content:

4th YEAR MBBS

Block 2 CODE Y4B2

In case of online classes MIT and Assessment will be online via zoom meeting and Google classroom

Community Medicine

Learning outcomes:

After completion of Community Medicine 2nd block the students would be able to:

1. Explain the epidemiology of common communicable and non-communicable diseases in the global and local context and apply the knowledge for the control and prevention of the diseases in the community in parallel with the public health system.
2. Identify the demographic changes in the community by accessing the demographic data sources and critically appraise the causal factors and implications of such changes pertaining to public health.

The following learning objectives, MIT, Assessment strategies will be used to achieve the above outcomes:

S#	Topic	Learning objectives students will be able to		MIT	Names of Instructor	Assessment
		Knowledge	Skill			

1.	**Demography and family planning**	• Relate fertility and population growth to epidemiological and Demographic principles • Interpret pyramids of different countries, correlate demographic structure with population change and predict demographic trends • Relate population forces to the delivery of different services • Select Family planning methods according to the situations • Extrapolate the need for population control	• Motivate women & men (inclusive approach) regarding family planning approach and methods • Communicate effectively • Counsel patients on various contraceptive tools and methods	Flipped class room		MCQs SAQs, OSCE
		• Interpret/distinguish Demographic, fertility and epidemiological transition • Explain Demographic trap • Calculate demographic equation and indicators • Outline strategies in health & social sectors applying multidisciplinary approach and demographic principles				

2.	**Emerging & reemergin g infections/ Hospital acquired infections/**	• Differentiate between emerging and reemerging diseases • Identify the causes and control of this emergence • Acquaintance with nosocomial infections, factors causing it and control measures • Describe the role of Hospital waste management in infectious disease control and select appropriate method.	• Communicate effectively regarding preventive measures	Flipped class room		MCQs SAQs
3.	**Travel medicine**	• Interpret the common health problems of travelers • Advice the travelers to prevent the travel related problems		Flipped class room		MCQs SAQs
4.	**General Immunolo gy**	• Define and explain immunology & its components • Describe prerequisites of Vaccination including cold chain, hazards, contra-indications & precautions • Justify the use of different types of vaccines in different scenarios • Define EPI and explain its Component vaccines	• Follow the protocol for cold chain maintenance for different vaccines • Keep records for vaccination protocol • Administer polio vaccine • Check BCG scar • Advise mothers for vaccination in different	Flipped class room		MCQs SAQs, OSCE

		• Plan a vaccination schedule according to given scenario applying current protocols/ evidence based	situations			
5.	**Communicable diseases including Parasitology & Entomology**	• Describe modes of disease transmission, interaction of agent host and environment in the pre & pathogenesis phases • Relate the natural history of disease in regards to incubation period, lab diagnosis and preventive measures • Suggest strategies for disease control and prevention for every specific disease and in different situations • Compare and contrast the clinical presentations of specific diseases • Relate occupations with various diseases • Manage cases and determine need to refer • Classify arthropods of medical importance and relate their role in disease transmission • Recommend control	• Motivate people at risk for adopting primary preventive measures • Advise about preventive measures to control spread of infections • Practice personal protective measures when at risk • Prepare, administer and transfer the skills for homemade/prepared ORS according to protocol • Evaluate degree of dehydration on the basis of history and clinical examination using algorithm	LGIS, Small group discussion		MCQs SAQs, OSCE

		measures for arthropods • Relate environment with specific vector breeding • Define and differentiate between terms used in medical Parasitology • Explain mode of transmission and recommend prevention and control measures for parasites of medical importance	/standards			
6.	**Non-communicable diseases**	• Classify biological and social epidemiology of different chronic non- communicable diseases and determine their risk factors • Formulate and suggest preventive measures for these diseases in individuals and populations at-risk • Relate different risk factors to particular patients and general population Estimate the extent of damage to individuals and community in terms of morbidity and mortality burden	• Revise/ restructure and communicate diet plan, nutritional and lifestyle modification	Flipped class room, Semina r		MCQs SAQs, OSCE

7.	**Social and behavioral sciences**	• Relate sociology, social sciences, epidemiology and clinical sciences • Relate the social evils of the society such as prostitution, delinquency, religious differences and food adulteration with individual and public health • Relate the social structure of a hospital with doctor-patient & doctor- nurse relationship • Recommend solutions based on the application of bio-psycho- social model and theories of social behavior to prevent/ decrease social deviances and evils	• Conduct interview in any setting, using the correct technique. • Practice ethical communication methods	LGIS		MCQs SAQs

