



**STUDY GUIDE 2025**  
**Final Year MBBS**

**Revised Curriculum 2025**  
**(Version- V)**

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# Introduction to Study Guide

This study guide is designed for medical undergraduates through a collaborative effort of institutional faculty members and students' representatives to provide medical students of CMH Lahore Medical College a resource material for sharing important aspects of the curriculum, as proposed by Pakistan Medical & Dental Council and National University of Medical Sciences. The study guide aims to promote self-regulated and lifelong learning among students by empowering them to have complete information about their educational journey and its significance.

The overarching curricular aspects such as undergraduate competencies, exit outcomes, subject specific learning outcomes, assessment methods, curricular framework, academic calendar, online learning, relevant policies, and names of curriculum coordinators are all included in this guidebook. Horizontal integration across the pre-clinical years has been implemented for better conceptual understanding while vertical integration has been incorporated by early clinical exposure through addition of lectures and integrated seminars.

CMH Lahore Medical College aims to improve health indicators of the community and society at large by training students and doctors in preventive healthcare services, and health education by community outreach programs. The MBBS curriculum at CMH Lahore Medical College also offers learning of medical education, leadership and management via dedicated teaching hours in the academic calendar.

Since curriculum is a living and a dynamic document therefore, the aim is to improve it on yearly basis, using faculty & students' feedback sought after every block examination by program evaluation unit (L-QEC).

## School of Health Professions' Education

### CMH LMC & IOD

## **Vision of National University of Medical Sciences**

To be the best medical university by conducting world-class bio-medical research and creative research activities that develop knowledge and contribute to improve the health care system and social advancement for the people of Pakistan and benefit humanity as a whole with a standard of excellence.

## **Mission of National University of Medical Sciences**

Our mission is to emphasize rigorous research fundamentals while stimulating innovation and providing talented students and faculty with the high standard research facilities in the colleges/institutions of NUMS, necessary to achieve excellence in bio-medical research to contribute toward best care for our individuals and communities, embraces the challenges of health disparities and improve health care system up to international standards.

## **Vision of CMH Lahore Medical College and Institute of Dentistry**

To be a leading institute in medical education that provides an inclusive and conducive environment to foster excellence in teaching, learning, acquisition of clinical skills, research, and innovation to improve future health indicators within our region and beyond.

## **Mission of CMH Lahore Medical College and Institute of Dentistry**

To improve healthcare by:

1. Providing quality medical education that prepares healthcare professionals according to internationally accepted benchmarks for empathy, social accountability, lifelong learning, critical thinking, and sound clinical acumen.
2. Ensuring a conducive and equitable learning environment in research and continuous professional development for students and faculty respectively, enabling their success in national and international licensure examinations and opportunities.
3. Fostering evidence-based and patient-centered care to efficiently address global healthcare challenges, focusing on prevention and community health improvement.

## **Rationale of Curriculum**

This curriculum has been designed by NUMS to address both local and international needs. The curriculum is focused to prepare future doctors to treat local patients efficiently and safely employing best evidence clinical practice. There are many embedded opportunities for students to learn leadership in order to prepare them for their future role as a leader in a healthcare team. There are numerous opportunities for students to learn and practice leaderships skills by participating in integrated seminars, CPCs, clinical rotations and co-curricular activities. In order to give medical students requisite evidence-based practices health education, research module, research day and elective in preventive health education are added in the curriculum to ensure their holistic growth.

## Curriculum Perspective

Curriculum has been developed in light of behaviorism, cognitivism and constructivism. These curricular flavors provide opportunities to students to have structured learning and practice session along with information orientated feedback, small group learning, critical thinking, decision making and problem-solving opportunities.

## Introduction to Curricular Framework

The implemented curriculum is at the 7th level in the integration ladder where basic sciences' facts are correlated with clinical sciences through student led integrated seminars.

1. **PHASE 1 (Year 1 and 2):** Includes basic sciences namely, Anatomy, Physiology, Biochemistry with horizontal integration within the basic sciences and vertical integration through integrated seminars and interactive lectures in Surgery, Medicine and Behavioral Sciences.
2. **PHASE 2 (Year 3, 4 & 5):** Includes paraclinical and clinical sciences namely, Pharmacology, General Pathology, Special Pathology, Community Medicine, Forensic Medicine, Behavioral Sciences, Eye, ENT, Medicine, Psychiatry, Pediatrics, Surgery, and OBGYN, Internal Medicine, Gastroenterology, Rheumatology, Dermatology, Pulmonology, Cardiology, Nephrology, Endocrinology, General Surgery, Orthopedics



## Five-year Scheme of Studies / Curricular Framework.

Year	Subjects	Teaching Method	Additional Subjects	Teaching Method	Additional Components
<b>1<sup>st</sup> Year</b>	Anatomy (including Histology, Embryology & General Anatomy)	Interactive Lectures. SGDs, Tutorials, DH & Practical	Islamiyat		Student led Integrated Seminar
	Physiology	Interactive Lectures. SGDs, Tutorials, & Practical	Quran Kareem		
	Biochemistry		Introduction to Computer		
	Surgery & Allied	Interactive Lectures	Expository English		
	Medicine & Allied		Basics of Radiology		
	Behavioral Sciences				
<b>2<sup>nd</sup> Year</b>	Anatomy (including Histology & Embryology)	Interactive Lectures. SGDs, Tutorials, DH & Practical	Pakistan Studies	Interactive Lectures	Student led Integrated Seminar
	Physiology	Interactive Lectures. SGDs, Tutorials, & Practical	Quran Kareem		
	Biochemistry				
	Surgery & Allied	Interactive Lectures	Basics of Radiology		
	Medicine & Allied				
	Behavioral Sciences				
<b>3<sup>rd</sup> Year</b>	Pharmacology & Therapeutics	Interactive Lectures. SGDs, Tutorials, & Practical's	Research Methodology & EBM		
	General Pathology				
	Forensic Medicine				
	Behavioral Sciences (includes communication skills, leadership, management, professionalism)	Interactive Lectures. SGDs, & Tutorials.			
	Community Medicine				
	Surgery & Allied				

Year	Subjects	Teaching Method	Additional Subjects	Teaching Method	Additional Components
	Medicine & Allied	Interactive Lecture, Case Based Learning & Clinical Rotation			
	Gynae & Obs				
	Pediatric Medicine & Neonatology	Clinical Rotation			
<b>4<sup>th</sup> Year</b>	Special Pathology	Interactive Lectures, SGDs, & Tutorials.	Research Methodology & EBM		Seminar/CPC
	Community Medicine	Interactive Lectures, Clerkship & Community Visits			
	ENT	Interactive Lecture, Case Based learning & Clinical Rotation All clinical rotations will include patient safety.			
	Eye				
	Surgery & Allied				
	Medicine & Allied				
	Gynae & Obs				
Pediatric Medicine & Neonatology					
<b>Final Year</b>	Surgery & Allied	Interactive Lecture, Case Based Learning & Clinical Rotation			Seminar/CPC
	Medicine & Allied				
	Gynae & Obs				
	Pediatric Medicine & Neonatology				

## Undergraduate Competencies

- The focus of this curriculum is on the roles of a general physician. These are skillful, knowledgeable, community health promoter, critical thinker, professional and role model, researcher, and leader. Generic competencies addressed in year V are:
  - Medical Knowledge
  - Procedural skills
  - Clinical skills
  - Problem solving
  - Communication skills
  - Empathy

- Professionalism
- Research

## Yearly Outcomes:

By the end of these Clerkship, students should be able to:

- Manage common medical, surgical, gynecological and pediatric conditions in OPD
- Respond effectively to emergencies and trauma cases, demonstrating the ability to think critically and act decisively
- Communicate effectively with patients and their families, demonstrating empathy and professionalism in delivering medical information and discussing treatment plans.
- Collaborate with healthcare teams, including nurses and specialists, to provide comprehensive patient care.
- Apply evidence-based medicine principles in clinical decision-making and stay updated with the latest medical guidelines and research.
- Demonstrate proficiency in basic techniques, aseptic practices, and proper instrument handling
- Present clinical cases that reflects critical thinking and presentation skills.
- Take timely decision to refer the cases to the specialist

## Exit Learning Outcomes of MBBS programme

Exit learning outcomes describe what students are expected to know and be able to do by the time they graduate. They relate to skills, knowledge, attitudes, and professional behavior that students acquire as they progress through the program. At CMH Lahore Medical College and Institute of Dentistry, our goal is to train every graduating student in demonstrating requisite characteristics and skills that are needed for the 21st-century medical graduate. Exit outcomes are directly linked to the list of competencies and enabling outcomes of each subject being taught over a span of 5 years in the MBBS program.

On completion of MBBS program, graduates of CMH LMC & IOD will be able to:

1. Apply scientific principles, knowledge and skills to interpret history, examination and investigations to develop a differential diagnosis of medical conditions in a variety of situations such as indoor, outdoor, and emergency
2. Carry out consultations with patients using appropriate communication and clinical skills to diagnose health problems and refer, if required.
3. Demonstrate leadership, management skills, and professionalism while collaborating, ethically, with others in a health care delivery team, giving top priority to patients' safety and health
4. Reflect and continue improving professional skills by engaging in self-directed learning

5. Participate, initiate research and use published evidence to inform and improve clinical practice
6. Apply principles of public health to advocate health promotion and disease prevention to reduce burden of disease in the community
7. Perform basic life support skills to save life.

## Subjects in Final Year MBBS

### Core Subjects

Following are the core subjects for Final year MBBS.

1. Medicine and Allied
2. Surgery and Allied
3. Gynaecology and Obstetrics
4. Paediatric Medicine and Neonatology

### Contact Hours Distribution Year-V

Subjects	Contact Hours
Medicine & Allied	600
Surgery & Allied	600
Obstetrics & Gynecology	200
Paediatrics	200
Seminar / CPC	60
Co-curricular activities/ Sports	40
SDL	100
<b>GRAND TOTAL</b>	<b>1800</b>

### Teaching and Learning Methods

The teaching-learning will be through diverse methods and will include

1. Large group interactive sessions (LGIS)
2. Flipped Classroom
3. Small group discussions (SGD) including tutorials and demonstrations
4. Practical sessions/hands on training (Laboratory work)
5. Skill lab
6. Student led Integrated Seminar
7. Bedside teaching
8. Ambulatory Care teaching

9. Sessions of self-directed learning (SDL). This is the time during which students are expected to revise what they have learnt in the class, clear their confusions by consulting different texts and reference books



## Assessment Plan

The assessment plan comprises 1 mid-term, 1 send-up, and 1 professional examination. Examination consists of one-best multiple-choice questions and short essay type questions along with OSPE/OSCE. All exams except for University's exam/professional exam contribute towards internal assessment of the respective subjects according to the institutional policy. The assessment schedule is given below

Type of Assessment	Weightage	Frequency and Time	Methods/ Tools for Assessment
Formative		Informally during and after the session.	Class tests (MCQs, SEQs), Class presentations, Assignments, Tutorials, Case Based Discussions, Team based learning, Portfolios
Summative	Internal assessment	20%	2-3 term tests (quarterly), Send up (before the professional exam) (80%) Attitude/ behavior/ attendance/ assignments/ achievements (throughout the year) (20%)
	University exam	80%	Once at the end of academic year

### Annual Professional Examination (80% weightage)

The University will take the final professional Examination as per PM&DC guidelines at the end of the academic year. Professional Exams will be discipline based. In final Prof, Medicine & Allied, Surgery & Allied, Obstetrics & Gynaecology and Paediatrics will be assessed.

- **Medicine & Surgery;** There will be 300 marks theory paper and 300 marks of practical.
- **Obstetrics & Gynaecology;** There will be 200 marks theory paper and 200 marks of practical.
- **Paediatrics.** There will be 100 marks theory paper and 100 marks of practical.
- Student has to pass theory and practical separately with minimum 50 % marks. However, student should pass in clinical exams / OSCE (with 50% marks) and unobserved stations (with 50% marks) separately

### Evaluation of the Course

The major goals of the evaluation are to monitor quality of teaching and assessment and improve the implemented curricula's.

- a. Feedback through CMS will be taken at the end of block from students and faculty members.
- b. LQEC receives recommendation from Evaluation Committee comprising of
  - Head of QEC: Dr. Rizwana Kamran (Associate Professor SHaPE)
  - Officer 1: Dr. Bushra Riaz (Demonstrator SHaPE)

- Medical Educationist: Dr. Khizar Ansar Malik (Assistant Professor SHaPE)
  - Any one student from each academic year.
  - Representation from each academic year.
- c. LQEC generates reports to be shared with the yearly curriculum and institutional curricular committee for implementation of recommendation from students and faculty members.

## Online Learning & Assessment

The COVID-19 pandemic has transformed education, introduced new challenges while fostered innovation catering for the unforeseen situations: Now institutions within Pakistan and across the world are expected to be ready to resume online learning and assessment in times of emergency. The Learning Management System (LMS) at CMH LMC & IOD ensures that online education is standardized, interactive, and aligned with academic and professional requirements.

Switch over to online learning will be notified a day before or on the same day before the first academic session depending upon the nature of national emergency situation.

The LMS combines **Moodle** and **Zoom**, designed to meet the needs of students. Key features include:

- **Access to Courses:** Students can view recorded lectures, access course materials, and engage with faculty.
- **Attendance Verification:** Attendance is tracked using a dual system:
  1. Moodle login records.
  2. Mandatory quizzes after each lecture (not-graded).
- **Progress Monitoring:** Regular assessments such as quizzes and assignments track students' performance.

**Feedback Mechanisms:** Integrated evaluation forms enable students and faculty to provide input for continuous improvement.

To ensure privacy and security:

- Students: Receive personalized logins to access course materials.
- Faculty: Have permissions to upload content, grade assignments, and track student progress.
- SHaPE & QEC: Monitor and evaluate LMS activities to monitor quality.
- IT Support: Manage user accounts, system updates, and security.

Special access requests are managed through the CE Secretariat in consultation with the IT department.

Assessments are designed to support learning and maintain academic rigor:

- **Formative Assessments:** Quizzes and assignments contribute to assessment for learning but do not count toward final grades.
- **Summative Assessments:** Online term exams and send-ups.
- **Feedback and Quality Assurance:** Student evaluations collected through QEC proformas ensure ongoing improvement of online teaching practices.

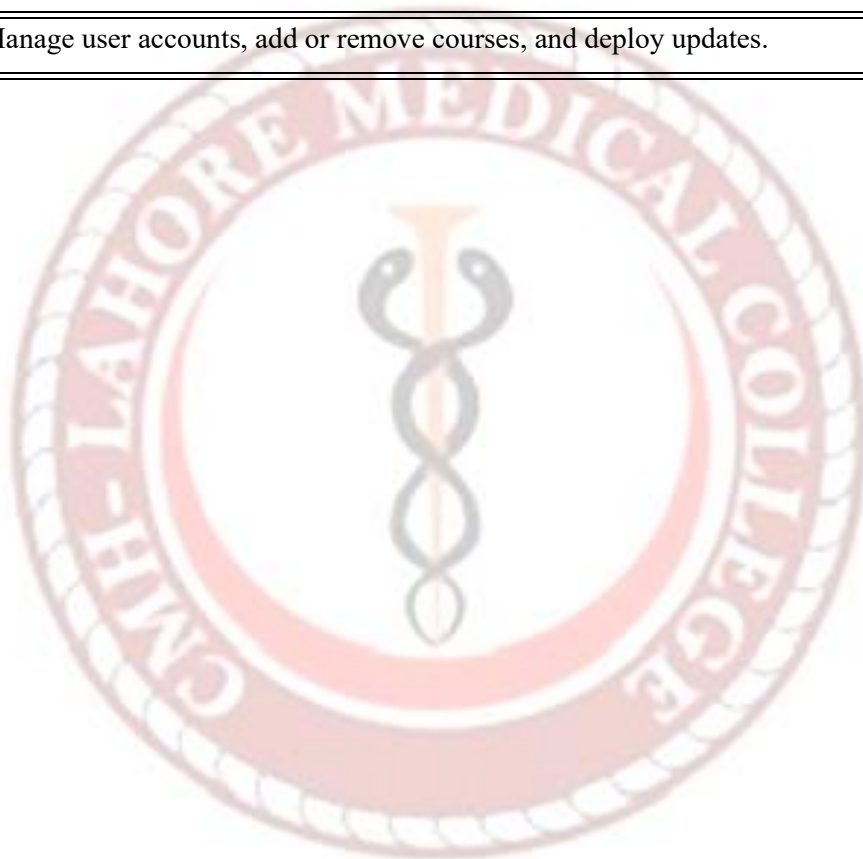


## System Maintenance & Confidentiality

- **Planned Outages:** The IT department notifies users in advance of any maintenance.
- **Privacy Policies:** All users are accordingly notified to must comply with institutional and PMDC regulations to protect intellectual property and personal information.
- **Security:** The IT team monitors and manages unauthorized access or inappropriate behaviors.

### Roles and Responsibilities

User Role	Permissions
<b>Students</b>	Access lectures, take quizzes, and submit assignments.
<b>Instructors</b>	Upload course content, grade assignments, and track students' performance.
<b>SHaPE &amp; QEC</b>	Review course quality, quizzes, assignments, and suggest modifications accordingly.
<b>IT Department</b>	Manage user accounts, add or remove courses, and deploy updates.