8.	**Mental health**	• Define and categorize mental health • Recognize characteristics of a mentally healthy person and warning signals of poor mental health • Identify common mental health problems (as pertains to symptomatic psycho-social aspects) of public health importance in Pakistan and relate their risk factors/causes • Recommend preventive measures against mental health problems according to given scenario • List WHO criteria and Recommendations to improve mental health in countries	• Communicate effectively and ethically with individuals regarding mental health issues • Identify clinically the warning signs and symptoms of mental health ; refer at appropriate time to relevant health professional(s)	LGIS		MCQs SAQs

9.	**Drug Addiction, Smoking**	• Define and comprehend magnitude of drug abuse in Pakistan • Relate factors and populations associated with high risk for drug abuse • Differentiate the symptoms of different drug related addictions • Describe first- aid measures for different drug related emergency health situations in a given scenario • Apply three levels of prevention to decrease drug abuse in the country • Describe magnitude of tobacco smoking globally as well as in Pakistan • Describe hazards associated with tobacco smoking • Recommend measures to control tobacco smoking in the country at all levels • Formulate behavior modification plan for patient(s) to quit smoking in hospital settings	• Communicate effectively with individuals having addictions • Educate and motivate individuals at- risk how to avoid and modify risk behaviors and seek professional help • Educate parents on the sign and symptoms of drug abuse/ addiction and when to seek professional help • Educate and motivate individuals at risk to avoid and modify risk behaviors and seek professional help to quit smoking • Educate parents on signs and symptoms of smoking addiction and when to seek professional help	LGIS		MCQs and SAQs, OSCE

10.	**Personal hygiene, Unsafe injections**	• Comprehend the concept of personal hygiene • Define unsafe injections practices and suggest relevant control measures	• Educate community regarding unsafe injections practices and related hazards	SGD		MCQs and SAQs

Special Pathology

S.#	Topics	Learning Outcomes	Course Content	% Weightage	Teaching Methodology	Assessment Methodology
1.	Urinary System	Correlate the morphology (Microscopic and macroscopic) of urinary disorders to their etiology and pathogenesis	• Glomerular Diseases • Tubulo Interstitial Diseases • Vascular disorders • Congenital & developmental anomalies • Cystic diseases of kidney • Obstructive Uropathy • Neoplasms of kidney • Congenital anomalies of ureter and urinary bladder • Neoplastic disorders of ureters and urinary bladder	25%	LGIS/SGD	MCQs & SEQs/SAQs
		Justify the importance of various biochemical markers in diagnosis of renal disorders	• Fluid and electrolyte disorders • Renal Function tests • Proteinuria and nephrotic/ nephritic syndrome		SGD	MCQs

2.	Male genital system	Correlate the morphology (Microscopic and macroscopic) of male genital disorders to their etiology and pathogenesis	• Congenital anomalies of penis • Congenital anomalies of testis • Testiculartumors • Prostatic hyperplasia and carcinoma • Inflammatory disorders	15 %	LGIS	MCQs & SEQs/SAQs
		Justify the importance of biochemical markers in diagnosis of prostatic cancer	• PSA		SGD	MCQs
3.	Female genital system	Correlate the morphology (Microscopic and macroscopic) of female genital tract disorders to their etiology and pathogenesis	• Vulva • Vagina • Cervix • Endometrium & Myometrium • Fallopian tubes • Ovaries • Gestational and placental disorders • Infertility	25%	LGIS	MCQs & SEQs/SAQs
4.	Diseases of Breast	Correlate the morphology (Microscopic and macroscopic) of Breast pathology to their etiology and pathogenesis Justify the importance of biochemical markers in diagnosis of breast cancer	• Benign epitheliallesions • Carcinoma breast • Stromal Tumors • Breast tumor markers	10%	LGIS SGD	MCQs & SEQs/SAQs MCQs
5.	The Skin	Correlate the morphology (Microscopic and macroscopic) of epidermal and dermal disorders to their etiology and pathogenesis	• Disorders of Pigmentation & Melanocytes • Benign Epithelialtumors • Pre malignant & malignant epidermaltumors • Tumors of thedermis • Chronic inflammatory dermatosis • Blistering diseases Disorders of Epidermal appendages	10%	LGIS/SGD	MCQs & SEQs/SAQs