# Academic Calendar

Weeks	Details	Dates	
		From	To
<b>Start of New Class</b>		<b>14 Oct 2024</b>	
1-10	Academic Classes (10 Weeks)	14 Oct 2024	20 Dec 2024
11	<b>Winter Vacations</b>	<b>21 Dec 2024</b>	<b>29 Dec 2024</b>
12-17	Academic Classes (06 weeks)	30 Dec 2024	14 Feb 2025
	Kashmir Day (Holiday)	05 Feb	
	Olympiad Day 1	14 Feb	
18	<b>Mid Term Exam (1 Week)</b>	10 Feb 2025	14 Feb 2025
	Surgery	<b>10 Feb 2025 (Mon)</b>	
	Medicine	<b>11 Feb 2025 (Tue)</b>	
	Paeds	<b>12 Feb 2025 (Wed)</b>	
	Gynae	<b>13 Feb 2025 (Thu)</b>	
	Obs	<b>14 Feb 2025 (Fri)</b>	
19-24	Academic Classes (06 Weeks)	17 Feb 2025	28 Mar 2025
	Annual Play	18 Feb	
	Annual Sports Day	20 Feb	
25	<b>Spring Vacation / Eid ul Fitr Holiday (Tentative)</b>	31 Mar 2025	04 Apr 2025
26-34	Academic Classes (09 Weeks)	07 Apr 2025	06 June 2025
	Trifecta	11 Apr	
	Qiraat & Naat Competition	17 Apr	
	Annual Research Day	28 Apr	
	Labour Day (Holiday)	01 May	
	Mushaira & Bait Bazi (Literary Festival)	07 May	
	General Knowledge Quiz	15 May	
	<b>Eid ul Azha (Tentative)</b>	<b>07 June 2025</b>	
35-36	<b>Summer Vacations (2x weeks) (Tentative)</b>	<b>09 June 2025</b>	<b>22 Jun 2025</b>
37-45	Academic Classes (09 Weeks)	<b>23 Jun 2025</b>	<b>22 Aug 2025</b>
46-47	<b>Pre-Annual Exam / OSPE (02 Weeks)</b>	<b>25 Aug 2025</b>	<b>05 Sep 2025</b>
48	Prep Leave for Prof Exam	13 Sep 2025	<b>22 Sep 2025</b>



## Rotation plans

WEEKS	Dates	Batch-A	Batch-B	Batch-C	Batch-D	Batch-E	Batch-F	Batch-G	Batch-H	Batch-J	Batch-K	Batch-L	Batch-M
1 - 4	14 Oct 2024 to 08 Nov 2024	PAEDS-1	PAEDS-1	MED - 3	PSY	GYN	SURG-4	OBS	SURG-3	MED-1	MED-2	SURG-1	SURG-2
5 - 7	11 Nov 2024 to 29 Nov 2024	PAEDS-2	PAEDS-2	SURG-3	MED - 3	PSY	GYN	SURG-4	OBS	MED-2	MED-1	SURG-2	SURG-1
8-10	02 Dec 2024 to 20 Dec 2024	SURG-1	SURG-2	PAEDS-1	PAEDS-1	MED - 3	PSY	GYN	SURG-4	OBS	SURG-3	MED-1	MED-2
11	21 Dec 2024 - 29 Dec 2024	<b>Winter Vacation (1 Week)</b>											
12-14	30 Dec 2024 to 17Jan 2025	SURG-2	SURG-1	PAEDS-2	PAEDS-2	SURG-3	MED - 3	PSY	GYN	SURG-4	OBS	MED-2	MED-1
15-17	20 Jan 2025 to 07 Feb 2025	MED-1	MED-2	SURG-1	SURG-2	PAEDS-1	PAEDS-1	MED - 3	PSY	GYN	SURG-4	OBS	SURG-3
18	10 Feb 2025 to 14 Feb 2025	<b>Mid Term Exam</b>											
19-21	17 Feb 2025 to 07 March 2025	MED-2	MED-1	SURG-2	SURG-1	PAEDS-2	PAEDS-2	SURG-3	MED - 3	PSY	GYN	SURG-4	OBS
22-24	10 Mar 2025 to 28 Mar 2025	OBS	SURG-3	MED-1	MED-2	SURG-1	SURG-2	PAEDS-1	PAEDS-1	MED - 3	PSY	GYN	SURG-4
25	29 Mar 2025 - 6 Apr 2025	<b>Spring break (1 Week)</b>											
26-28	07 Apr 2025 to 25 Apr 2025	SURG-4	OBS	MED-2	MED-1	SURG-2	SURG-1	PAEDS-2	PAEDS-2	SURG-3	MED - 3	PSY	GYN
29-31	28 Apr 2025 to 16 May 2025	GYN	SURG-4	OBS	SURG-3	MED-1	MED-2	SURG-1	SURG-2	PAEDS-1	PAEDS-1	MED - 3	PSY
32-35	19 May 2025 to 13 Jun 2025	PSY	GYN	SURG-4	OBS	MED-2	MED-1	SURG-2	SURG-1	PAEDS-2	PAEDS-2	SURG-3	MED - 3
36-37	14 Jun 2025 to 29 Jun 2025	<b>Summer Vacations (2x weeks)</b>											
38-41	30 Jun 2025 - 25 Jul 2025	MED - 3	PSY	GYN	SURG-4	OBS	SURG-3	MED-1	MED-2	SURG-1	SURG-2	PAEDS-1	PAEDS-1
42-45	28 Jul 2025 to 22 Aug 2025	SURG-3	MED - 3	PSY	GYN	SURG-4	OBS	MED-2	MED-1	SURG-2	SURG-1	PAEDS-2	PAEDS-2
46-47	25 Aug 2025 to 05 Sep 2025	<b>Pre-Annual Exam</b>											
48-49	06 Sep -22 Sep 2025	<b>Prep Leave for Annual Exam 16 Days</b>											
<b>NUMS Annual Exam 23 Sep 2025</b>													



## **Year-5 Curriculum Committee:**

1. HoD Gynae ( (MCPS-HPE / MHPE) (Convener)
2. HoD Surgery
3. HoD Medicine or nominee.
4. HoD Gynae / Obs or nominee.
5. HoD Dermatology
6. HoD Paediatrics
7. HoD Behavioral Sciences or nominee.
8. IS & T
9. Student Affairs
10. IEC
11. Student Council
12. IFMSA
13. Assistant Professor SHaPE.



## CMH Lahore Medical College – Policies

- Attendance and disciplinary policy <https://cmhlahore.edu.pk/wp-content/uploads/2024/10/std-policy.pdf>
- Policy for Steering Committee for the Selection of Class Representatives (BR and GR) Based on Student Feedback <https://cmhlahore.edu.pk/wp-content/uploads/2025/01/Steering-committee.pdf>
- Social Media Policy for Faculty, Staff, and Students <https://cmhlahore.edu.pk/wp-content/uploads/2024/02/Social-Media-Policy-for-students-02-08-2023.pdf>
- Code of Conduct <https://cmhlahore.edu.pk/wp-content/uploads/2024/02/SOP-Code-of-Conduct-27-02-24.pdf>
- Internet Usage Policy <https://www.cmhlahore.edu.pk/wp-content/uploads/2023/09/CMH-Internet-Usage-Policy-02-08-2023.pdf>
- Healthcare Facility <https://www.cmhlahore.edu.pk/wp-content/uploads/2023/09/Health-Care-Facility.pdf>
- Complaint Cell <https://www.cmhlahore.edu.pk/wp-content/uploads/2023/09/Complaint-Cell-CMH-LMC-IOD.pdf>
- Retake Policy (For Internal Assessment Only) <https://www.cmhlahore.edu.pk/wp-content/uploads/2023/05/ion-Updated-Retake-Policy-2.pdf>
- Drug and tobacco abuse/smoking <https://www.cmhlahore.edu.pk/wp-content/uploads/2022/11/SOP-Drug-and-Tobacco.pdf>
- Sexual harassment <https://www.cmhlahore.edu.pk/wp-content/uploads/2022/11/Sexual-Hars-policy.pdf>
- Disciplinary Committee Policy <https://www.cmhlahore.edu.pk/wp-content/uploads/2022/11/Disciplinary-Committe-Policy.pdf>
- Co-curricular Activities <https://www.cmhlahore.edu.pk/wp-content/uploads/2022/11/Co-curricular-privacy-policy.pdf>
- Electives Policy <https://www.cmhlahore.edu.pk/wp-content/uploads/2022/11/electives-policy.pdf>
- CMH LMC Formative Assessment and Feedback Policy <https://www.cmhlahore.edu.pk/wp-content/uploads/2022/11/CMH-LMC-Formative-Assessment-and-Feedback-Policy.pdf>

## Internal Assessment Theory (Medicine, Surgery)

Ser	Assessment tool	Year-III	Year-IV	Year-V	Final IA (20%)
1.	Continuous Assessment (Intramodular Exam, EOB)	8%			8%
2.	Pre Annual Exam	-		10%	10%
3.	Attendance Criteria: > 95% = 02, 90- 94% = 01	2%	2%	2%	Yr III + Yr IV + Yr V / 3
<b>Total</b>					

HOD Signature: \_\_\_\_\_ Assistant Controller Signature: \_\_\_\_\_

## Internal Assessment Practical (Medicine, Surgery)

S#	Assessment Tool	Year-III	Year-IV	Year-V	Final IA (20%)
<u>1</u>	Continuous Assessment				
	a. EOR Exam (Ward Test) & (OSCE Viva of EOB – Year V)	1.00%	1.5%	3.5%	5%
	b. Logbooks/ Portfolio, Discipline / Attitude, Responsibility and Teamwork	0.4%	0.6%	1%	2%
	c. CPC	-		1%	1%
<u>2</u>	Pre annual Exam (OSCE/Viva)	-		10%	10%
<u>3</u>	Attendance Criteria: - > 95 % = 02, 90- 94 % = 01	2%	2%	2%	Yr III + Yr IV + Yr V / 3
-		<b>Total</b>			

HOD Signature: \_\_\_\_\_ Assistant Controller Signature: \_\_\_\_\_

## 1. Annual Professional Examination.

The University will take the final professional Examination as per PM&DC guidelines at the end of the academic year. Professional Exams will be discipline based. In final Prof, Medicine & Allied, Surgery & Allied, Obstetrics & Gynaecology and Paediatrics will be assessed.

- **Medicine & Surgery;** There will be 300 marks theory paper and 300 marks of practical.
- **Obstetrics & Gynaecology;** There will be 200 marks theory paper and 200 marks of practical
- **Paediatrics.** There will be 100 marks theory paper and 100 marks of practical.
- Student has to pass theory and practical separately with minimum 50 % marks. However, student should pass in clinical exams / OSCE (with 50% marks) and unobserved stations (with 50% marks) separately



**2. Evaluation of the Course.** To be filled in by the institute.

- Student portfolio shall be maintained in the departments in which students will give their feedback either by name or anonymously. Feedback may be taken at the end of module, online and informal student feedback during the running module
- Faculty suggestions if any, for improvement of training may be incorporated in the next rotation



## Medicine & Allied



## Introduction

Medicine is a broad based specialty dedicated to providing primary and specialized care to adults. Therefore, it forms a key component of the undergraduate curriculum and is taught throughout the five years with increased emphasis in last three years. Its primary focus is on building knowledge, skills and attitudes of the students for the practice of medicine not only at the primary care level but to advance to postgraduate studies for clinical practice, medical education and research.

Our aim is to prepare future doctors for independent practice after graduation as a general practitioner who can provide patient centered medical care with highest standards of professionalism

## Learning Outcome

### At the end of final year, student will be able to:

- a) Diagnose common Medical problems, suggest and interpret appropriate investigation, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management.
- b) Suggest preventive measure for the common Public Health Problem in the community.
- c) Perform relevant procedures.
- d) Convey relevant information and explanations accurately to patients, families, colleagues and other professionals.
- e) Understand medical ethics and its application pertaining to medicine and maintain the confidentiality of the patient.
- f) Adapt research findings appropriately to the individual patient situation or relevant patient population.

### Teaching hours – Medicine

Sessions	YEARS	CONTACT HOURS
2020-2021	V	600
2021-2022	IV	210
2022-2023	III	165
2023-2024	II	55
2024 -2025	I	50

## 2. Learning Strategies

- a) Interactive lectures
  - b) Teaching Ward Rounds
  - c) Case presentations
  - d) Case based Discussion
  - e) Short cases in OPD
  - f) Bedside Discussion
  - g) Team based learning
  - h) Small Group Discussion
- a) Workshops; 4x scheduled workshops including BLS/ACLS (**only attendance is required to get marks**).
  - b) Self-learning Activities
  - c) Skill Lab Activity

## Venues for learning opportunities

- d) Outpatient clinic
- e) Emergency room
- f) Inpatient ward
- g) Tutorial room
- h) Libraries including audio-visuals

## Specific Learning Outcomes

Learning outcomes specific to the medicine course have been tabulated below in the table of specification and matched with educational strategies.

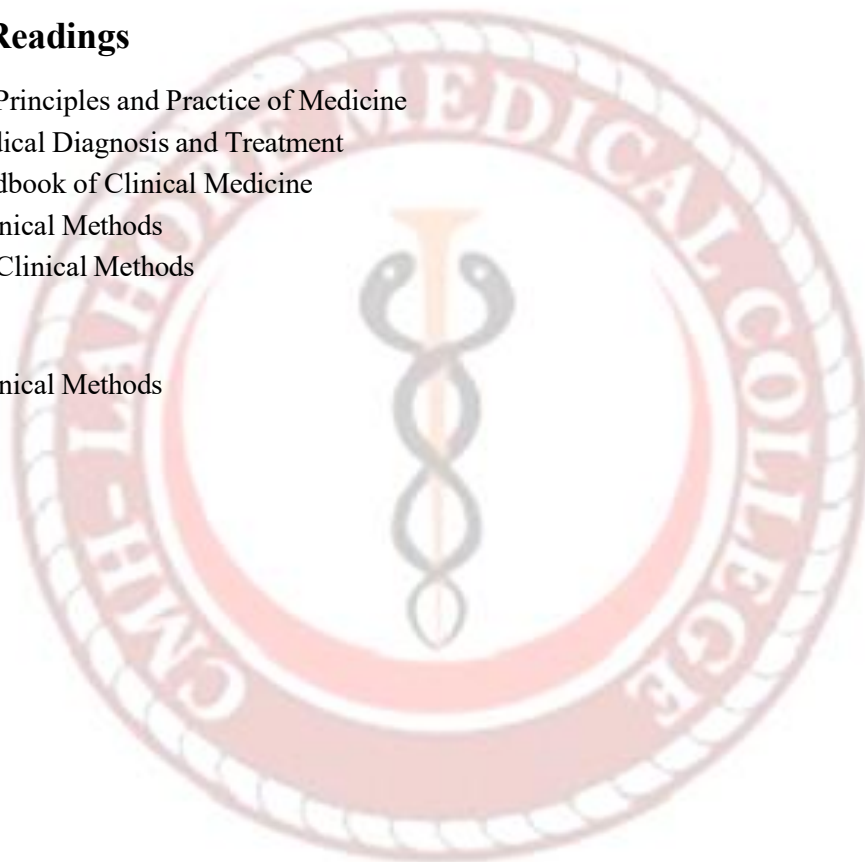
**The table below gives details of all content, distribution of which across the three years and rotations is upon the discretion of the medical College/Institute**

## Recommended Readings

- i) Davidson's Principles and Practice of Medicine
- j) Current Medical Diagnosis and Treatment
- k) Oxford Handbook of Clinical Medicine
- l) Macleod Clinical Methods
- m) Hutchinson Clinical Methods

## Reference Book

- n) Harrison Clinical Methods



Theme/ Topic	Course Content	Learning Outcomes		Instructional Strategies	Assessment
		At the end of each module, student will be able to:			
		Knowledge	Skill/ Attitude		
<b>➤ INTRODUCTION TO MEDICINE</b>					
<b>Symptomatology</b>	Symptomatology of following: <ul style="list-style-type: none"> <li>• CVS disease</li> <li>• Respiratory diseases</li> <li>• GI diseases</li> <li>• CNS diseases</li> <li>• Locomotor diseases</li> <li>• Renal diseases</li> <li>• common endocrine diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Correlate clinical findings to anatomical structures</li> <li>• Correlate clinical features to etiology in terms of congenital, traumatic, inflammatory, neoplastic or miscellaneous.</li> <li>• Discuss basic pharmacology of drugs being used in a medical unit</li> </ul>	<ul style="list-style-type: none"> <li>• Take the relevant history</li> <li>• Perform general physical examination</li> <li>• Perform systemic examination of different systems</li> <li>• Show empathy and sympathy while examining the patient</li> <li>• Recognise the right to consent and privacy of the patient</li> <li>• Present findings of the history and examination in logical order verbally as well as in written form</li> </ul>	CBL/ Bed side training/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Common clinical presentations</b>	<ul style="list-style-type: none"> <li>• Approach to patient with:</li> <li>• Fever</li> <li>• Headache</li> <li>• Cyanosis</li> <li>• Jaundice</li> <li>• chest pain</li> <li>• Unconsciousness</li> <li>• Dyspnea</li> <li>• Dyspepsia</li> <li>• Hematemesis</li> <li>• Bleeding per rectum</li> <li>• Malena</li> <li>• Vomiting</li> <li>• Diarrhoea</li> <li>• Fits</li> <li>• Anorexia and weight loss</li> <li>• Oedema</li> <li>• Acute Poisoning</li> <li>• Ascites</li> <li>• Anemia</li> <li>• Critically ill patient</li> <li>• PUO</li> </ul>	<ul style="list-style-type: none"> <li>• list the investigations</li> <li>• Outline management plan</li> </ul>			