6.	Bones, Joints and Soft Tissue	Correlate the morphology (Microscopic and macroscopic) of bone, joints and soft tissue disorders to their etiology and pathogenesis	• Defects in metabolic pathways of Bone development • Acquired disorders of bone & cartilage • Fractures of Bone • Osteomyelitis • Bone tumors & tumor likelesions • Joints • Soft Tissues • Tumors of Adipose tissue • Fibroustumors • Skeletal muscletumors • Smooth muscletumors • Tumors of uncertain origin	15%	LGIS	MCQs & SEQs/SAQs
		Justify the importance of biochemical markers in diagnosis of certain metabolic disorders	• Uric acid and Gout		SGD	MCQs
	Total			**100**		
	End Block Assessment	**End Block Assessment to be taken by concerned institute itself** **Assessment tools: MCQs & SAQs/SEQs**				

Practicals

S. #	Learning Outcomes:	List of Practicals	Teaching Methodology	Mode of Assessment
1	**Establish diagnosis by correlating findings of given slides with given scenarios**	**Chronic pyelonephritis, renal stones , Wilm's tumor Renal cell carcinoma Transitional cell carcinoma- Bladder**	**Practical**	**OSPEs / Structured Viva**
		Benign prostatic hyperplasia Prostate carcinoma Seminoma Testis		

		Leiomyoma Cystadenoma (Serous and Mucinous) CA Cervix, Endometrial Carcinoma Mature Cystic Teratoma, Ovarian Tumors, Endometriosis		
		Fibroadenoma Invasive ductal carcinoma breast Fibrocystic disease		

ENT

Learning Outcomes

At the end of block-2, 4th year MBBS students should acquire the knowledge of following:

1. Compose differential diagnosis of nasal and sinus disease symptoms i.e. nasal obstruction, discharge, sneezing, snoring, bleeding, speech disorders due in nasal diseases, smell abnormalities, headache/facial pains, nasal deformity and so on.

2. Justify management plan of nasal/sinus pathologies.

3. Recommend referral and intervention from concerned specialties, if required

S. No	Topic	Learning Objective	MIT	Name of instructor	Mode of assessment
1.	Congenital conditions of nose	• Explain embryology of the branchial arches and outcome in normal and anomalies. • Recognize nasal dermoid, gliomas, meningo/ menigoencephaloceles, facial clefts and choanl atresia	LGIS	All Professors	MCQ/SEQ OSCE/viva
2.	Diseases of external nose	• Describe furunculosis, vestibulitis, cellulitis, external deformities, neoplasms and cavernous sinus thrombosis	LGIS	All Professors	MCQ/SEQ OSCE/viva
3.	Facial trauma	• Explain the etiology of facial trauma, classification and management principles. Role of imaging in facial trauma and its significance.	LGIS	All Professors	MCQ/SEQ OSCE/viva

4.	Inflammatory conditions of nose.	• Define rhinitis, its classification and management plans.	LGIS	All Professors	MCQ/SEQ OSCE/viva
5.	Diseases of nasal septum and nasal cavities.	• Enlist features of deviated nasal septum and other nasal septal diseases, clinical features, managements and complications along with their managements. • Discuss rhinolith and maggots and their managements.	LGIS	All Professors	MCQ/SEQ OSCE/viva
6.	Epistaxis	• Explain nasal vascularity; sites of bleeding, presentation and emergency and definitive managements.	LGIS	All Professors	MCQ/SEQ OSCE/viva
7.	Nasal Allergy	• Define nasal allergy and its pathophysiology. Clinical presentation, differential diagnosis (D.D), investigation and managements.	LGIS	All Professors	MCQ/SEQ OSCE/viva
8.	Vasomotor Rhinitis & nasal polypi	• Know function of nose and effects of autonomic imbalance in nasal physiology. Presentation, D.D., assessment and managements.	LGIS	All Professors	MCQ/SEQ OSCE/viva
9.	Sinusitis	• Knowledge of paranasal sinus anatomy ant function. • Explain pathophysiology of sinus infection. • Reiterate clinical features, detailed investigations; awareness of complications and timely investigations including CT and MRI including conservative and surgical managements	LGIS	All Professors	MCQ/SEQ OSCE/viva

References:

1. Diseases of Ear,Nose, and Throat Head and Neck Surgery by PL Dhingra . Shruti Dhingra 6th Edition.
2. Logan Turner's Diseases of the nose Throat and Ear head and Neck Surgery by S. Musheer Hussain 11th Edition

Ophthalmology

Learning Outcomes:

At the end of block-2 the students of 4th year MBBS should be able to:

1. Identify different corneal diseases and summarize principles of corneal disease management.
2. Identify cataract and lens related pathologies.
3. Justify different treatment options for cataract.
4. Identify common refractive conditions and discuss their management.
5. Differentiate between various types of Glaucoma.
6. Justify different treatment options of Glaucoma.