➤ **NUTRITION/OBESITY/ CHOLESTEROL RELATED & GENETIC DISORDERS**

<b>Nutrition</b>	Vit B12 deficiency Folate deficiency	<ul style="list-style-type: none"> <li>Assess the patient with nutrition disorders</li> <li>Propose investigation modalities</li> <li>Treatment options for nutritional deficiencies</li> </ul>	<ul style="list-style-type: none"> <li>Take the relevant history</li> <li>Perform general and relevant clinical examination</li> </ul>	CBL/ Bed side training/DL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Metabolic syndromes				
<b>Obesity</b>		<ul style="list-style-type: none"> <li>Assess the patient with nutrition disorders</li> <li>Discuss the investigation modalities and Treatment options</li> </ul>		CBL/ Bed side training/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Cholesterol Related Disorders</b>	Dyslipidemia	<ul style="list-style-type: none"> <li>Assess the patient with nutrition disorders</li> <li>Discuss the investigation modalities for diagnosis</li> <li>Discuss the Treatment options available</li> </ul>		CBL/ Bed side training/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Genetic Disorders</b>	Hemoglobinopathies <ul style="list-style-type: none"> <li>Sickle cell syndromes</li> <li>Thalassaemias</li> </ul>	<ul style="list-style-type: none"> <li>Classify hemoglobinopathies on the basis of defects in basic structure and formation</li> <li>Identify characteristic features of each type of hemoglobinopathy</li> <li>Establish clinical basis of diagnosis of Various hemoglobinopathies and them</li> <li>treatment modalities</li> </ul>		Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

➤ POISONING/ANIMAL BITES					
<b>Animal Bites</b>	Snake Bite- Diagnosis and management	<ul style="list-style-type: none"> <li>Classify Snake bite, based on animal and time duration and type of wound.</li> <li>List the immediate management and long term management</li> <li>Discuss the antivenom type and dosing and the criteria of administering antivenom</li> <li>Enumerate the various complications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with snake bite</li> <li>Counsel the patients and relatives regarding the correct response at home of the management of snake bite and regarding the immediate presentation of the patient to hospital</li> </ul>	CBL	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case
<b>Poisoning</b>	Paracetamol Poisoning- Diagnosis and management	<ul style="list-style-type: none"> <li>Discuss the pharmacological effects of Paracetamol.</li> <li>Diagnose paracetamol poisoning on the basis of clinical presentation</li> <li>Apply the concepts of mode of reversal to the dosage and route of reversal medication</li> <li>Enumerate the complication</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with poisoning</li> <li>Counsel the patient to prevent self-harm</li> </ul>	CBL	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case
➤ DERMATOLOGY					
<b>Basic Dermatology</b>	<ul style="list-style-type: none"> <li>Anatomy and Physiology of Skin related to Clinical Dermatology skin lesions</li> </ul>	<p>Apply concepts of anatomy and physiology of skin to clinical dermatology</p> <ul style="list-style-type: none"> <li>give pathologic basis of skin lesions</li> <li>Identify different types of skin lesions</li> <li>characteristic differentiating features of various</li> <li>skin lesions</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with skin lesions</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case

<b>Allergy</b>	Pruritis <ul style="list-style-type: none"> <li>Differential diagnosis</li> <li>Management</li> </ul>	<ul style="list-style-type: none"> <li>Classify types of pruritis</li> <li>Identify its characteristic lesions</li> <li>Advise specific lab investigations</li> <li>Discuss the steps of management</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with pruritis</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	<ul style="list-style-type: none"> <li>Urticaria</li> <li>Anaphylaxis</li> </ul>	<ul style="list-style-type: none"> <li>Define urticaria</li> <li>Diagnose urticarial illness on the basis of clinical features</li> <li>Give causes of anaphylaxis</li> <li>Advise specific lab investigations</li> <li>Describe immediate management of urticaria.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with urticaria</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Dermatitis</b>	Eczema	<ul style="list-style-type: none"> <li>Classify eczema</li> <li>Apply diagnostic criteria to clinical assessment of eczema</li> <li>Develop management plan of eczema</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with eczema</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Viral infections of skin	<ul style="list-style-type: none"> <li>list common types of viral infections of skin</li> <li>Establish diagnosis of viral skin infections based on clinical features and investigations.</li> <li>Elaborate various management modalities of viral skin infections</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with viral infections of skin</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

Bacterial and Mycobacterial infections of skin	<ul style="list-style-type: none"> <li>list the types of Bacterial and Mycobacterial Infections</li> <li>Give clinical features and symptoms of bacterial and Mycobacterial infections</li> <li>Develop management plan to establish diagnosis and treat different infections</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with bacterial infections</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case	
Acne vulgaris	<ul style="list-style-type: none"> <li>Clinically assess Acne vulgaris</li> <li>Diagnose acne vulgaris based on clinical features and investigations</li> <li>Suggest treatment options for Acne vulgaris</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	CBL/SDL	MCQ/SEQ/SAQ/OSPE/Long case/short case	
Fungal infections of skin	<ul style="list-style-type: none"> <li>Differentiate between different fungal infections of the skin based on their clinical features and management plan</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with fungal infections of skin</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case	
<b>Infestations</b>	<ul style="list-style-type: none"> <li>Scabies</li> <li>Pediculosis</li> </ul>	<ul style="list-style-type: none"> <li>Diagnose scabies and pediculosis based on clinical features and investigations</li> <li>Recommend specific treatment options for scabies and pediculosis</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with infestations</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case

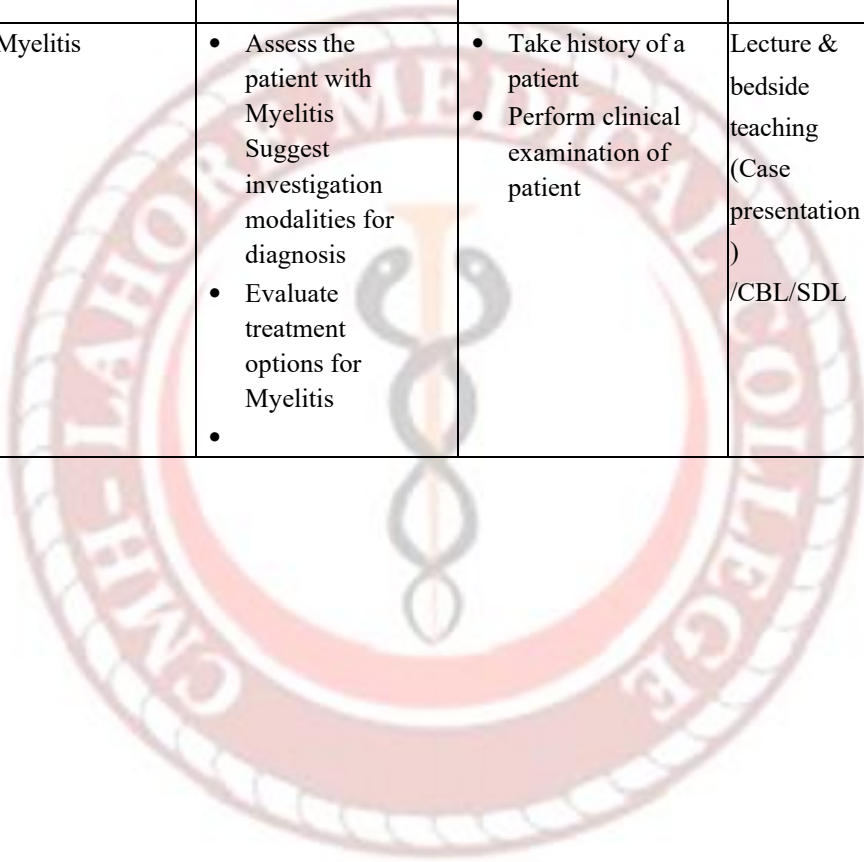
<b>Other disorders</b>	<ul style="list-style-type: none"> <li>• Psoriasis and Lichen planus</li> <li>• <b>Nodular ulcerative cutaneous lesions</b></li> <li>• Cutaneous signs of systematic disease</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the etiology and precipitating factors</li> <li>• Discuss general and specific treatment of psoriasis and Lichen planus</li> <li>• Describe the role of ultraviolet and PUVA therapy and its uses in Psoriasis</li> <li>• Propose systemic treatment of psoriasis and Lichen planus</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with psoriasis and Lichen planus</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Disorders of hairs.</b>	Alopecia	<ul style="list-style-type: none"> <li>• Classify alopecia</li> <li>• Make clinical diagnosis by assessing symptoms.</li> <li>• list necessary investigations</li> <li>• Discuss management of the condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with alopecia</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Sexually transmitted diseases</b>	Syphilis Gonorrhea Chlamydia	<ul style="list-style-type: none"> <li>• Make clinical diagnosis by assessing symptoms.</li> <li>• list necessary investigations</li> <li>• Discuss management of the condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	MCQ/SEQ/SAQ/OSPE/Long case/short case

➤ **NEUROLOGY/MUSCLE DISORDERS**

<p><b>Headache</b></p>	<ul style="list-style-type: none"> <li>Differential diagnosis of headache, Migraine, cluster, tension, analgesia-overuse, neuralgias,</li> </ul>	<ul style="list-style-type: none"> <li>Assess the patient with headache.</li> <li>Discuss the investigation modalities for diagnosis</li> <li>Elaborate pharmacologic treatment for Acute</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with headache</li> </ul>	<p>Lecture and bed side teaching/CBL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>
	<p>idiopathic intracranial hypertension, temporal arteritis</p> <ul style="list-style-type: none"> <li>Presentations and clinical features of various types of headache especially migraine</li> <li>Etiologies &amp; Pathogenesis</li> </ul>	<p>condition and Prophylaxis</p> <ul style="list-style-type: none"> <li>Migraine.</li> <li>Suggest primary drugs used to prevent nausea related to migraine.</li> <li>Develop management plan for complications of migraine including life style modifications</li> </ul>			
<p><b>Unconsciousness</b></p>	<p>Approach to an Unconscious Patient</p>	<ul style="list-style-type: none"> <li>Generate differential diagnosis of the unconscious patient</li> <li>Identify signs and investigations to determine the cause</li> <li>Justify the utility of Glasgow Coma Scale (GCS)</li> <li>Outline the emergency management of patient</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of unconscious patient</li> <li>Manage an unconscious patient</li> </ul>	<p>Lecture and bed side teaching/CBL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>

<b>Gait/movemen ts Disorders</b>	<ul style="list-style-type: none"> <li>• Parkinson’s disease, essential tremor, Huntington’s disease, tics, medication-induced dyskinesia</li> <li>• Distinguishing features of essential tremor from dystonic tremor, cerebellar tremor, parkinsonian</li> </ul>	<ul style="list-style-type: none"> <li>• Review the gait cycle</li> <li>• Classify gait disorders</li> <li>• Recognize common clinical features of gait disorders</li> <li>• Differentiate between clinical and laboratory features of essential tremor dystonic tremor, cerebellar tremor, parkinsonian tremor, and other tremor disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with gait disorders</li> </ul>	Lecture and bedside teaching/CBL	MCQ/SEQ/SAQ/OSPE/Long case/short case
	<ul style="list-style-type: none"> <li>tremor, and other tremor disorders</li> <li>• Pharmacological treatment for relief of symptoms and its complications</li> <li>• Non Pharmacological treatment including surgery and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Recognize the spectrum of movement disorders, both hypo- and hyperkinetic</li> <li>• Generate differential diagnosis of PD</li> <li>• Describe the prevalence and etiology of Parkinson’s disease</li> <li>• Recognize the clinical features and presentations of movement disorders</li> <li>• Outline the workup and management of patients with gait disorders</li> </ul>			
	<ul style="list-style-type: none"> <li>• Myasthenia Gravis</li> <li>• Muscle Dystrophy</li> </ul>	<ul style="list-style-type: none"> <li>• Provide pathophysiological basis of Myasthenia gravis.</li> <li>• Differentiate between Myasthenia and Dystrophy.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Myasthenia and Dystrophy.</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case

		<ul style="list-style-type: none"> <li>• Give genetic basis of muscular dystrophy</li> <li>• Identify clinical features of Myasthenia Gravis</li> <li>• Diagnose various stages on time based characteristic features.</li> <li>• Develop management plan for Myasthenia Gravis</li> </ul>			
<b>Spinal cord disorders.</b>	<ul style="list-style-type: none"> <li>• Myelitis</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Assess the patient with Myelitis Suggest investigation modalities for diagnosis</li> <li>• Evaluate treatment options for Myelitis</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case



<b>Cerebrovascular accident</b>	<ul style="list-style-type: none"> <li>• Stroke</li> <li>• Transient ischemic attack (TIA)</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Classify stroke</li> <li>• Correlate pathophysiology of stroke to its causes and risk factors</li> <li>• Outline early evaluation and management of stroke patients</li> <li>• Emphasize the importance of early symptom recognition and prompt reaction</li> <li>• Justify the role of thrombolytic therapy and administration of tPA</li> <li>• Explain the pathophysiological basis of Transient Ischemic Attack (TIA)</li> <li>• Evaluate stroke risk after transient ischemic attack (TIA)</li> <li>• Order Investigations for diagnosis of stroke</li> <li>• List the complications of stroke</li> <li>• Identify various prevention strategies pertaining to stroke</li> <li>• Outline management of ischemic and hemorrhagic stroke.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with stroke</li> <li>• Counsel the patient with stroke about physiotherapy</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
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<b>Seizures</b>	<ul style="list-style-type: none"> <li>• Epilepsy</li> <li>• various seizure types including adult vs pediatric seizures</li> <li>• Status Epilepticus</li> <li>• Epilepsy Management Issues</li> <li>• Medically refractory epilepsy and immunotherapy</li> <li>• Anticonvulsants in Specific Patient Populations such as Neonates, Children, Elderly, Women on contraceptive agents, Pregnant women, Patients with hepatic or renal insufficiency, (HIV)–infected patients</li> <li>• Seizure relapse after discontinuation of drug therapy</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between different types of seizures including epilepsy</li> <li>• Explain pathophysiological basis of epilepsy</li> <li>• Identify the cause and trigger factors associated</li> <li>• Recognize the clinical features of seizures</li> <li>• Outline the management of Status Epilepticus</li> <li>• List the investigation of a patient with suspected epilepsy</li> <li>• Outline the acute and long term management of seizures, both medical and surgical</li> <li>• Evaluate the considerations in special populations such as pregnancy and old age</li> <li>• illustrate the Goals of management of epilepsy</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with seizures</li> </ul>	Lecture and bed side teaching/CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Infections of CNS</b>	<ul style="list-style-type: none"> <li>• Meningitis/ Encephalitis/ Brain Abscess</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate among the various infections of CNS based on etiologies and clinical features and presentations</li> <li>• Outline the modalities for investigation and medical management</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with infections of CNS</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<ul style="list-style-type: none"> <li>of CNS infections.</li> <li>Identify Complications their treatment</li> <li>Advocate preventive strategies for</li> <li>complications</li> </ul>			
<b>Other diseases</b>	<ul style="list-style-type: none"> <li>Multiple Sclerosis</li> </ul>	<ul style="list-style-type: none"> <li>Provide pathophysiologic basis of the effects of Multiple Sclerosis (MS) on the body.</li> <li>Diagnose MS on the basis of to Clinical features</li> <li>Develop plan for the workup and management including therapeutic options, of a patient with MS</li> <li>Propose plan for treatment of acute relapse, prevention of future relapses, treatment of complications and management of disability.</li> <li>Provide pathophysiologic basis of the poor prognosis of MS</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with MS</li> <li>Counsel the patient about prognosis of MS</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Motor Neuron Disease/</b>	<ul style="list-style-type: none"> <li>Amyotrophic Lateral Sclerosis (ALS), Guillain–</li> </ul>	<ul style="list-style-type: none"> <li>Correlate the phenomenon of degeneration and</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/

<p><b>Polyneuropathies</b></p>	<p>Barré Syndrome (GBS), Post-polio Syndrome (PPS), neuropathies, and brachial plexus injuries</p> <ul style="list-style-type: none"> <li>• lower motor neuron disease</li> <li>• upper motor neuron disease</li> <li>• Investigations and general management of these patient</li> <li>• Role of Plasma exchange or IV immunoglobulin therapy</li> </ul>	<p>regeneration nerve and muscle and patterns of involvement in motor neuron disease</p> <ul style="list-style-type: none"> <li>• Describe the demographic, risk factors, etiology, pathophysiology, diagnosis, general progression and prognosis of Amyotrophic Lateral Sclerosis (ALS), Guillain–Barré Syndrome (GBS), Post-polio Syndrome (PPS), neuropathies, and brachial plexus injuries</li> <li>• Elaborate the pathophysiology, incidence, signs and symptoms, and typical progression of Guillain-Barre syndrome</li> <li>• Differentiate among lower motor neuron and upper motor neuron disease based on signs and symptoms and pathology</li> <li>• Describe the general investigations and interpretation of nerve conduction studies, including motor and sensory studies of peripheral nerves and clinical electromyography</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of patient with motor neuron diseases</li> </ul>	<p>(Case presentation)</p>	<p>Long case/ short case</p>
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		<ul style="list-style-type: none"> <li>• Discuss the differential diagnosis, management and prognosis of these diseases</li> </ul>			
<b>Dementia</b>	<ul style="list-style-type: none"> <li>• Neurodegenerative cognitive impairment, Alzheimer's disease (AD) and related dementias</li> </ul>	<ul style="list-style-type: none"> <li>• Distinguish neurodegenerative cognitive impairment, Alzheimer's disease (AD) and related dementias from age-related normal cognitive changes.</li> <li>• Apply standard diagnostic criteria for mild cognitive impairment, dementia, and Alzheimer's disease</li> <li>• Apply standard guidelines for the laboratory investigation of patients with dementia or suspected dementia.</li> <li>• Relate the etiology and risk factors of conditions leading to dementia to its pathophysiology and progression</li> <li>• Discuss the short and long term management of disease.</li> <li>• Review the standard pharmacotherapy for cognitive deficits experienced by</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with dementia</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<p>patients with mild Cognitive impairment &amp; dementia.</p> <ul style="list-style-type: none"> <li>Describe non-pharmacological interventions for management of behavioral disturbances ensuring Compassionate Palliative &amp; End-of-Life Care for People with Dementia</li> </ul>			
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➤ **GASTROENTEROLOGY**