S. No	Topic	Learning Objective	MIT	Name of instructor	Mode of assessment
1.	**Introduction to cornea and corneal diseases**	• Explain the anatomy and physiology of cornea. • Explain usual signs and symptoms of corneal disease. • Know different ectatic corneal disorders. • Know management of ectatic corneal disorders.	LGIS		MCQ/SEQ
2.	**Corneal Diseases II**	• Differentiate between various corneal ulcers. • Recognize different clinical presentations of viral corneal ulcers. • Know different treatment strategies and visual rehabilitation options in patients of various corneal ulcers.	LGIS		MCQ/SEQ
3.	**Introduction to lens and ectopia lentis**	• Explain anatomy of lens. • Explain important physiological aspects of lens. • Know definition, causes and management of ectopia lentis.	LGIS		MCQ/SEQ

4.	**Cataract I**	• Identify different types of cataract. • Recognize different clinical presentations of cataract. • Explain different examination techniques to detect cataract	LGIS		MCQ/SEQ
5.	**Cataract II**	• Know and justify different treatment options of cataract. • Know major complications of cataract surgery.	LGIS		MCQ/SEQ
6.	**Refractive Errors**	• Explain different refractive errors and their basis. • Know various methods to diagnose refractive errors. • Know different techniques for treatment of refractive errors. • Know different refractive surgical procedures and their basis.	LGIS		MCQ/SEQ
7.	**Glaucoma I**	• Know related anatomy and physiology • Explain pathogenesis of different types of glaucoma. • Know different open angle glaucomas and their treatment.	LGIS		MCQ/SEQ
8.	**Glaucoma II**	• Explain pathophysiology of angle closure glaucoma. • Know management of acute congestive glaucoma.	LGIS		MCQ/SEQ
9.	**Glaucoma III**	• Explain different features of congenital glaucoma. • Know differential diagnosis of congenital glaucoma.	LGIS		MCQ/SEQ

References:

3. Clinical ophthalmology, a systematic approach by Jack J. Kanski, 8th Edition.

4. General ophthalmology by Vaughan & Asbury, 18th edition.

5. Clinical ophthalmology by Shafi M. Jatoi, 5th Edition.

Pediatrics

TOPIC	LEARNING OBJECTIVES Students will be able to:	MIT	NAMES OF INSTRUCTOR	ASSESSMENT
NEPHROLOGY				
1) Child with Edema	• Define and list differential diagnosis of edema. • Define and explain pathophysiology of Nephrotic syndrome. • Recognize clinical features, list investigations and outline management plan of Nephrotic syndrome • List complications and discuss prognosis of Nephrotic syndrome	LGIS		MCQ,SEQ
2) Child with deranged RFTS	• Discuss pathophysiology, clinical manifestations and complications of CKD and AKI • List investigations and outline management plan of CKD and AKI	LGIS		MCQ,SEQ
3) Child with Hematuria	• Define and list differential diagnosis of hematuria • Define and explain pathophysiology of AGN. • Recognize clinical features, list investigations and outline management plan of AGN. • List complications and discuss prognosis of AGN	LGIS		MCQ,SEQ
4) Child with Dysuria / Recurrent UTI	• Define UTI. • Discuss clinical features , investigations and complications of UTI • Outline management of UTI. • Describe pathophysiology, clinical features and investigations of VUR • Outline management of VUR and discuss prognosis of VUR.	LGIS		MCQ,SEQ

DYSMORPHOLOGY				
5) Child with abnormal features	• List common syndromes • Identify features of common syndromes • Plan investigations and outline management plan of common syndromes. • Discuss complications and prognosis of common syndromes.	LGIS		MCQ,SEQ

Gynecology/ Obstetrics

S. No	Topic	Learning Objective	MIT	Name of instructor	Mode of assessment
1	Fetal malpresentation	• Define malpresentation • Enlist different types of malpresentation • Describe predisposing factors for malpresentation • Explain the clinical findings on abdominal examination in breech and shoulder presentation • Discuss the advantages and disadvantages of various management options for breech presentation at term • Outline the management plan for shoulder presentation	LGIS		MCQs, SEQs, OSPE

2	**Post term pregnancy and induction of labour**	• Define preterm, term and post term pregnancy • Review the maternal and fetal risks associated with post term pregnancy • Calculate the bishop score according to cervical scoring system • Define induction of labour • Describe various methods with their advantages and disadvantages used for induction of labour	LGIS		MCQs, SEQs, OSPE
3	**Caesarean section, PPH**	• Define caesarean section and brief review of its history • Enlist common indications of caesarean section • Describe the types of caesarean section • Enlist indications for classical caesarean section • Review the steps of caesarean section • Discuss common complications of caesarean section • Define postpartum heamorrhage (PPH) and its type • Identify risk factors for PPH • Enlist causes of PPH • Discuss clinical presentation and causes of PPH • Formulate a management plan (general & specific) for PPH	LGIS		OSPE
4	**Operative vaginal delivery**	• Define operative vaginal delivery (OVD) • Enlist indications for OVD • Classify instruments used for OVD • Review prerequisites for OVD • Describe contraindications for OVD • Discuss complications of OVD • Select instrument for OVD in a clinical scenario	LGIS		MCQs OSPE

5	**Perinatal infections 1**	• Define perinatal infections • Enlist infections causing congenital abnormalities • Discuss the infective organism, prevalence, clinical features effect on fetus and management of Rubella, Syphilis, Toxoplasmosis, CMV, Chicken pox • Enlist congenital infections associated with pregnancy loss and preterm labour • Describe the infective organism, prevalence, clinical features and management of Parvovirus, Listeria and Malaria	LGIS		MCQs, SEQs, OSPE
6	**Perinatal infections 2**	• Enlist the infections acquired around the time of delivery with serious neonatal consequences • Discuss infective organisms, prevalence, clinical features and management of Herpes simplex, Group B Steptococus, Chlamydia and Gonorrhea • Review the neonatal effects of above infections • Discuss the infective organism, prevalence, screening and management of HIV in pregnancy • Describe the infective organism, prevalence, screening and management of Hepatitis in pregnancy	LGIS		MCQs SEQs
7	**Rhesus isoimmunization**	• Review the etiology of rhesus disease • Enlist potential sensitizing events for rhesus disease • Describe management of sensitizing events in Rh – ve women • Outline a management plan of pregnancy in a non- sensitized women • Suggest a management plan of pregnancy in a sensitized women	LGIS		MCQs, SEQs, OSPE

		• Interpret ultrasound features of hydrops fetalis			
8	**Pregnancy in a patient of renal disease and renal transplant**	• Counsel women with renal disease before conception • Describe the effects of pregnancy on chronic kidney disease • Discuss the effects of chronic kidney disease on pregnancy outcome • Outline the management plan of pregnancy in women with renal disease and after renal transplant	LGIS		MCQs SEQs
9	**Benign and premalignant conditions of cervix**	• Review the etiology, diagnosis and management of cervical ectopy • Describe the etiology, patho - physiology and natural history of CIN • Plan and advise the investigations to diagnose CIN • Suggest various treatment options for CIN • Discuss the screening, its importance and method for cervical cancer • Explain the importance of vaccination for prevention of cervical cancer	LGIS		MCQs, SEQs, OSPE
10	**Malignant conditions of cervix**	• Review the etiology and pathogenesis of cervical cancer • Explain the clinical presentation of cervical cancer • Describe clinical findings on speculum and pelvic examination • Stage the disease according to FIGO staging system • Formulate a management plan according to stage of disease	LGIS		MCQs SEQs

11	**Endometrial hyperplasia and endometrial carcinoma**	• Define endometrial hyperplasia and classify its types • Discuss clinical presentation and management of endometrial hyperplasia • Review the incidence of endometrial carcinoma. • Classify types of endometrial carcinoma • Enlist factors that increases are decrease risk of endometrial carcinoma. • Describe clinical presentation of endometrial carcinoma • Investigate a case of endometrial carcinoma • Stage endometrial carcinoma according to FIGO staging system • Discuss different management options according to stage of disease	LGIS		MCQ SEQ
12	**Benign ovarian tumors**	• Classify benign ovarian tumors according to histological types • Discuss the clinical presentation of benign ovarian tumors • Differentiate benign from malignant ovarian tumor on ultrasound • Describe the tumor markers and their importance • Outline the management of benign ovarian tumor • Discuss the complications of benign ovarian tumors and their management (Ovarian cyst torsion, rupture infection)	LGIS		SEQ MCQ
13	**Malignant ovarian tumors**	• Describe the incidence of malignant ovarian tumors • Classify malignant ovarian tumors according to histological types • Enlist the risk factors for malignant ovarian tumors • Discuss the clinical presentation of malignant ovarian tumors • Stage malignant ovarian tumors according to FIGO staging system • Diagnose and manage a case of malignant ovarian tumor	LGIS		MCQ SEQ