<b>Dyspepsia/ Indigestion</b>	<ul style="list-style-type: none"> <li>Dyspepsia/ GERD/ Peptic Ulcer</li> </ul>	<ul style="list-style-type: none"> <li>Identify the causes of Dyspepsia, GERD and Peptic Ulcer</li> <li>Generate differential diagnosis of Dyspepsia, GERD and Peptic Ulcer</li> <li>Establish definitive diagnosis based on laboratory investigations</li> <li>Develop treatment plan for Dyspepsia, GERD and Peptic Ulcer</li> <li>Evaluate prognosis of the patient of Dyspepsia, GERD and Peptic Ulcer</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with dyspepsia</li> <li>Counseling of patients with GERD &amp; Peptic ulcer about the outcomes of diseases and how to prevent them</li> </ul>	Lecture & bedside teaching (case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
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<b>Gastrointestinal Bleeding</b>	Differential diagnosis of <ul style="list-style-type: none"> <li>• Upper GI Bleeding</li> <li>• Lower GI Bleeding</li> </ul> Clinical assessment, and signs and symptoms Management	<ul style="list-style-type: none"> <li>• Differentiate between upper and lower GI bleeding</li> <li>• Assess the patient on the basis of signs and symptoms</li> <li>• Outline the management plan</li> <li>• Outline the risk factors for death in Upper GI bleeding</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient.</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Risk factors for death in Upper GI bleeding Prognosis	<ul style="list-style-type: none"> <li>• Assess the Prognosis</li> </ul>			
<b>Diarrhea</b>	<ul style="list-style-type: none"> <li>• Acute and chronic diarrhea</li> <li>• Inflammatory Bowel Disease</li> <li>• Ulcerative colitis</li> <li>• Crohn's disease</li> <li>• Irritable Bowel Syndrome</li> <li>• Clinical features, signs and symptoms</li> <li>• Management</li> <li>• Malabsorption</li> <li>• Sprue Tropical</li> <li>• Coeliac Disease</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between Acute and Chronic Diarrhoea on the basis of its etiology</li> <li>• Outline the risk factors for Acute and Chronic Diarrhoea</li> <li>• Assess the patient on the basis of signs and symptoms</li> <li>• Outline the investigations and management plan</li> <li>• Discuss the Prognosis</li> <li>• Discuss the prognosis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with diarrhea</li> <li>•</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE / Long case/ short case
<b>Tumours</b>	<ul style="list-style-type: none"> <li>• Upper GI Malignancy</li> <li>• Lower GI Malignancy</li> </ul>	<ul style="list-style-type: none"> <li>• Classify Upper and lower GI tumours</li> <li>• Differentiate between benign and malignant tumours on the basis of its etiology and clinical features</li> <li>• List risk factors</li> <li>• Outline investigations and management of tumours</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with GI tumours</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE / Long case/ short case

• LIVER & PANCREAS					
<b>Chronic Liver disease</b>	Ascites and Management	<ul style="list-style-type: none"> <li>Elaborate the causes of Ascites</li> <li>Outline the management and prognosis</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with CLD</li> <li>Counsel a cirrhotic patient</li> </ul>	Lecture & bedside teaching (Case presentation )	MCQ/SEQ/SAQ/OSPE / Long case/ short case
	Cirrhosis of Liver	<ul style="list-style-type: none"> <li>Describe the causes, pathology and clinical features of Hepatic Cirrhosis               <ul style="list-style-type: none"> <li>Explain the pathogenic mechanism of Hepatic Fibrosis</li> </ul> </li> <li>Discuss the Management and prognosis of the condition</li> </ul>			

	Portal Hypertension/ Sequelae <ul style="list-style-type: none"> <li>Aetiology and pathogenesis</li> <li>Clinical features</li> <li>Investigations and management</li> </ul> Complications of Portal Hypertension	<ul style="list-style-type: none"> <li>Classify Portal Hypertension according to site of vascular obstruction</li> <li>Evaluate Management and prognosis of the condition</li> </ul>			
	Hepatic Encephalopathy	<ul style="list-style-type: none"> <li>Correlate the causes and pathology of hepatic encephalopathy to its clinical features</li> <li>Outline the management and prognosis</li> </ul>			

<b>Hepatitis</b>	Hepatitis B and C Infections Other Forms of Hepatitis (A, D and E) <b>Autoimmune Hepatitis</b>	<ul style="list-style-type: none"> <li>Classify viral Hepatitis</li> <li>Differentiate between different types of Hepatitis</li> <li>Interpret investigations for diagnosis of Hepatitis B and C</li> <li>Discuss their modes of transmission</li> <li>Outline the treatment plan and Prognosis</li> <li>List the Complications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with hepatitis</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Pancreatitis</b>	Acute Pancreatitis Chronic Pancreatitis	<ul style="list-style-type: none"> <li>Elaborate the pathophysiology of Acute and Chronic Pancreatitis</li> <li>Diagnose the patient on the basis of Signs, symptoms and investigations</li> <li>Outline the Treatment plan</li> <li>List its Complications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with pancreatitis</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Investigation &amp; Imaging of GI, Liver and Pancreatic disorder</b>		Interpret investigations for diagnosis of GI, Liver and Pancreatic disorder		Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/Long case/short case

<b>Other hepatobiliary/pancreatic disorders</b>	<ul style="list-style-type: none"> <li>• Hemochromatosis</li> <li>• Wilson Diseases</li> <li>• SBP/HRS</li> <li>• Metabolic Diseases of the liver</li> <li>• Liver abscess</li> <li>• HCC</li> <li>• CA pancreas/ Ampullary Carcinoma</li> <li>• Abdominal tuberculosis</li> <li>• Dysphagia and its evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of Signs, symptoms and investigations</li> <li>• Outline the Treatment plan</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture &amp; bedside teaching</li> <li>• (Case presentation)</li> </ul>	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>➤ RHEUMATOLOGY/BONES</b>					
<b>Inflammation of joints</b>	<b>Rheumatoid arthritis</b>	<ul style="list-style-type: none"> <li>• Discuss etiology, Symptoms and signs of the disease</li> <li>• Diagnose the patient on the basis of presenting complaints and clinical examination</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/Long case/short case
		<ul style="list-style-type: none"> <li>• Interpret relevant Investigations and laboratory findings.</li> <li>• Recognize complications and their management options</li> </ul>			

<b>Osteoarthritis</b>	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of presenting complaints and clinical examination</li> <li>• Determine causes of osteoarthritis established through Investigations and laboratory findings.</li> <li>• Manage complications of the disease</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with joint disease</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
Seronegative Poly Arthritis	<ul style="list-style-type: none"> <li>• Define diagnostic criteria for Seronegative Poly Arthritis</li> <li>• Correlate etiology of the disease to its presentation.</li> <li>• Diagnose the patient on the basis of presenting complaints and clinical examination</li> <li>• Propose appropriate Investigations and laboratory findings to establish diagnosis.</li> <li>• Manage complications of the disease</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Poly Arthritides</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
Arthritis/ ankylosing spondylitis	<ul style="list-style-type: none"> <li>• Diagnose the disease on the basis of clinical</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<p>Presentation and investigations.</p> <ul style="list-style-type: none"> <li>• Correlate clinical signs with radiological findings.</li> <li>• Suggest appropriate diagnostic modalities and treatment options.</li> </ul>	<p>patient with Arthritis/ ankylosing spondylitis</p>	<p>(Case presentation)</p>	
Gout	<ul style="list-style-type: none"> <li>• Give pathological basis of Gout</li> <li>• Differentiate between acute and chronic disease based on presentation, investigations and treatment options</li> <li>• Diagnose the disease based on clinical presentation and investigations.</li> <li>• Discuss the association of disease with other diseases</li> <li>• Manage the complications of disease</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with gout</li> </ul>	<p>Lecture &amp; bedside teaching (Case presentation) /CBL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>	
Polymyalgia rheumatica	<ul style="list-style-type: none"> <li>• Define Polymyalgia rheumatica</li> <li>• Develop therapeutic plan for the disease after diagnosing based on clinical presentation of various stages, and investigations diagnosing</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Polymyalgia rheumatica</li> </ul>	<p>Lecture &amp; bedside teaching (Case presentation) /CBL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>	

<b>Systemic disorders involving joints</b>	SLE	<ul style="list-style-type: none"> <li>Define diagnostic criteria Seronegative SLE</li> <li>Suggest therapeutic options and investigations after</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with SLE</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
		<p>establishing diagnosis based on etiology, clinical Presentation and investigations Manage complications.</p>			
	<ul style="list-style-type: none"> <li>MCTD</li> <li>Vasculitis (Small, Medium and Large)</li> <li>Dermatomyositis /Polymyosities</li> <li>Scleroderma/Raynaud Phenomenon and Syndrome</li> <li>Systemic Sclerosis</li> <li>Sjorgen syndrome/Kerat oconjunctives Sicca</li> </ul>	<ul style="list-style-type: none"> <li>Suggest therapeutic options and investigations after establishing diagnosis based on etiology, clinical Presentation and investigations</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case case

➤ ENDOCRINOLOGY

<p><b>Disorders of Pituitary gland and Hypothalamus</b></p>	<p>Acromegaly/Growth hormone deficiency.</p>	<ul style="list-style-type: none"> <li>• Define criteria for diagnosing acromegaly, clinical presentation of acromegaly/ growth hormone deficiency.</li> <li>• Identify pathophysiology of central precocious puberty, acromegaly and growth hormone deficiency.</li> <li>• Discuss functions of anterior and posterior pituitary hormones and hypothalamic hormones.</li> <li>• Suggest investigations for</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with acromegaly</li> </ul>	<p>Lecture &amp; bedside teaching (Case presentation) /SDL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>
		<p>diagnosis by oral glucose tolerance test and GH levels.</p> <ul style="list-style-type: none"> <li>• Propose surgical ,medical and radiotherapy management</li> </ul>			
	<p>Diabetes insipidus/SIADH</p>	<ul style="list-style-type: none"> <li>• Correlate pathophysiology of diabetes insipidus/SIADH to its clinical manifestations and</li> <li>• Relate the effects Devise plan for diagnosis and clinical management of SIADH/diabetes insipidus.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with diabetes insipidus</li> </ul>	<p>Lecture &amp; bedside teaching (Case presentation)</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>

	Hypopituitarism/Addison's disease.	<ul style="list-style-type: none"> <li>Correlate pathophysiological basis of various etiological factors in to clinical manifestations of the disease</li> <li>Determine diagnostic criteria for hypopituitarism/acromegaly.</li> <li>Outline the management of the disease.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with Addison's disease</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
	Acute Addisonian crisis	<ul style="list-style-type: none"> <li>Outline the management of the disease</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Disorders of thyroid gland</b>	Hyperthyroidism	<ul style="list-style-type: none"> <li>Correlate pathophysiological basis of various etiological factors to clinical manifestations of hypothyroidism</li> <li>Devise plan for diagnosis, drug therapy, radioactive iodine and surgical management of hyperthyroidism</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with hyperthyroidism</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case

	Hypothyroidism.	<ul style="list-style-type: none"> <li>• Correlate pathophysiological basis of various etiological factors to clinical manifestations of hypothyroidism.</li> <li>• Classify hypothyroidism</li> <li>• Interpret investigations for diagnosis including thyroid function tests.</li> <li>• Outline management including drug therapy and regular follow up.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with hypothyroidism</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case
<b>Disorders of Parathyroid gland</b>	Parathyroid disorders.	<ul style="list-style-type: none"> <li>• Identify the hormones produced by the parathyroid and their functions.</li> <li>• Correlate pathophysiological basis of various etiological factors to clinical manifestations of parathyroid endocrine disorder.</li> <li>• Devise plan for diagnosis and clinical management of each parathyroid disorder.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with parathyroid disorder</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/Long case/short case

<b>Disorders of Adrenal Gland</b>	<ul style="list-style-type: none"> <li>• Cushing Syndrome</li> <li>• Pheochromocytoma</li> <li>• Aldosterone &amp; related conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Justify abnormalities in the hormones produced by the adrenal glands and their functions resulting in Cushing Syndrome / Pheochromocytoma</li> <li>• Aldosterone &amp; related conditions</li> <li>• Propose management of Cushing Syndrome after establishing clinical diagnosis.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Cushing Syndrome</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>MEN-I and II</b>	<b>MEN-I and II</b>	<ul style="list-style-type: none"> <li>• Outline management plan of MEN-I and II</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>➤ DIABETES MELLITUS</b>					
<b>Diabetes mellitus</b>	<ul style="list-style-type: none"> <li>• Diabetes mellitus type -1</li> <li>• Diabetes mellitus type-2</li> <li>• <b>Acute Complication of Diabetes Mellitus-DKA/HHS/Hypoglycemia</b></li> <li>• Chronic complications of diabetes mellitus</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between type 1 and type 2 diabetes on the basis of pathophysiology, etiology,</li> <li>• Prevalence and incidence, risk factors, manifestations and complications.</li> <li>• Identify abnormalities in investigations for blood sugar levels including HbA1c.</li> <li>• Propose diagnostic tests used for screening, diagnosis and monitoring of diabetes mellitus.</li> <li>• Emphasize implications of</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with diabetes mellitus</li> <li>• Advise best practices of self-care management of diabetes related to diet planning, sick day management and exercise.</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<p>insulin and oral hypoglycemic agents used to treat patients of DM-1&amp; II.</p> <ul style="list-style-type: none"> <li>• Identify maternal and fetal risks or complications associated with diabetes in pregnancy.</li> <li>• Identify the warning signs of insulin-dependent and non-insulin-dependent diabetes mellitus.</li> <li>• Compare prevalence of diabetes mellitus among different ethnic groups.</li> <li>• Identify risk factors for developing diabetes and its complications.</li> <li>• Devise Management plan for acute Complication of Diabetes Mellitus- DKA/HHS/Hypoglycemia Describe the major microvascular, macrovascular and neuropathic complications of diabetes and self-care behavior that are important in their prevention.</li> </ul>			
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➤ **PSYCHIATRY & MENTAL HEALTH**

<b>Anxiety Disorders</b>	<ul style="list-style-type: none"> <li>Acute anxiety states</li> <li>Panic disorders</li> <li>Generalized anxiety disorders</li> <li>Psychic Traumatic disorders</li> <li>Obsessive-compulsive disorders</li> <li>Phobic disorders</li> </ul>	<ul style="list-style-type: none"> <li>Classify Anxiety Disorders</li> <li>Discuss the Management of Anxiety Disorders</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with anxiety disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Mood Disorders</b>	<ul style="list-style-type: none"> <li>Major depressive episodes</li> <li>Stress Related Disorders</li> <li>Unipolar</li> <li>Bipolar</li> <li>Dysthymic</li> <li>Atypical</li> <li>Manic episodes</li> </ul>	<ul style="list-style-type: none"> <li>Diagnose mood Disorder on the basis of etiology</li> <li>Discuss its Management and prognosis</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with mood Disorder</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Schizophrenia	<ul style="list-style-type: none"> <li>Diagnose Schizophrenia based on signs and symptoms</li> <li>Devise a plan for treatment of disease, side effects of the treatment and its withdrawal.</li> <li>Assess prognosis of the disease</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with Bipolar Disorder</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/ CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Other disorders</b>	Dissociative Disorders	<ul style="list-style-type: none"> <li>Give an overview of dissociative disorders</li> <li>Discuss common presentation</li> <li>Give management options for these disorders</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with dissociative disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

	Mental and Behavioural Disorder due to General Medical Condition	<ul style="list-style-type: none"> <li>• Classify different medical conditions and its related psychological disorders</li> <li>• Diagnose the patient on history and signs and symptoms</li> <li>• Outline treatment options for these disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with different medical conditions and its related psychological disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Psychopharmacology</b>	overview of drugs used to treat psychiatric disorders and classification of drugs	<ul style="list-style-type: none"> <li>• Classify drugs used to treat psychiatric disorders</li> <li>• Elaborate mode of action of drugs used in psychiatry</li> <li>• and their side effects</li> </ul>		CBL/Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Drug Abuse</b>	Substance Misuse and Abuse	<ul style="list-style-type: none"> <li>• Elaborate the different groups of drugs of abuse and misuse</li> <li>• Suggest the laboratory investigations needed for Management</li> <li>• Evaluate the prognosis of substance abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with substance abuse</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

➤ **HAEMATOLOGY AND TRANSFUSION MEDICINE**

<b>Anemias</b>	<ul style="list-style-type: none"> <li>• Iron deficiency</li> <li>• Megaloblastic B-12 deficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between various types of anemia</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/
<b>Pancytopenia clinical approach</b>	<ul style="list-style-type: none"> <li>• Folic acid deficiency</li> <li>• Anaemia of chronic disorder</li> <li>• Haemolytic anaemia</li> <li>• Hereditary Acquired</li> <li>• Aplastic anemia</li> <li>• Aetiology and presentation</li> <li>• Causes &amp; Management</li> </ul>	<p>based on etiology, underlying pathology, symptoms and signs</p> <ul style="list-style-type: none"> <li>• Evaluate the patient on the basis of signs and symptoms and differential diagnosis</li> <li>• Interpret appropriately ordered laboratory investigation to reach a final diagnosis</li> <li>• Devise plan for treatment of disease and complications of the condition if it remains untreated</li> <li>• Monitor treatment of anemia</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of a patient with anemia</li> </ul>	(Case presentation) /SDL	Long case/short case
<b>Transfusion</b>	Transfusion – Blood groups and blood transfusion. Reactions & Management	<ul style="list-style-type: none"> <li>• Elaborate the generic prerequisites and modes of transfusion.</li> <li>• Correlate the pathophysiology of blood reactions to the Requirement &amp; safety protocol</li> <li>• Follow through step by step management of different types of transfusion reactions</li> </ul>	<ul style="list-style-type: none"> <li>• Follow the protocol of blood transfusion</li> </ul>	CBL/Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/short case

<b>Generalized Lymphadenopathy</b>	Differential diagnosis of Generalized Lymphadenopathy	<ul style="list-style-type: none"> <li>Outline the approach to a patient with generalized lymphadenopathy to identify its cause.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with lymphadenopathy</li> </ul>	CBL/Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
		<ul style="list-style-type: none"> <li>Establish final Diagnosis, after generating differential diagnosis, based on clinical presentation and investigations</li> <li>Suggest different treatment modalities to treat the condition</li> </ul>			
<b>*Haemoglobinopathies.</b>  *Also included in genetic disorders	<ul style="list-style-type: none"> <li>Sickle cell syndromes</li> <li>Thalassaemias</li> </ul>	<ul style="list-style-type: none"> <li>Classify hemoglobinopathies based on abnormalities in structure and formation of Hb.</li> <li>Differentiate between different hemoglobinopathies based on characteristic features, signs and symptoms treatment modalities, and diagnostic approach</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with hemoglobinopathies</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Bleeding Disorders</b>	ITP/ Bleeding Disorders/ DIC	<ul style="list-style-type: none"> <li>Correlate abnormalities in physiology of coagulation with.</li> <li>etiology, Symptoms and signs of ITP/ Bleeding Disorders/ DIC</li> <li>Devise plan for investigating, diagnosing and treating Bleeding disorders and their complications.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with Bleeding Disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

➤ **CARDIOVASCULAR SYSTEM**

<p><b>Hypertension</b></p>	<p>Hypertension : Causes, Types, Diagnosis and Management.</p>	<ul style="list-style-type: none"> <li>• Define diagnostic criteria for hypertension.</li> <li>• Provide pathophysiological basis of hypertension.</li> <li>• Propose Life style modifications and non- pharmacological options for patients with hypertension.</li> <li>• Diagnose primary hypertension from secondary hypertension</li> <li>• Rationalize the need for achieving recommended BP goals in treatment of hypertension.</li> <li>• Classify antihypertensive drugs</li> <li>• Choose appropriate antihypertensive drug considerign their indications for use.</li> <li>• Recognize types of hypertension, hypertensive urgency and emergency.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with hypertension.</li> <li>• Perform clinical examination of a patient with hypertension.</li> </ul>	<p>Lecture &amp; bedside teaching/SDL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>
<p><b>Ischaemic heart disease</b></p>	<p>ACS/MI: Diagnosis, complications and Management</p>	<ul style="list-style-type: none"> <li>• Define</li> <li>• Acute coronary syndrome (ACS)</li> <li>• Angina</li> <li>• Unstable angina pectoris (UA)</li> <li>• Non-ST segment elevation myocardial infarction(NSTEMI)</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with ACS/MI</li> <li>• Perform clinical examination of a patient with ACS/MI</li> </ul>	<p>Lecture/CBL/SDL/ Bedside training</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>

		<ul style="list-style-type: none"> <li>• ST segment elevation myocardial infarction</li> <li>• Provide pathophysiological basis of cardiac ischemia.</li> <li>• Diagnose ACS and MI.</li> <li>• List complications of MI</li> <li>• Analyze the pharmacological management in the treatment of ACS.</li> <li>• Differentiate between male and female signs and symptoms of ACS.</li> <li>• Examine ACS modifiable and non-modifiable risk factors.</li> <li>• Discuss coronary revascularization procedures and nursing care.</li> </ul>			
<b>Heart failure</b>	LVF CCF Cor-pulmonale	<ul style="list-style-type: none"> <li>• Define Heart failure</li> <li>• Provide pathophysiological basis of Heart failure.</li> <li>• Diagnose Heart failure.</li> <li>• List complications of Heart failure</li> <li>• Analyze the pharmacological management in the treatment of Heart failure</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Heart failure</li> </ul>	Lecture/SDL/ Bedside training	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case
<b>Endocardial diseases</b>	Infective endocarditis.	<ul style="list-style-type: none"> <li>• Identify signs/symptoms of</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/ SAQ/OSPE/

		<p>infective endocarditis.</p> <ul style="list-style-type: none"> <li>• Differentiate between types of IE in relation to its pathophysiology</li> <li>• Diagnose suspected and confirmed IE on the basis of criteria used</li> <li>• Manage infective endocarditis</li> <li>• List its complications</li> </ul>	<p>infective endocarditis.</p> <ul style="list-style-type: none"> <li>• Perform clinical examination of a patient with infective endocarditis.</li> </ul>	<p>(Case presentation) /SDL</p>	<p>Long case/ short case</p>
<b>Pericardial diseases</b>	<p>Constrictive pericarditis Pericardial effusion</p>	<ul style="list-style-type: none"> <li>• Differentiate between types of Pericarditis on the basis of its etiology and pathophysiology</li> <li>• Identify acute and chronic complications of Pericarditis</li> <li>• Identify the clinical manifestation of Pericarditis with diagnostic approach of Pericarditis.</li> <li>• State principles of management of Pericarditis.</li> <li>• List common causes and understand mechanism of pericardial effusion</li> <li>• Recognize early signs of pericardial tamponade</li> <li>• Justify the role of echocardiography in the diagnosis of pericardial effusion</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with Pericarditis/Pericardial effusion</li> <li>• Perform clinical examination of a patient with Pericarditis/Pericardial effusion</li> </ul>	<p>Lecture &amp; bedside teaching (Case presentation) /SDL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>
<b>Cyanotic heart disease.</b>	<p>Congenital heart diseases (brief). Atrial Septal Defect</p>	<ul style="list-style-type: none"> <li>• Identify common etiologies and risk</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with</li> </ul>	<p>Lecture &amp; bedside teaching</p>	<p>MCQ/SEQ/SAQ/OSPE/</p>

	<p>Ventricular Septal Defect Patent Ductus Arteriosus Fallot's tetralogy Other causes of cyanosis</p>	<p>factors for cyanotic heart defects.</p> <ul style="list-style-type: none"> <li>• Diagnose cyanotic heart defects based on clinical manifestations and appropriate diagnostic methods</li> <li>• Explain the pathophysiology, manifestations, diagnosis and management of acyanotic congenital cardiac anomalies.</li> <li>• Elaborate the pathophysiology, manifestations, diagnosis and management of obstructive congenital anomalies.</li> <li>• Explain the pathophysiology, manifestations, diagnosis and management of cyanotic heart disease.</li> <li>• Identify the implications of cardiac anomalies for respiratory care.</li> </ul>	<p>cyanotic heart defects</p> <ul style="list-style-type: none"> <li>• Perform clinical examination of a patient with cyanotic heart defects</li> </ul>	<p>(Case presentation) /SDL</p>	<p>Long case/ short case</p>
<p><b>Valvular Heart Disease</b></p>	<p>Mitral valve disease Aortic valve disease</p> <ul style="list-style-type: none"> <li>• Causes of Valvular Heart Disease</li> <li>• Etiology, pathogenesis and hemodynamics</li> </ul>	<ul style="list-style-type: none"> <li>• list causes of Valvular Heart Disease</li> <li>• Describe Etiology, pathogenesis and hemodynamics of mitral/aortic valve disease.</li> <li>• <b>Outline management plan</b></li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with valvular disease.</li> <li>• Perform clinical examination of a patient with valvular disease.</li> </ul>	<p>Lecture &amp; bedside teaching (Case presentation) /SDL</p>	<p>MCQ/SEQ/SAQ/OSPE/ Long case/ short case</p>

	<p><b>of Valvular Heart Disease</b></p> <ul style="list-style-type: none"> <li>• Clinical finding, treatment of <b>Valvular Heart Disease</b></li> <li>• Assessment, diagnosis and management of the patient with <b>Valvular Heart Disease</b></li> </ul>				
	Rheumatic fever- Diagnosis and treatment.	<ul style="list-style-type: none"> <li>• Illustrate clinical features of rheumatic fever</li> <li>• Diagnose Rheumatic fever on the basis of its Pathogenesis</li> <li>• Devise the prevention and treatment plan of rheumatic fever.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with rheumatic fever</li> <li>• Perform clinical examination of a patient with rheumatic fever</li> </ul>	Lecture & bedside teaching (Case presentation ) /SDL	
<b>Cardiomyopathies</b>	Cardiomyopathies- Brief review	<ul style="list-style-type: none"> <li>• Identify signs/symptoms of Cardiomyopathies.</li> <li>• List its relevant investigations, treatment plan and its complications</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination.</li> </ul>	Lecture & bedside teaching (Case presentation ) /SDL	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case
<b>Investigations</b>	ECG.	<ul style="list-style-type: none"> <li>• Review the electrophysiology of the heart as it relates to the ECG</li> <li>• Interpret normal ECGs.</li> <li>• Identify common errors in ECG recording.</li> <li>• Recognize common characteristics of abnormal heart rhythms.</li> <li>• Identify abnormal heart rhythms.</li> </ul>	Perform ECG	Lecture/ CBL and bedside teaching	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case

		<ul style="list-style-type: none"> <li>• Differentiate between life threatening and non-life-threatening EKG rhythms</li> <li>• Identify components of the ECG waveform.</li> <li>• Employ a systematic process to evaluate and analyze ECG rhythm strips.</li> <li>• Recognize common ECG dysrhythmias.</li> <li>• List the common causes, consequences and patient management strategies for ECG dysrhythmias.</li> <li>• Provide physiological basis of the rate, rhythm and axis of ECG.</li> </ul>		
ETT, ECHO, CT-Angiography and cardiac catheterization-Overview	<ul style="list-style-type: none"> <li>• Plan patient preparation for ECG</li> <li>• Select clinical protocol</li> <li>• Explain the role of a pre-contrast scan</li> <li>• Outline a contrast administration protocol</li> <li>• Identify access site anatomy, including femoral artery and vein, internal jugular vein, and brachial artery</li> <li>• List disease conditions (and surgical correction) involving these anatomic structures <ul style="list-style-type: none"> <li>• Appreciate atherosclerotic disease of the ileo- femoral system and knowledge of surgical</li> </ul> </li> </ul>	CBL & bedside teaching	MCQ/SEQ/SAQ/OSPE/Long case/ short case	

		revascularization anatomy, including Aorto-bifemoral graft, Fem-fem bypass, and Fem- pop bypass. <ul style="list-style-type: none"> <li>• Demonstrate understanding of basic aspects of cardiac ultrasound, including physical principles, instrumentation, cardiovascular anatomy, cardiovascular physiology, and cardiovascular pathophysiology.</li> <li>• Give an overview of cardiac CT angiography acquisition.</li> <li>• List the indications and C/I of cardiac investigations</li> </ul>			
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➤ **PULMONOLOGY**

<b>Allergic Disorders of respiratory system</b>	Bronchial Asthma	<ul style="list-style-type: none"> <li>• Relate abnormalities of physiology of ventilation &amp; respiration to obstructive pulmonary diseases</li> <li>• Discuss the incidence, etiology, risk factors associated with asthma,</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with bronchial asthma</li> <li>• Perform clinical examination to pick up the signs of bronchial asthma</li> <li>• Explain the methods to use inhaler/space</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
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		<p>pathophysiology and progression of asthma</p> <ul style="list-style-type: none"> <li>• Debate the short and long term complications of obstructive diseases</li> <li>• Evaluate the prognosis of disease</li> <li>• Establish diagnosis of asthma through a focused history and physical exam</li> <li>• Advise investigations and workup of patient</li> <li>• Describe the procedure of pulmonary function tests and enlist criteria for diagnosing asthma and grading severity</li> <li>• Advise medication keeping in mind their mechanism of drug action, particularly SABA and ICS, Benefits, risks, limitations, Use patterns, compliance, device use</li> <li>• Evaluate the different medication delivery methods (and relevant compliance / educational issues)</li> <li>• Advise management plan for patients with acute exacerbations</li> </ul>	<ul style="list-style-type: none"> <li>• Teach the patient how to use a nebulizer</li> </ul>		
		<ul style="list-style-type: none"> <li>• Justify Non-pharmacological treatment</li> <li>• List Complications of drug therapy</li> </ul>			

<b>Interstitial lung diseases</b>	ILD/ DPLD/EAA/IPF <ul style="list-style-type: none"> <li>• Definition of ILD/DPLD/EAA/ IPF</li> <li>• Etiology and Pathophysiology of parenchymal and interstitial lung diseases</li> <li>• Classification of diffuse parenchymal lung disease</li> <li>• Diagnosis and management</li> <li>• Nonpharmacologic therapies, including lifestyle changes and multidisciplinary care interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Determine the evaluation plan of patients with DPLD including exposure history, signs and symptoms, and results of diagnostic tests.</li> <li>• Critique current treatment of the DPLDs and their side effects</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with ILD/DPLD</li> </ul>	Lecture& bedside teaching	MCQ/SEQ/SAQ/OSPE/Long case/short case
	Sarcoidosis	<ul style="list-style-type: none"> <li>• Review the epidemiology of sarcoidosis.</li> <li>• Recognize diverse clinical presentations of sarcoidosis on the basis of its pathophysiology</li> <li>• Describe the clinical predictors for disease progression and outcomes.</li> <li>• Devise a diagnostic pathway from a</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
		differential diagnosis. <ul style="list-style-type: none"> <li>• Propose plan for drug therapy and investigating the disease.</li> </ul>			

<b>Inflammatory diseases</b>	Tuberculosis- Diagnosis, Treatment 9DS- TB, MDR- TB, XDR- TB	<ul style="list-style-type: none"> <li>• Review etiology, pathogenesis, risk factors and clinical features of TB</li> <li>• Identify the components of a clinical evaluation of a patient with TB</li> <li>• Advise lab investigations like Chest X-ray, Montoux test</li> <li>• Prioritize the objectives of TB case management</li> <li>• Outline control and prevention modalities</li> <li>• List drug therapy and side effects of first and 2nd line anti tuberculosis drugs</li> <li>• List DOTS</li> <li>• Define diagnostic criteria of MDR TB</li> <li>• Devise treatment of multidrug resistant (MDR) and extensively drug- resistant tuberculosis (XDR TB)</li> <li>• Evaluate the prognosis of TB and treatment of opportunistic infections</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the signs and symptoms of the pt with TB</li> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with TB</li> </ul>	Lecture and bed side teaching/ CBL	MCQ/SEQ/ SAQ/OSPE/ Long case/ short case
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		<ul style="list-style-type: none"> <li>• List the aims of treatment of recommended doses of first-line anti-TB drugs for adults;</li> <li>• Develop treatment regimens for new and previously treated patients taking into consideration</li> <li>• Significance of standard regimens for defined patient groups, including</li> <li>• Special populations like pregnant women, children, and HIV infected patients.</li> <li>• Manage drug therapy and its complications.</li> </ul>			
	<p>Pneumonia</p> <ul style="list-style-type: none"> <li>• Definition, Etiological classification and risk factors predisposing to pneumonia</li> <li>• Pathophysiology and progression of disease</li> <li>• Clinical features and presentation of disease</li> <li>• Clinical evaluation and Investigations for diagnosis</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnose Pneumonia on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose plan for prevention and follow up</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with pneumonia</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

	<ul style="list-style-type: none"> <li>• Assessment of disease severity- CURB65</li> <li>• List of differential diagnosis</li> <li>• Management of disease and its complications</li> <li>• Antibiotic therapy and Supportive treatment</li> <li>• Pneumonias in specific populations: Immunocompromised and hospital acquired pneumonias</li> </ul>				
Lung Abscess		<ul style="list-style-type: none"> <li>• Provide pathophysiological basis of lung abscess due to various etiological factors.</li> <li>• Diagnose lung abscess based on clinical presentation</li> <li>• Generate differential diagnosis based on clinical assessment of patient</li> <li>• Suggest appropriate lab investigations including chest X ray, sputum examination and hematological studies.</li> <li>• Devise plan for drug therapy, drainage</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with lung abscess</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		and surgical intervention for management of lung abscess.			
<b>Obstructive airway diseases</b>	COPD	<ul style="list-style-type: none"> <li>• Provide pathophysiological basis of COPD due to various etiological factors.</li> <li>• Diagnose lung abscess based on clinical presentation</li> <li>• Generate differential diagnosis based on clinical assessment of patient</li> <li>• Suggest appropriate lab investigations including chest X ray, sputum examination and hematological studies.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with lung abscess</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Respiratory Emergencies</b>	Adult respiratory distress syndrome. Pulmonary thromboembolism/ Acute cor pulmonale.	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> <li>• NIV</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> <li>• Provide emergency treatment</li> <li>•</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Shortness of breath	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<p>relating to its etiology and pathophysiology</p> <ul style="list-style-type: none"> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> </ul>	<ul style="list-style-type: none"> <li>• Provide emergency treatment</li> <li>•</li> </ul>		
	Respiratory Failure	<ul style="list-style-type: none"> <li>• Define diagnostic criteria of respiratory failure of varied etiology.</li> <li>• Differentiate between acute, chronic, and postoperative respiratory failure on the basis of <ul style="list-style-type: none"> <li>• pathophysiology</li> </ul> </li> <li>• Recognize the signs and symptoms of respiratory failure.</li> <li>• Apply alveolar gas equation to evaluate respiratory failure.</li> <li>• Recognize the changes in blood gases that accompany respiratory failure and other investigations</li> <li>• Review major treatment strategies for respiratory failure and their monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with respiratory failure</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Tumours</b>	<p>Carcinoma Lung</p> <ul style="list-style-type: none"> <li>• Etiology and risk factors for development of ca lung</li> </ul>	<ul style="list-style-type: none"> <li>• Elaborate plan for diagnosis of common types of lung cancers</li> <li>• based on clinical presentations and</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with Ca lung</li> </ul>	Lecture and bedside teaching	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