14	**Gestational trophoblastic tumors**	• Classify gestational trophoblastic tumors(GTT) • Review the clinical presentation of GTT • Identify the appearance of GTT on ultrasound • Investigate a case of GTT • Outline the management of GTT	LGIS		MCQ SEQ OSPE
15	**Obstetrical emergencies (maternal collapse, amniotic fluid embolism, pulmonary embolism, cord prolapse)**	• Explain the assessment of pregnant women with collapse • Describe the CPR of pregnant women • Analyze the difference of CPR of pregnant and non pregnant women • Describe the incidence and risk factor for amniotic fluid embolism • Explain the clinical presentation of amniotic fluid embolism • Outline the management plan of pregnant women with amniotic fluid embolism • Review the incidence and risk factor for VTE • Discuss the clinical presentation of DVT and pulmonary embolism • Suggest the diagnostic modalities and management plan for pulmonary embolism • Identify umbilical cord prolapse • Review the risk factors and prevention of umbilical cord prolapse • Discuss the management of umbilical cord prolapse	LGIS		MCQ SEQ OSPE
16	**Medical disorders in pregnancy (asthma, epilepsy, skin diseases in pregnancy)**	• Review the incidence, the effect of pregnancy on asthma and the effect of asthma on pregnancy • Discuss the management of asthma in pregnancy • Describe the pre-pregnancy counseling in epilepsy and effects of pregnancy on epileptic fits frequency • Review the teratogenic effects of anti-epileptic drugs • Outline the management plan for pregnant women having epilepsy	LGIS		SEQ MCQ

		• Enlist specific dermatoses of pregnancy • Explain the clinical presentation of pregnancy specific dermatoses • Suggest the treatment for pregnancy specific dermatoses			
17	**Obstetrical emergencies – 2 (shoulder dystocia, Uterine inversion, uterine rupture)**	• Define shoulder dystocia • Enlist risk factor for shoulder dystocia • Suggest a plan for management of shoulder dystocia • Define uterine inversion • Illustrate the degrees of uterine inversion • Review the risk factors, prevention and warning sign of uterine inversion • Discuss the clinical presentation and management plan for uterine inversion • Enlist the risk factor for uterine rupture • Identify the clinical presentation and warning signs of uterine rupture • Suggest measures to prevent uterine rupture • Discuss management of uterine rupture	LGIS		SEQ OSPE
18	**Breast feeding + breast problems in puerperium**	• Review the anatomy and physiology of breast • Explain the different hormones involved in milk production • Discuss advantages of breast feeding • Identify common breast disorders during breast feeding and discuss their management (blood stained nipple discharge, painful nipples, galactocele, breast engorgement, mastitis)	LGIS		SEQ MCQ

Medicine

S.#	Topic	Learning Outcome	MIT	Instructor Name	Mod of Assessment

1.	Malaria	i. What is Malaria ii. Describe etiology, pathogenesis & types of Malaria iii. Clinical manifestations and complications iv. How to diagnose Malaria v. Treatment of complicated and uncomplicated Malaria	LGIS		MCQ/SEQ
2.	Typhoid fever		LGIS		MCQ/SEQ
3.	Symptomtology of Renal diseases		LGIS		MCQ/SEQ
4.	Glumerulonephritis	i. Know and understand the structural unit of kidney- nephron and its histopathological structure ii. Know the causes of Glomerulonephritis iii. Understand the pathogenesis of Glomerulonephritis iv. Comprehend the clinical manifestations of Glomerulonephritis and their rationale Understand the different types of investigative tests for Glomerulonephritis and their rationale v. vi. Understand the management plan of Glomerulonephritis	LGIS		MCQ/SEQ
5.	Acute Renal failure	i. Define Acute kidney injury ii. Understand the concept of AKI and its implications iii. Recognise common causes of hospital and community related AKI iv. Outline the management plan and follow up v. Differentiate between AKI and CKD vi. Understand the reversible component of AKI on top of CKD	LGIS		MCQ/SEQ

6.	UTI and Pyelonephritis	i. Describe etiology & types of UTI and Pylonephritis ii. Clinical manifestations and complications iii. How to diagnose UTI and Pylonephritis iv. Treatment of complicated and uncomplicated UTI and Pylonephritis	LGIS		MCQ/SEQ
7.	Pulmonary Tuberculosis	i. What is Pulmonary Tuberculosis ii. Describe etiology, pathogenesis of Pulmonary Tuberculosis iii. Clinical manifestations and complications iv. How to diagnose Pulmonary Tuberculosis v. Treatment of Pulmonary Tuberculosis vi. What is MDR and XDR Tuberculosis	LGIS		MCQ/SEQ
8.	Extra Pulmonary Tuberculosis		LGIS		MCQ/SEQ
9.	Fluid and Electrolyte Balance Hypokalemia, Hyponatermia, Hyperkalemia	i. Know the Acid base, fluid and Electrolyte composition of different fluid compartments of the body ii. Revise and understand the homeostatic mechanism for maintaining this balance iii. Know and understand the different pathophysiological phenomena and diseases which can cause impairment of electrolytes iv. Understand different investigations for diagnosing these impairment and their underlying causes v. Understand the managing principles of these impairments and their monitoring	LGIS		MCQ/SEQ

10.	Nephrotic Syndrome	i. Understand and know the diagnostic criteria of nephrotic Syndrome ii. Understand the pathophysiological mechanism that cause protein urea iii. Understand the different theories for development of nephrotic syndrome iv. Know the etiologies of nephrotic syndrome v. Know and understand the clinical manifestations of nephrotic and syndrome vi. Know and understand the investigative work up for nephrotic syndrome vii. Know and understand the managing principles of neprotic syndrome	LGIS		MCQ/SEQ
11.	Pyogenic Meningitis	i. What is Pyogenic Meningitis ii. Describe etiology, pathogenesis of Pyogenic Meningitis iii. Clinical manifestations and complications iv. How to diagnose Pyogenic Meningitis v. Treatment of Pyogenic Meningitis	LGIS		MCQ/SEQ
12.	Osteo Arthritis		LGIS		MCQ/SEQ

13.	Rheumatoid Arthritis	i. Rheumatoid arthritis Facts and epidemiology ii. Learn clear concept of Pathophysiology of Rheumatoid arthritis iii. Clinical Presentations of Rheumatoid arthritis, clinical features and extra articular manifestations 4- Diagnostic criteria of Rheumatoid arthritis iv. Felty's Syndrome v. Learn about detail management including Investigations and monitoring of Rheumatoid arthritis and DMARD therapy for Rheumatoid arthritis	LGIS		MCQ/SEQ
14.	S.L.E		LGIS		MCQ/SEQ
15.	Osteomalacia and Rickets	i. What is Osteomalacia and Rickets ii. Describe etiology, pathogenesis of Osteomalacia and Rickets iii. Clinical manifestations and complications iv. How to diagnose Osteomalacia and Rickets v. Treatment of Osteomalacia and Rickets	LGIS		MCQ/SEQ
16.	Osteoporosis	i. What is Osteoporosis ii. Describe etiology, pathogenesis of Osteoporosis iii. Clinical manifestations and complications iv. How to diagnose Osteoporosis v. Treatment of Osteoporosis	LGIS		MCQ/SEQ
Dermatology					
17.	Disorders of Pigmentation	i. Summarize important points in the composition of normal skin colour. ii. Identify important diseases included in the disorders of hypo-pigmentation	LGIS		MCQ/SEQ

		iii. Discuss their definitions, epidemiologies and aetiology. iv. Analyze their clinical features with a view to make a diagnosis. v. Discuss their treatment.			
18.	Chronic Inflammatory Dermatoses	i. Identify important diseases included in chronic inflammatory dermatoses. ii. Describe the definition of Psoriasis and Lichen planus. iii. Summarize important points in their incidence, prevalence and aetiology. iv. Analyze their clinical features with a view to make a diagnosis. v. Identify clinical variants of the diseases. vi. Identify features of nail involvement in both the diseases. vii. Describe different types of psoriatic arthritis. viii. Explain important steps in the management of these diseases.	LGIS		MCQ/SEQ

Surgery

S. #	Topic	Learning Outcome	MIT	Instructor Name	Mod of Assessment
Urology					
1.	Introduction, urinary symptoms, Investigation.	• Identify basis for diagnosing hematuria. • Recognize those pigments that may discolor the urine, mimicking hematuria. • Give a differential diagnosis for hematuria	LGIS		MCQs/ SEQs/ SAQs
2.	AC+ Chronic Infections urinary tract				