	<ul style="list-style-type: none"> <li>• Pathophysiology and classification of lung cancers</li> <li>• alternate treatment modalities like stenting and laser therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Radiological appearance.</li> <li>• Describe the grading and staging systems for lung Carcinomas</li> <li>• Propose plan for chemotherapy, surgical interventions and radiotherapy for management of lung carcinomas</li> <li>• Suggest alternate treatment modalities like stenting and laser therapy</li> <li>• Evaluate prognosis and need for palliative care and</li> </ul>			
<b>Miscellaneous</b>	Pneumothorax: Causes/ Diagnosis/ Management	<ul style="list-style-type: none"> <li>• Classify pneumothorax based on etiological factors</li> <li>• Provide Pathophysiological basis of clinical manifestations and differential diagnosis of pneumothorax.</li> <li>• Develop plan for diagnosing and managing a patient of pneumothorax, including emergency treatment</li> <li>• Identify measures for prevention of recurrence</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with</li> <li>• pneumothorax</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
	Bronchiectasis	<ul style="list-style-type: none"> <li>• Analyze the etiology and pathogenesis of bronchiectasis</li> <li>• Diagnose bronchiectasis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of</li> </ul>	Lecture & bedside teaching (Case presentation)	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<p>based on clinical features radiological and lab investigations</p> <ul style="list-style-type: none"> <li>• Generate Differential diagnosis of bronchiectasis</li> <li>• Develop plan for diagnosing and managing a patient of bronchiectasis, including drug therapy, surgical intervention and physiotherapy</li> <li>• Assess prognosis required measures for prevention</li> </ul>	patient with bronchiectasis	/SDL	
	Pulmonary Embolism	<ul style="list-style-type: none"> <li>• Elaborate, epidemiology and risk factors and preventive measures for pulmonary embolism</li> <li>• Recognize the clinical features and presenting symptoms of pulmonary embolism</li> <li>• Evaluate various modalities of investigations for diagnosis and differential diagnosis</li> <li>• Develop plan for pharmacological and surgical management of a patient with pulmonary embolism</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with pulmonary embolism</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

	Pleural effusion types & causes	<ul style="list-style-type: none"> <li>Apply basic concepts of important anatomic features and physiologic function of the visceral and parietal pleural membranes to explain occurrence of pleural effusions</li> <li>Differentiate between transudative and exudative effusions based on etiology, pathophysiology and risk factors.</li> <li>Diagnose effusion based on clinical features and investigations.</li> <li>Manage effusion appropriate to the underlying cause</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with pleural effusion.</li> </ul>	CBL & bedside teaching	
<b>Examination of Chest</b>	Chest Auscultation	<ul style="list-style-type: none"> <li>Justify Significance of chest auscultation in clinical examination</li> <li>Apply basic concepts of anatomy and physiology of heart and lungs and related structures in relation to auscultation</li> <li>Correlate biological changes of the aging process to the altered physical findings on chest and lung examination</li> </ul>	<ul style="list-style-type: none"> <li>Perform the correct procedure for carrying out chest auscultation</li> <li>recognize normal breath sounds</li> <li>identify Adventitious lung sounds: Wheezes, Crackles, Squeak, Pleural rub and Stridor.</li> </ul>	Lecture and bedside teaching	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

<b>Investigations</b>	Chest X- ray Arterial blood Gases	<ul style="list-style-type: none"> <li>• Identify anatomical features of heart and lungs on a chest x-ray</li> <li>• interpret Arterial Blood Gases findings</li> <li>• Learn the concept of atelectasis and the ability to recognize it on a chest x-ray</li> <li>• justify reasons that make lung cancer unresectable</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Appreciate the appearance of pulmonary edema and the differences between cardiogenic and noncardiogenic causes</li> <li>• Recognize atelectasis on a chest x-ray</li> <li>• Appreciate the difference findings of atelectasis and pneumonia</li> <li>• Recognize pleural effusions and pneumothorax appear on CXR</li> <li>• Recognize the signs of COPD</li> <li>• Recognize the signs of a benign pulmonary nodule</li> <li>• Recognize the signs of COPD</li> <li>• Recognize the signs of a benign pulmonary nodule</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>Therapy</b>	Oxygen Therapy: Various means & implications	<ul style="list-style-type: none"> <li>• Differentiate between ventilation, internal respiration, and external respiration.</li> <li>• Identify the major muscles of respiration.</li> <li>• Identify factors affecting external and internal respiration.</li> <li>• Define hypoxemia and hypoxia.</li> </ul>		CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<ul style="list-style-type: none"> <li>Identify the indications dangers, problems and contraindications for oxygen therapy</li> <li>elaborate preventive measures for injury when working with oxygen.</li> <li>Differentiate between low flow and high flow oxygen delivery systems.</li> <li>Identify different oxygen delivery devices.</li> <li>Evaluate physiological basis of pulse oximetry, its.</li> <li>indications and limitations</li> </ul>			
	Ventilator Techniques different modes and terms used in mechanical ventilation such as IPPV, PCV, PEEP, CPAP, BIPAP, NIPPV etc	<ul style="list-style-type: none"> <li>Emphasize primary objective of airway maintenance</li> <li>list the indications for mechanical ventilation(MV)</li> <li>Identify ventilation strategies.</li> <li>alternative modes of MV and the basic principles of non-invasive ventilation</li> </ul>		CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>➤ NEPHROLOGY, DIALYSIS &amp; TRANSPLANT</b>					
<b>Inflammatory Diseases</b>	Urinary tract infections	<ul style="list-style-type: none"> <li>Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>Advise relevant investigations</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient</li> <li>Counsel the patient with renal failure</li> </ul>	Lecture & bedside teaching/SDL /CBL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Glomerulonephritis				
	Nephrotic syndrome Nephritic Syndrome Renal TB				

		<ul style="list-style-type: none"> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> <li>•</li> </ul>			
<b>Miscellaneous</b>	Renal artery stenosis	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> </ul>			
	Renal tubular Acidosis				
	Nephrolithiasis				
<b>Renal failure</b>	AKI (Acute renal failure) CKD(Chronic renal failure)	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan and follow up</li> </ul>			
<b>Treatment</b>	Dialysis	<ul style="list-style-type: none"> <li>• List the different causes requiring dialysis</li> <li>• Enumerate steps of dialysis and its preparation</li> </ul>			
	Renal Transplant	<ul style="list-style-type: none"> <li>• List the different causes requiring renal transplant</li> </ul>			

➤ INFECTIONS					
<b>Diagnosis and management of common infectious diseases</b>	Typhoid/ Paratyphoid Fevers- Diagnosis and management	<ul style="list-style-type: none"> <li>Discuss the etiology and Enumerate the Symptoms and signs of the disease</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
	Dengue Hemorrhagic Fever – Diagnosis and management	<ul style="list-style-type: none"> <li>Elaborate Modes of transmission and the causative organism</li> <li>Identify Susceptible individuals</li> </ul>	<ul style="list-style-type: none"> <li>Establish diagnosis through a focused history and physical exam</li> <li>Counsel the patients about importance of hygiene and how to prevent contamination of food and by limiting vector and its breeding places</li> </ul>		
	Malaria- Diagnosis and management	<ul style="list-style-type: none"> <li>Diagnose various stages of disease based on clinical and characteristic features.</li> <li>Suggest Diagnostic modalities and treatment options.</li> <li>Propose prevention options including vaccination.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>		
<b>Septicemia</b>	Sepsis/ Septicemia Meningococcaemia – Diagnosis and management	<ul style="list-style-type: none"> <li>Define Sepsis</li> <li>Classify sepsis according to criteria</li> <li>identify the organ involved and stage of the disease based on Clinical Presentation</li> <li>Evaluate Diagnostic modalities, treatment options and.</li> <li>complications of the disease</li> <li>Propose drug treatment of sepsis and measures to prevent its progression</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with sepsis</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>HIV/AIDS</b>	Acquired immune deficiency syndrome	<ul style="list-style-type: none"> <li>Relate the etiology of AIDS to its Symptoms and signs</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> </ul>	Lecture & bedside teaching	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

		<ul style="list-style-type: none"> <li>• identify the modes of transmission</li> <li>• identify individuals susceptible to the disease</li> <li>• Diagnose the disease and its stage on the basis of clinical presentation,</li> <li>• and laboratory findings</li> <li>• Evaluate various diagnostic modalities and treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of a patient</li> </ul>	(Case presentation) /CBL/SDL	
<b>*Common disease syndromes caused by different bacteria and their drug therapy.</b>	<ul style="list-style-type: none"> <li>• Pneumococci</li> <li>• Staphylococci.</li> <li>• Streptococci.</li> <li>• Hemophilis influenzae.</li> <li>• Shigella.</li> <li>• Gonococci.</li> <li>• Pseudomonas.</li> <li>• Cholera.</li> <li>• Amoebiasis/Giardiasis</li> </ul>	<ul style="list-style-type: none"> <li>• *Already taught in different modules with respective system</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case
<b>➤ ONCOLOGY , DISEASES OF LYMPH NODES &amp; BONE MARROW</b>					
<b>White blood cells tumours</b>	Lymphoma	<ul style="list-style-type: none"> <li>• Correlate abnormalities in the immune system and its processes to occurrence of lymphoma and its associated clinical presentation.</li> <li>• Identify organs associated with Lymphoma.</li> <li>• Delineate the diagnostic criteria of various stages on time based Characteristic features.</li> <li>• Propose diagnostic modalities and</li> <li>• treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Lymphoma</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/ Long case/ short case

<b>Bone marrow tumors</b>	<ul style="list-style-type: none"> <li>Acute Leukemia</li> <li>Chronic Leukemia</li> </ul>	<ul style="list-style-type: none"> <li>Classify various forms of acute and chronic Leukemia.</li> <li>Differentiate between Symptoms and signs, and characteristic features of acute and chronic Leukemia</li> <li>Diagnose various stages of leukemia</li> <li>Propose appropriate Investigations, diagnostic modalities and treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with bone marrow tumors</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/Long case/short case
	Multiple Myeloma	<ul style="list-style-type: none"> <li>Define the pathological basis of Multiple myeloma</li> <li>Classify various stages based on clinical presentation</li> <li>Justify the role of laboratory investigations and various treatment options</li> </ul>		Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/Long case/short case
	Myeloproliferative Disorders	<ul style="list-style-type: none"> <li>Classify various forms of Myeloproliferative disorders based on Clinical Presentation.</li> <li>Diagnoses various stages of the disease.</li> <li>Propose appropriate Investigations Diagnostic modalities and treatment options.</li> </ul>		Lecture & bedside teaching (Case presentation) /SDL	MCQ/SEQ/SAQ/OSPE/Long case/short case

➤ **CRITICAL CARE & EMERGENCY\***

➤ **PHARMACOTHERAPEUTICS\***

**\*Both modules XVIII and XIX are vertically integrated throughout the curriculum and taught as a part of each module where required**

## **PROCEDURE**

### **a) Perform:**

- 1) Injection I/V, I/M, S/C, intradermal
- 2) Oxygen therapy
- 3) Urinary catheterisation – collection and samples of blood

### **b) Observe:**

- 1) Observe I/V lines/Fluids/Blood/Blood products, direct, branula, cut down, CVP
- 2) N/G passing and feeding
- 3) Foley's catheter/Red rubber catheter, IOP record maintenance
- 4) Endotracheal tube placement
- 5) Endotracheal suction/maintenance of airway/nursing on side etc.
- 6) Aspiration of fluids (Pleural, Pericardial, Peritoneal, Knee)
- 7) Lumbar puncture
- 8) O<sub>2</sub> therapy
- 9) Nebulisation
- 10) ECG taking/reading basics
- 11) X-ray chest reading
- 12) Barium series
- 13) I/V urograms
- 14) Bone and joint X-ray reading for medical problems (Rheumatoid arthritis, Osteoarthritis, Collapse vertebra, Caries spine, Multiple myeloma, Cervical rib etc.)
- 15) Preparing a patient for endoscopies, upper and lower GIT
- 16) Bone marrow aspiration/Terph

# Surgery & Allied



## Preamble:

Surgery is an important part of the undergraduate curriculum and is taught throughout the five years with increased emphasis in last two years. It focuses on building basics of surgical practice as much as relevant for general practitioner and is built upon an understanding of anatomical structure and functions and its clinical surgical relevance.

Aim is to provide state of the art educational programs in all areas of clinical surgery and in the biologic basis of surgical illness with a special emphasis on research which will. Moreover, to provide the best possible care to patients who require surgical services. contribute to the practical solutions and theoretical structure of future surgical practice

## Learning Outcome

At the end of final year, student will be able to:

- a. Diagnose common Surgical problems, suggest and interpret appropriate investigation, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management.
- b. Suggest preventive measure for the common Public Health Problem in the community
- c. Perform relevant procedures
- d. Convey relevant information and explanations accurately to patients, families, colleagues and other professionals
- e. Understand medical ethics and its application pertaining to surgery and maintain the confidentiality of the patient.
- f. Adapt research findings appropriately to the individual patient situation or relevant patient population

## Teaching hours – Surgery

Sessions	YEARS	CONTACT HOURS
2019-2020	V	630
2020-2021	IV	210
2021-2022	III	165
2022-2023	II	50
2023-2024	I	50

## Learning Opportunities

1. Teaching Ward Rounds
2. Case presentations
3. Case based Discussion
4. Short cases in OPD
5. Bedside Discussion
6. Small Group Discussion
7. Team-based learning
8. **Workshops:** Four workshops for clinical and procedural skills will be held during the rotation. In addition, students will also attend a Basic Life Support (BLS) workshop (**only attendance is required to get marks**)
9. Self-learning Activities
10. Skill Lab Activity
11. Observation of operations in OT
12. **Venues for learning opportunities**
13. Outpatient clinic

14. Emergency room
15. Inpatient ward
16. Tutorial room
17. Libraries including audio-visuals
18. Operation Theatres

## 2. Specific Learning Outcomes

Learning outcomes specific to the surgery course have been tabulated below in the table of specification and matched with educational strategies.

## 3. Recommended Readings

- a. Bailey & Love Short Practice of Surgery
- b. Browse Introduction to the Symptoms & Signs of Surgical Disease
- c. Apley's Concise System of orthopedics & Fractures



**Table of Specification (Themes/Topics/Learning outcomes/Educational Strategies/ Weightings )**

SURGERY & ALLIED						
	At the end of each module, student will be able to:					
Theme/Topic	Course Content	Learning Outcomes		Instructional strategies	Assessment Tools	
		Knowledge	Skill/Attitude			
<b>Basic Principles of Surgery</b>						
<b>Metabolic response to injury</b>	<ul style="list-style-type: none"> <li>• Normal physiology, water loss &amp; intoxication</li> <li>• Physiology of fluids and electrolytes</li> <li>• Pathophysiology of fluids and electrolytes derangements</li> <li>• Acid base balance</li> <li>• ECF loss &amp; Excess, Hyponatremia, Hypernatremia, Hypermagnesiumemia, Hypomagnesiumemia                             <ul style="list-style-type: none"> <li>○ Clinical diagnosis</li> <li>○ Lab diagnosis</li> </ul> </li> <li>• Management</li> <li>• Fluid loss reference to:                             <ul style="list-style-type: none"> <li>• diarrhea and vomiting</li> <li>• immobile / debilitated</li> <li>• elderly patients with reduced renal function</li> <li>• drugs that lower renal fluid exchange functions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Describe the major fluid compartments of the body, the effect of osmolality</li> <li>○ Explain what may happen in common conditions (eg acute blood loss, dehydration, excessive fluid replacement).</li> <li>○ Recognize the different types of fluid used for optimization, especially Hartmann's, Normal 0.9% Saline and Dextrose.</li> </ul>	Assess the volume of body fluid depletion,  Administer fluids according to age and comorbids.  Calculate the correct volume and rate of administration  Monitor the progression of fluid optimization	Lecture/SDL	MCQ/SEQ/SAQ/ OSPE/Long case/ short case	
	<ul style="list-style-type: none"> <li>• low BMI patients</li> </ul>					

	<p><b>Nutrition</b></p> <ul style="list-style-type: none"> <li>• Enteral feeding (Oral, gastrostomy, jejunotomy) Different modes of enteral feeding</li> <li>Its Advantages and Complications</li> <li>• Parenteral nutrition and its complications</li> <li>• Malnutrition in surgical patients</li> <li>• Definition</li> <li>• Assessment</li> <li>• Lab diagnosis</li> <li>• Correction of malnutrition especially pertaining to BMI, serum albumin, frailty or triceps skin fold thickness.</li> </ul>	<p>List the physiological effects of protein–calorie malnutrition.</p> <ul style="list-style-type: none"> <li>• Identify the different types of nutritional support – oral, nasogastric, gastro/jejunotomy and parenteral.</li> <li>• Describe what total parenteral nutrition (TPN) entails, its associated risks, and the additional and parameters of care for these patients.</li> </ul>	<p>Identify patients in need of nutritional optimization.</p>	<p>Lecture/SDL</p>	<p>MCQ/SEQ/SA Q/ OSPE/Long case/ short case</p>
<p><b>Perioperative Care</b></p>	<p><b>Pre – operative optimization of surgical patients with systemic diseases</b></p> <ul style="list-style-type: none"> <li>• Types of medical diseases</li> <li>• Assessment of patients</li> <li>• Subject specialist consultation (Importance)</li> <li>• Optimization</li> <li>• Assessment of risk of surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Rationalize routine intravenous fluid replacement in surgical patients</li> <li>• Identify the commonly prescribed intravenous fluids.</li> <li>• Optimize management of co morbid.</li> <li>• Describe important complications of common operations</li> </ul>	<ul style="list-style-type: none"> <li>• Counsel the patient about the prognosis of the disease</li> <li>• Manage post – op complications</li> </ul>	<p>Lecture/SDL</p>	<p>MCQ/SEQ/SA Q/ OSPE/Long case/ short case</p>

	<b>Post- operative care</b> <ul style="list-style-type: none"> <li>• Daily assessment of patient</li> <li>• Day to day patient care</li> <li>• Recognition of potential complications</li> <li>• Diagnosis of complications</li> <li>• Management of post – op complications</li> <li>• Rehabilitation</li> </ul>			Lecture /CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Shock &amp; Blood transfusion</b>	Shock/Classification Hypovolemic Shock Hemorrhage Blood transfusion	<ul style="list-style-type: none"> <li>• Discuss the protocols of blood transfusion</li> <li>• Elaborate principles of blood transfusion of a surgical patient</li> </ul>	<ul style="list-style-type: none"> <li>• Clinically assess hypovolemia</li> <li>• Identify patients in need of fluid optimization/blood transfusion</li> </ul>	Lecture /CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Wound, healing and tissue repair</b>	<ul style="list-style-type: none"> <li>• Wound classification, Mechanism of healing</li> <li>• Factors affecting wound healing</li> <li>• Complications of wound</li> <li>• Hypertrophic scars, keloid</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the process and stages of wound healing.</li> <li>• State primary, secondary and tertiary wound healing.</li> <li>• Justify the reasons for conducting a wound assessment.</li> <li>• Summarize pressure ulcer classification.</li> <li>• State the need to assess pain in wound care.</li> <li>• Explain extrinsic and intrinsic factors which impact on wound healing eg nutrition.</li> <li>• State the basic principles of wound dressing.</li> <li>• Identify patients at risk of pressure sore development</li> </ul>	<ul style="list-style-type: none"> <li>• Identify wound bed tissue types.</li> <li>• Describe the skin surrounding the wound reference to underlying disease and the effectiveness of current treatment.</li> <li>• Measure a wound.</li> </ul>	Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

<b>Surgical infections</b>	<p>Bacteremia, Septicemia, Pyemia, SIRS, Sepsis, MOFS Severe Sepsis &amp; Septic shock.</p> <ul style="list-style-type: none"> <li>• Definitions</li> <li>• Pathophysiology</li> <li>• Diagnosis</li> <li>• Investigations</li> <li>• Management principles</li> </ul> <p>Sepsis 6 (BUFALO) recommendations within the first hour to reduce mortality</p> <ul style="list-style-type: none"> <li>• <b>B – blood cultures</b></li> <li>• <b>U – urine output</b></li> <li>• <b>F – fluid</b></li> <li>• <b>A – antibiotics</b></li> <li>• <b>L -lactate (and hemoglobin)</b></li> <li>• <b>O – oxygen</b></li> </ul>	<ul style="list-style-type: none"> <li>• Define the following terms: systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, septic shock, MOFS and acute respiratory distress syndrome(ARDS).</li> <li>• Differentiate between SIRS, sepsis, severe sepsis and septic shock on the basis of signs, symptoms, vital signs, hemodynamic measures and laboratory tests</li> <li>• Explain the seriousness of sepsis</li> <li>• Describe the microbiological causes of sepsis.</li> <li>• Describe the pathophysiology and mechanism of sepsis.</li> <li>• Prioritize for treatment of sepsis.</li> <li>• Explain the role of vasoactive agents in supporting the physiological function of a patient with sepsis.</li> <li>• Select appropriate agent, given details of a patient’s condition.</li> <li>• Develop an appropriate monitoring program for patients with sepsis.</li> <li>• List the principles of diagnosis and management of sepsis.</li> <li>• State when to involve the infection control team.</li> <li>• State when to take appropriate microbiological specimens.</li> </ul>	<ul style="list-style-type: none"> <li>• Take proper history of patient with sepsis</li> <li>• Perform clinical examination of patient with sepsis</li> <li>• Determine appropriate fluid resuscitation for sepsis with colloids or crystalloids.</li> <li>• Recommend an appropriate antibiotic regimen for treatment of sepsis based on patient characteristics and site of primary infection.</li> <li>• Carry out Sepsis 6 (BUFALO) recommendations within the first hour to reduce mortality</li> <li>• Prescribe antibiotic following local guidelines/protocols</li> </ul>	CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Skin &amp; Subcutaneous tissue</b>					
<b>Skin swellings and lumps</b>	Cyst, Dermoid, Papilloma, Fibroma, Bursae, ganglion, Neurofibroma, Schwannoma and Basal Cell Carcinoma	<ul style="list-style-type: none"> <li>• Classify lumps in skin &amp; subcutaneous tissue</li> <li>• Differentiate between benign and malignant tumors</li> <li>• List the principles of diagnosis and management of lumps in skin &amp; subcutaneous</li> </ul>	<ul style="list-style-type: none"> <li>• Take proper history of patient presenting with skin swelling</li> <li>• Perform clinical examination of</li> </ul>	Lecture/ CBL/SD L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	<ul style="list-style-type: none"> <li>• Classification</li> <li>• Clinical features</li> <li>• Diagnosis</li> <li>• Management</li> </ul>	tissue.	patient presenting with skin swelling		
<b>Sinuses and fistulas</b>	<ul style="list-style-type: none"> <li>• Classification</li> <li>• Causes</li> <li>• Clinical features</li> <li>• Diagnosis</li> <li>• Management principles</li> </ul>	<ul style="list-style-type: none"> <li>• List the principles of diagnosis and management of sinuses and fistula on the basis of its etiology.</li> </ul>	<ul style="list-style-type: none"> <li>• Take proper history of patient presenting with sinuses and fistula</li> <li>• Perform clinical examination of patient presenting with sinuses and fistula</li> </ul>	Lecture /CBL/SDL	MCQ/SEQ/SAQ/ OSPE/Long case/ short case
<b>Burn</b>	<ul style="list-style-type: none"> <li>• Types of burns</li> <li>• Pathophysiology</li> <li>• Complications</li> <li>• Acute management</li> <li>• Reconstruction</li> </ul>	<ul style="list-style-type: none"> <li>• Apply basic concepts of burn injury and pathophysiology to the evaluation, resuscitation, clinical management and rehabilitation of the burned patient.</li> <li>• Evaluate a burned patient</li> <li>• Develop an initial treatment plan for stabilization and fluid replacement using basic principles of burn management.</li> </ul>	Assess the appearance of the burn wound in relation to its depth, bacteriologic condition, healing potential and requirement for intervention.	Lecture & bedside teaching/SDL	MCQ/SEQ/SAQ/ OSPE/Long case/ short case
<b>Ulcer Classification and Management</b>	<ul style="list-style-type: none"> <li>• Definition of ulcers</li> <li>• Classification of ulcers</li> <li>• Pathophysiology of ulcers</li> <li>• Definitive diagnosis</li> <li>• Treatment plan</li> </ul>	<ul style="list-style-type: none"> <li>• List the principles of diagnosis and management of ulcers on the basis of its pathophysiology.</li> </ul>	<ul style="list-style-type: none"> <li>• Take proper history of patient presenting with ulcer</li> <li>• Perform clinical examination of patient presenting with ulcer</li> </ul>	Lecture /CBL/SDL	MCQ/SEQ/SAQ/ OSPE/Long case/ short case

## Trauma

<p><b>Trauma and tissue response</b></p>	<ul style="list-style-type: none"> <li>• Types of trauma</li> <li>• SIRS</li> <li>• Pathophysiology</li> <li>• Immediate management</li> <li>• Definitive management</li> <li>• Complications</li> <li>• Rapid primary survey, concurrent resuscitation, secondary survey, continued re-evaluation and monitoring, investigation and definitive care.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the physiological response to injury.</li> <li>• State the principles of surgical treatment in a multi-injured patient.</li> <li>• Assess priorities during all phases of management following <i>ATLS</i> principles.</li> <li>• Justify the importance of re-assessment of the patient with regards to earlier interventions.</li> <li>• Emphasize the significance of a patient with polytrauma.</li> <li>• Discuss issue of missed injuries, management and documentation.</li> <li>• Differentiate between primary and secondary survey.</li> <li>• Define triage and its importance.</li> <li>• State the importance of analgesia in the management of these patients.</li> <li>• Differentiate between blunt, penetrating, crush, blast injuries on the basis of mechanisms of trauma</li> <li>• List the interventions that may be required for head injury.</li> <li>• Explain the importance of nerve or vessel injury in trauma.</li> <li>• Elaborate the importance of a continuum of care for the injured patient by a multidisciplinary team</li> <li>• Explain the importance of the <i>ATLS</i> strategy and systematic approach.</li> <li>• Explain the role of radiological investigations (eg CT scanning) and interventions.</li> <li>• Identify the role of investigation and treatment dependent on the hemodynamic status of the patient.</li> </ul>	<ul style="list-style-type: none"> <li>• Take proper history of patient presenting with trauma (AMPLE)</li> <li>• Perform clinical examination of patient presenting with trauma</li> <li>• Provide emergency care with the patient of poly-trauma as per ABCDE protocol</li> </ul>	<p>Primary trauma care course (PTCC) /SDL</p>	<p>lectures/clinical training</p>
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<b>Trauma to regions</b>	Chest Trauma Broken ribs Pneumothorax	<ul style="list-style-type: none"> <li>Differentiate between different types of chest injuries based on mechanism of pathophysiology findings, and management.</li> </ul>	<ul style="list-style-type: none"> <li>Take proper history of patient presenting with chest trauma.</li> <li>Perform clinical examination of patient presenting with chest trauma.</li> </ul>	CBL & Bedside teaching PTCC/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Abdominal Injury	<ul style="list-style-type: none"> <li>Elaborate upon abdominal/ genitourinary injuries reference to causes, signs, symptoms diagnosis, management predisposing factor, complications and preventions</li> <li>Discuss various causes of abdominal injury/ genitourinary trauma</li> <li>Enumerate the most susceptible visceral organs in Abdominal Injury/ genitourinary trauma</li> </ul>	<ul style="list-style-type: none"> <li>Take proper history of patient presenting with abdominal/ genitourinary injury</li> <li>Perform clinical examination of patient presenting with abdominal injury/ genitourinary trauma</li> </ul>	CPC/ PTCC/S DL	
	Genitourinary Trauma				
<b>Radiological Investigations and Diagnosis</b>					
<b>Conventional Radiology</b>  <b>Advanced techniques</b>	<b>X-ray Chest</b>  Normal and different pathological conditions like pleural effusion, Pneumothorax, Bronchitis, cardiomegaly, Mitral valve disease, left to right shunts, differentiating pulmonary arterial from pulmonary venous hypertension.	<ul style="list-style-type: none"> <li>Demonstrate knowledge, clinical and technical skills and decision-making capabilities with respect to diagnostic imaging pertinent to the practice of General Surgery</li> <li>State the basic principles of radiation protection and law in relation to use of ionizing radiation</li> <li>Justify use of relevant imaging techniques in various clinical scenarios reference to advantages and disadvantages.</li> </ul>	Differentiate between normal and pathological findings on CXRay	Lecture/CBLs/ SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	<p><b>X-Ray Abdomen</b></p> <p>free air under the diaphragm. Intestinal obstruction.</p> <p>Barium studies: barium swallow, meal, follow through, enema.</p> <p>Normal gut pattern on plain film and barium studies</p>		Differentiate between normal and different pathological conditions on X Ray Abdomen	Lecture/CBLs/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	<p><b>Genito Urinary Tract</b></p> <p>IVU technique, Different phases of IVU. Interpretation of normal IVU. Basic pathologies as obstructive uropathy</p> <p>Hysterosalpingography: technique Normal uterus and fallopian tubes, Abnormal tubes as tubal blockage.</p>		<ul style="list-style-type: none"> <li>• Differentiate between normal and different pathological conditions as renal calculi, bladder calculi</li> <li>• Interpret IVU</li> <li>• Interpret Hysterosalpingography</li> </ul>	Lecture/CBLs/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	<p><b>Skull X Ray</b></p>		<ul style="list-style-type: none"> <li>• Differentiate between normal and abnormal Skull lesions as lytic and sclerotic Calcifications</li> <li>• Identify Pituitary fossa</li> </ul>	Lecture/CBLs/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	<p><b>Spine X-Ray</b></p> <p>Imaging modalities, X Ray projections of spine. Plain X Ray anatomy of spine</p>		Identify X Ray projections of spine. Plain X Ray anatomy of spine	Lecture/CBLs/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	<b>Bones</b> Modalities for bone imaging Projections. Plain x rays of bones for pathologies as rickets, fractures, neoplastic lesions and how to describe them. Lytic and sclerotic lesions.		Differentiate between normal and different pathological conditions as rickets, fractures, neoplastic lesions and how to describe them. Lytic and sclerotic lesions.	Lecture/CBLs/SDL	MCQ/SEQ/SAQ/ OSPE/Long case/ short case
	<b>CT scan &amp; MRI</b>	<ul style="list-style-type: none"> <li>• Compare the benefits and limitations of different radiologic modalities including CT and MRI</li> <li>• List risks associated with radiation exposure</li> <li>• Describe the impact of patient age on radiation sensitivity</li> <li>• Compare the relative radiation dose delivered by different imaging modalities</li> <li>• Discuss the potential complications of intravenous contrast administration for CT and MR exams and identify predisposing risk factors</li> </ul>		Lecture/CBLs/SDL	
<b>Paediatric Surgery</b>					
<b>Congenital Deformities</b>	<ul style="list-style-type: none"> <li>• Cleft Lip &amp; palate</li> <li>• Reconstructive Surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Relate embryological formation of face/ lip and palate to congenital anomalies</li> <li>• Detail signs, symptoms, treatment options, complications and management of Cleft Lip &amp; palate</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with Cleft Lip &amp; palate/CTEV</li> <li>• Perform clinical examination of a patient with Cleft Lip &amp; palate/DTEV/ Dysplasia of hip joint</li> </ul>	Lecture/SDL	MCQ/SEQ/SAQ/ OSPE/Long case/ short case
	<ul style="list-style-type: none"> <li>• CTEV</li> <li>• Dysplasia of hip joint</li> </ul>	<ul style="list-style-type: none"> <li>• Relate embryological formation of hip joint, foot and palate to congenital anomalies</li> <li>• Detail signs, symptoms, treatment options, complications and management of CTEV and Dysplasia of hip joint</li> </ul>			

<b>Congenital anomalies- Skull/Meninges</b>	Hydrocephalus & Meningocele	<ul style="list-style-type: none"> <li>Describe the common symptoms, signs and management of hydrocephalus and meningocele.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with Hydrocephalus &amp; Meningocele</li> <li>Perform clinical examination of a patient with Hydrocephalus &amp; Meningocele</li> </ul>	Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Congenital anomalies- upper GI</b>	<ul style="list-style-type: none"> <li>Esophageal atresia pyloric stenosis, Hirschsprung's Disease</li> <li>Biliary Atresia</li> </ul>	<ul style="list-style-type: none"> <li>Correlate the embryological origin of upper GI tract with Pathophysiology of Esophageal atresia, pyloric stenosis, Hirschsprung's Disease</li> <li>Differentiate between the Clinical presentation of Esophageal atresia, pyloric stenosis, Hirschsprung's Disease, biliary atresia</li> <li>Propose diagnostic investigations and treatment options in Esophageal atresia, pyloric stenosis, Hirschsprung's Disease, biliary atresia</li> <li>Develop management plan for Complications Esophageal atresia, pyloric stenosis, Hirschsprung's Disease</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with esophageal atresia</li> <li>Perform clinical examination of a patient with esophageal atresia</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Congenital anomalies- lower GI</b>	<ul style="list-style-type: none"> <li>Neonatal intestinal obstruction</li> <li>Meconium ileus intestinal atresia intussusceptions</li> </ul>	<ul style="list-style-type: none"> <li>Correlate defects in embryologic developments to the causes, types and clinical features, radiological findings of neonatal intestinal obstruction.</li> <li>illustrate the contribution of different imaging modalities in diagnosis of neonatal intestinal obstruction.</li> <li>Develop an approach to the management of neonatal obstruction involving clinical and imaging data.</li> <li>Identify the surgical intervention and post-surgical complications for neonatal intestinal obstruction.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with neonatal intestinal obstruction</li> <li>Perform clinical examination of a patient with neonatal intestinal obstruction</li> </ul>	CBL& bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	Imperforate anus	<ul style="list-style-type: none"> <li>• identify embryological defect that leads to imperforate anus.</li> <li>• Demonstrate approach to diagnosis of imperforate anus.</li> <li>• Develop a treatment plan for Imperforate anus based on diagnostic classification and clinical presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with anal malformations</li> <li>• Perform clinical examination of a patient with anal malformations</li> <li>• Educate patient\adults about feeding newborns and children with GIT problems</li> </ul>	CBL& bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Congenital anomalies-Urogenital system</b>	<ul style="list-style-type: none"> <li>• Undescended testis</li> <li>• Hypospadias</li> </ul>	<ul style="list-style-type: none"> <li>• Correlate defects in the embryological origin of testes to classification of Undescended testis and its clinical presentation.</li> <li>• Suggest Diagnostic investigations and treatment options of Undescended testis</li> <li>• Elaborate management plan for possible complications of Undescended testis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with Undescended testis/hypospadias</li> <li>• Perform clinical examination of a patient with Undescended testis/hypospadias.</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Orthopedic Surgery</b>					
<b>Injuries of Upper limb</b>	Injuries of shoulder and arm Injuries of forearm and hand	<ul style="list-style-type: none"> <li>• Identify anatomical features of bones and joints of upper and lower limbs</li> <li>• State the general principles of fracture management.</li> <li>• Classify different types of fractures.</li> <li>• State radiological principles in fracture diagnosis.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with fracture</li> <li>• Perform clinical examination of a patient with fracture</li> </ul>	Lecture & bedside teaching /PTCC/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Injuries of Lower limb</b>	Injuries of pelvis and femur Fracture Neck of Femur Injuries below knee joint	<ul style="list-style-type: none"> <li>• List complications from fractures.</li> <li>• Describe the basic surgical management of fractures, including femoral neck fractures.</li> </ul>		Lecture/ PTCC/S DL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