3.	Kidney & Ureter	originating in the different anatomical parts of the urinary tract. • Justify the significance of the information gathered from the palpation of the prostate rectally. • List the radiological investigations available for the assessment of the urinary tract • Manage the patient with visible and non-visible hematuria. • Differentiate between obstruction at different levels of the urinary tract based on history, Clinical features and diagnostic Modalities • Discuss the presenting features, signs and symptoms of urological emergencies • Generate a prioritized differential of the most important and likely causes of a patient's emergency • Study the classification of urological emergencies based on etiology • Discuss the appropriate investigations leading to a definite diagnosis			
4.	Urinary Bladder				
5.	Prostate + seminal Vesicles				
6.	Urolithiasis				
7.	Urogenital Trauma				
8.	Testes & scrotum				
9.	Penis & urethra				
10.	Impotence & erectile dysfunction				

		• Devise a management plan according to clinical presentation • Review the epidemiology and causes • List the risk factors for carcinoma of urinary tract • Outline the initial diagnostic workup for patients suspected of having carcinoma of urinary system • Discuss the grading and staging of carcinoma of urinary tract • Plan the general management and pre-operative workup of patient • Suggest the potential options for treatment of carcinoma of urinary tract • Implement effective treatment options for advanced and metastatic basal cell carcinoma (BCC) based on efficacy data and current guidelines.			
Anesthesia					
1.	Post of Care, Recovery from Anesthesia	• Rationalize routine intravenous fluid replacement in surgical patients	LGIS		MCQs/ SEQs/ SAQs

2.	ICU & Essential Monitoring Ventilator Care	• Identify the commonly prescribed intravenous fluids. • Optimize management of co morbid. • Describe important complications of common operations			
Orthopedics					
1.	Bone Tumours & Soft tissue tumors	• classify benign and malignant tumors and soft tissue sarcomas • Choose best diagnostic strategies for appropriate treatment. • Elaborate the surgical interventions for bone tumors and soft tissue sarcomas. • Justify the management soft-tissue injury through surgery	LGIS		MCQs/ /SAQs
2.	Metabolic bone conditions		LGIS		
General Surgery					
1.	Breast I	• Classify Benign Breast Disease • Diagnose Benign breast disease based on history and clinical presentation • Enumerate the Diagnostic investigations of Benign Breast Diseases • Design management plan for Benign Breast Disease and its	LGIS		MCQs/ SEQs/ SAQs

2.	Breast II	complication • Suggest management plan for Ca breast and its complications applying basic concepts of anatomy and lymphatic drainage of the area. • Diagnose Ca Breast based on signs and symptoms and investigations			
Radiology					
19.	Imaging in Chest Diseases/ Trauma	• Differentiate between different types of chest injuries based on mechanism of pathophysiology findings, and management. • Demonstrate knowledge, clinical and technical skills and decision- making capabilities with respect to diagnostic imaging pertinent to the practice of General Surgery • State the basic principles of radiation protection and law in relation to use of ionizing radiation • Justify use of relevant imaging techniques invarious clinical scenarios reference to advantages and disadvantages.	LGIS		MCQs/ SEQs/ SAQs

Behavioral sciences & Professionalism

S #	Topic	Learning Outcome students will be able to :	MIT	Names of Instructor	Assessment
1	Introduction to Behavioral Sciences	• Comprehend the basic concepts related to the subject of behavioral sciences	LGIS		Formative
2	Professionalism & its attributes	• Analyze the historical development of medicine as a discipline	LGIS		Formative
3	Ethics in medical students	• Discuss the ethical boundaries of conduct for medical students	LGIS		Formative

- Robbins Basic Pathology, 10th ed.& Robbins and Cotran Pathologic Basis of Disease, 9th Edition.
- Robbins Atlas of Pathology 3rd edition & Robbins Basic Pathology 10th edition.
- Diseases of Ear,Nose, and Throat Head and Neck Surgery by PL Dhingra . Shruti Dhingra 6th Edition.
- Logan Turner's Diseases of the nose Throat and Ear head and Neck Surgery by S. Musheer Hussain 11th Edition
- Clinical ophthalmology, a systematic approach by Jack J. Kanski, 8th Edition.
- General ophthalmology by Vaughan & Asbury, 18th edition.
- Clinical ophthalmology by Shafi M. Jatoi, 5th Edition.

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