<b>Open Fracture</b>	Open Fracture	Justify the management of open fractures and soft-tissue injury through surgery	<ul style="list-style-type: none"> <li>• Take history of a patient with open fracture</li> <li>• Perform clinical examination of a patient with open fracture</li> </ul>	Lecture/ PTCC/S DL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Fractures without Displacement</b>	Supracondylar Fracture in children  Stress fractures	<ul style="list-style-type: none"> <li>• Describe the cellular process of fracture healing.</li> <li>• State the principles of general management of a fracture.</li> <li>• Differentiate the differences between different types of displaced fractures</li> <li>• Summarize the concept of ‘stability’ of a fracture</li> <li>• Describe the soft tissue component of a fracture</li> <li>• Identify risk factors for fractures</li> <li>• Classify fractures using different methods including Garland classification</li> <li>• Identify the clinical features requiring emergency management</li> <li>• Suggest appropriate investigations</li> <li>• Elaborate principles of management through open and closed reduction including follow up plan</li> <li>• List potential complications associated with supracondylar fracture</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with fracture</li> <li>• Perform clinical examination of a patient with fracture</li> </ul>	Lecture/ PTCC/S DL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Joints- Abnormalities</b>	Dislocation of Joints	<ul style="list-style-type: none"> <li>• Describe the management of a dislocated joint</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with dislocated joint</li> <li>• Perform clinical examination of a</li> </ul>	Lecture/ PTCC	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
			patient with dislocated joint		

<b>Infections – bone &amp; joint /Soft tissue</b>	Osteomyelitis Pathophysiology. Signs and symptoms. Medical treatment Surgical treatment	<ul style="list-style-type: none"> <li>Classify pathophysiology signs &amp; symptoms, medical and surgical types of infections of bones and soft joint tissues of Osteomyelitis</li> <li>Discuss the clinical presentation of osteomyelitis</li> <li>List the diagnostic and treatment modalities for osteomyelitis.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with Osteomyelitis</li> <li>Perform clinical examination of a patient with Osteomyelitis</li> </ul>	Lecture/ CPC/SD L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Tumors</b>	Bone tumours	<ul style="list-style-type: none"> <li>classify benign and malignant tumors and soft tissue sarcomas</li> <li>Choose best diagnostic strategies for appropriate treatment.</li> <li>Elaborate the surgical interventions for bone tumors and soft tissue sarcomas.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with bone tumours</li> <li>Perform clinical examination of a patient with bone tumours</li> </ul>	Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Spine Surgery</b>					
<b>Backache</b>	Acute Lumbago  Patient's medical work up, referral and physical therapy evaluation	<ul style="list-style-type: none"> <li>Relate functional anatomy to mechanisms for pain production.</li> <li>Differentiate between different types of low back pain based on signs and symptoms</li> <li>Develop management plan for a patient with a Lower back pain.</li> <li>Justify physical therapy as management option.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with backache</li> <li>Perform clinical examination of a patient with backache</li> <li>Offer recommendations for prophylaxis to patients in acute LBP and when in periods of recovery.</li> <li>Educate patient about compliance &amp; importance of physical therapy.</li> </ul>	CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Degenerative Spine Disease	<ul style="list-style-type: none"> <li>Describe the pathogenesis and natural history of degenerative disease of spine.</li> <li>Select appropriate diagnostic tools to interpret the results</li> <li>Identify the patient problems using appropriate clinical examination and radiological studies.</li> <li>Apply evidence based decision making for the management of the patient.</li> </ul>		Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
		<ul style="list-style-type: none"> <li>Manage post injury and post-operative complications</li> </ul>			

	TB spine	<ul style="list-style-type: none"> <li>Describe the etiology, epidemiology and pathophysiology of inflammatory infectious conditions of the spinal column.</li> <li>Suggest appropriate investigations and laboratory work up to establish case based differential diagnosis.</li> <li>Formulate appropriate evidence based medical and surgical management strategies for inflammatory and infectious disorders of the spinal column, including indication and techniques for urgent surgical intervention.</li> <li>Describe spinal TB its causes, pathophysiology, investigations and treatment options</li> </ul>		Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Spinal Tumour	<ul style="list-style-type: none"> <li>Differentiate between various types of spinal tumors.</li> <li>Assess the patient clinically for accurate treatment and about Post-surgical complications.</li> </ul>		Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Neurosurgery</b>					
<b>Tumours brain</b>	SOL Brain & Brain Tumour  Brain tumors in the following locations: Cerebellum, Brainstem and Pituitary etc.  Brain abscess	<ul style="list-style-type: none"> <li>State relative incidence and location of the major types of primary and secondary brain tumors and space occupying lesions</li> <li>Differentiate between clinical presentations of brain tumors based on their locations: Cerebellum, Brainstem and Pituitary etc.</li> <li>Describe the surgical indications for the most common benign and malignant tumors and also space occupying lesions of brain.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with brain tumours</li> <li>Perform clinical examination of a patient with brain tumours</li> </ul>	Lecture/CBC/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
		<ul style="list-style-type: none"> <li>List the major differences between the diagnosis and management of brain tumors and abscesses.</li> </ul>			
<b>Injuries</b>	Head Injury	<ul style="list-style-type: none"> <li>List the interventions that may be required for head injury.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with head injury</li> </ul>	Lecture& bedside	MCQ/SEQ/SA Q/ OSPE/Long

		<ul style="list-style-type: none"> <li>• Explain the importance of nerve or vessel injury in trauma.</li> <li>• Correlate types of head injury to their pathophysiology.</li> <li>• Review the GLASSGOW COMA SCALE</li> <li>• Recognize signs in neurologically deteriorating patient.</li> <li>• Demonstrate the ABCDE approach and its relation to the avoidance of secondary neurological damage after head injury.</li> <li>• Discuss the surgical treatment and complications</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of a patient with injury</li> </ul>	teaching/SDL	case/ short case
Hydrocephalus					
Myelomeningocele	Peripheral Nerve Injuries	<ul style="list-style-type: none"> <li>• Differentiate between compression and laceration in nerve injury on the basis of pathology presentation</li> <li>• Identify historical and current concepts of sensibility retraining in nerve injury. Identify common nerve palsies, rehabilitation phases, treatment approaches and associated problems.</li> <li>• Discuss common nerve compression syndromes, anatomical features, provocative tests, differential diagnosis and therapeutic interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Perform examination of peripheral nerves</li> <li>• Take history of a patient with backache</li> <li>• Perform clinical examination of a patient with backache</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
Vascular anomalies					
<b>Vascular Surgery</b>					
<b>Ischaemia</b>	Acute limb Ischaemia	<ul style="list-style-type: none"> <li>• Identify clinical manifestations and etiology of acute limb ischemia</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with ischaemia</li> </ul>	Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long

		<ul style="list-style-type: none"> <li>• Relate the major risk factors to the etiology and pathophysiology of acute limb ischemia.</li> <li>• Elaborate differential diagnosis of acute limb ischemia.</li> <li>• Suggest appropriate investigations to make the diagnosis.</li> <li>• Discuss the medical and surgical management of acute limb ischemia.</li> <li>• Plan appropriate nursing care for the patient of acute limb ischemia.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of a patient with ischemia</li> </ul>		case/ short case
	<p>Chronic limb ischemia &amp; DVT including but not limited to spiral CT, V/Q, lower extremity Doppler's, D-dimer.</p> <p>including appropriate use and monitoring of heparin and warfarin.</p>	<ul style="list-style-type: none"> <li>• List risk factors for the development of a Deep Vein Thrombosis (DVT)/chronic limb ischemia.</li> <li>• Recognize the signs and symptoms of DVT and chronic limb ischemia.</li> <li>• Generate a prioritized differential diagnosis of DVT/based on specific physical findings using pre-test probability tools</li> <li>• Justify utility of various diagnostic tests based on their interpretation</li> <li>• Develop an appropriate management plan for DVT/CLI.</li> <li>• Develop prophylaxis plan of deep vein thrombosis prophylaxis where indicated.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with ischaemia and with swelling of one leg</li> <li>• Perform clinical examination of a patient with swelling of one leg</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Peripheral Vascular Disease</b>	Varicose Veins	<ul style="list-style-type: none"> <li>• Elaborate clinical presentation, etiology and pathophysiology of varicose veins.</li> <li>• Suggest differential diagnosis based on assessment of patient.</li> <li>• Classify varicose veins.</li> <li>• Rule out the diagnosis of DVT using appropriate investigations.</li> <li>• Suggest conservative or surgical management of varicose veins where indicated.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with varicose veins</li> <li>• Perform clinical examination of a patient with varicose veins</li> </ul>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	<p>Surgical Complications of DM</p> <p>Diabetic foot ulcer in terms of wound infection, associated soft tissue, or bone involvement, along with the systemic features of sepsis</p>	<ul style="list-style-type: none"> <li>Elaborate significance of Baseline glycemic control required for surgical procedure</li> <li>Discuss the complications of DM in Surgical Patient</li> <li>Identify the Signs and Symptoms of uncontrolled DM in patients</li> <li>Develop pre-op, and post-op management plan for a diabetic patient.</li> </ul>	<ul style="list-style-type: none"> <li>Counsel a diabetic patient about foot care</li> <li>assess the severity of Diabetic foot ulcer</li> <li>Suggest antibiotic and local treatment for simple ulcers.</li> <li>Suggest newer and advanced modalities used for management of diabetic foot ulcers</li> </ul>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	<p><b>Gangrene</b></p> <ul style="list-style-type: none"> <li>Definition</li> <li>Types</li> <li>Pathophysiology</li> <li>Clinical features</li> <li>Diagnosis</li> <li>Management principles</li> </ul>	<ul style="list-style-type: none"> <li>Differentiate between dry and wet gangrene</li> <li>List the principles of diagnosis and its management</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with gangrene</li> <li>Perform clinical examination of a patient with gangrene</li> </ul>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Thoracic Surgery</b>					
<b>Infection</b>	Empyema Thoracic	<ul style="list-style-type: none"> <li>differentiate between types of para pneumonic abscess on the basis of etiology.</li> <li>Generate differential diagnosis of empyema thoracic</li> <li>Understand the role of radiographic, endoscopic and laboratory evaluation in the diagnosis</li> <li>Devise a proper management plan including pharmacotherapy and need for surgical intervention</li> <li>Discuss the complications of disease and of surgical procedures for empyema thoracic</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with empyema thoracic</li> <li>Perform clinical examination of a patient with empyema thoracic</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
		<ul style="list-style-type: none"> <li>Propose postoperative follow up plan for the patient</li> </ul>			

<b>SOLs – Mediastinum</b>	Mediastinal masses	<ul style="list-style-type: none"> <li>• Generate differential diagnosis of mediastinal mass based on signs and symptoms</li> <li>• Devise a management plan for the treatment and diagnosis of mediastinal mass.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with mediastinal masses</li> <li>• Perform clinical examination of a patient with mediastinal masses</li> <li>• Counsel the patient about the prognosis and follow up.</li> </ul>	CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Oesophagus</b>	Dysphagia  theoretical and practical components of dysphagia management impacting prevention, compensation, and rehabilitation	<ul style="list-style-type: none"> <li>• Identify factors in the patient history that are useful in diagnosing the etiology of dysphagia.</li> <li>• List symptoms that suggest oropharyngeal dysfunction.</li> <li>• List valuable tests in the diagnostic evaluation of dysphagia.</li> <li>• Specify diagnostic tools for dysphagia</li> <li>• Describe the</li> <li>• Suggest common food and liquid modification practices in dysphagia management.</li> <li>• Apply basic concepts to propose management for dysphagia</li> <li>• Explain the intended application/benefit for various swallowing maneuvers and postural adjustments employed in traditional dysphagia management.</li> <li>• Demonstrate understanding of basic exercise principles as applied to dysphagia management.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with dysphagia</li> <li>• Perform clinical examination of a patient with dysphagia</li> </ul>	CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	Ca Oesophagus	<ul style="list-style-type: none"> <li>• Relate cause, risk factors to pathophysiology of Ca Oesophagus.</li> <li>• Classify ca esophagus using TNM classification</li> <li>• Understand the role of grading and staging in assessment of patient</li> <li>• Discuss the role of medical history, clinical evaluation, radiographic procedures, endoscopic and laboratory evaluation in the diagnosis</li> <li>• Formulate a proper management plan for patient based on stage and grade of cancer</li> <li>• Describe the various treatment options for patients with esophageal cancer, including pre- and post-operative chemo radiation.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with ca esophagus</li> <li>• Perform clinical examination of a patient with ca esophagus</li> <li>• Counsel the patient about the poor prognosis of the diseases</li> <li>•</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SAQ/OSPE/Long case/ short case
	Oesophageal motility disorders	<ul style="list-style-type: none"> <li>• Relate abnormalities of anatomy and physiology of esophagus to etiology and types of motility disorders</li> <li>• generate differential diagnosis of motility disorders based on signs and symptoms.</li> <li>• Propose diagnostic and management plan of patient using conventional and newer treatment modalities</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with motility disorders</li> <li>• Perform clinical examination of a patient with motility disorders</li> </ul>	Lecture/SDL	MCQ/SEQ/SAQ/OSPE/Long case/ short case
<b>Tumors lungs</b>	Ca Lung  Modalities of treatment including radiotherapy, chemotherapy, surgical and neo adjuvant therapy	<ul style="list-style-type: none"> <li>• identify the causes and risk factors for lung cancer</li> <li>• Advocate measures and guidelines to decrease risk for developing lung cancer and its screening</li> <li>• Discuss the prognostic factors of Ca lung.</li> <li>• Classify tumors based on types, staging and grading</li> <li>• justify the role of radiographic, endoscopic and laboratory evaluation in the diagnosis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with Ca lung</li> <li>• Perform clinical examination of a patient with Ca lung</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SAQ/OSPE/Long case/ short case

		<ul style="list-style-type: none"> <li>Formulate a management plan using various modalities.</li> <li>Discuss the complications of disease and its treatment</li> </ul>			
<b>Anesthesia</b>					
<b>General Anaesthesia</b>	General Anaesthesia	<ul style="list-style-type: none"> <li>Differentiate between different techniques of anesthesia and airway maintenance</li> <li>Elaborate the methods of providing pain relief</li> <li>Devise a plan for management of chronic pain and pain from malignant disease</li> </ul>	Monitor the patient under general anesthesia	Lecture/ Demo/SD L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Regional &amp; Spinal Anaesthesia</b>	Regional & Spinal Anaesthesia	<ul style="list-style-type: none"> <li>Discuss the local and regional anesthesia techniques</li> <li>List the various techniques for regional anesthesia administration</li> <li>Choose appropriate type of anesthesia for various surgical procedures</li> <li>Discuss the pre-anesthesia workup required for regional/spinal anesthesia</li> <li>list the complications resulting from regional/spinal anesthesia</li> </ul>	Monitor the patient under regional/spinal anesthesia	Lecture/ Demo/SD L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Pain Relief</b>	Pain Relief in benign and malignant diseases	<ul style="list-style-type: none"> <li>Relate different types of pain to its pathophysiology.</li> <li>Outline various methods for pain relief in benign and malignant diseases</li> <li>Discuss the various methods used for pain relief in different diseases</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with pain</li> <li>Perform clinical examination of a patient with pain</li> <li>Counsel the patient with pain</li> </ul>	Lecture/ Demo/SD L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

## Head & neck

<b>Disorders of salivary glands</b>	Infections, obstruction, benign and malignant neoplasms of the salivary glands.	<ul style="list-style-type: none"> <li>• Recognize the clinical features of infections of the salivary glands.</li> <li>• List the relevant information to be elicited during history taking from patients with salivary gland disorders.</li> <li>• differentiate on clinical grounds between infection, obstruction, benign and malignant neoplasms of the salivary glands.</li> <li>• Suggest relevant investigations to help in the diagnosis of salivary gland disorders.</li> <li>• Evaluate the results of the investigations done for disorders of the salivary glands.</li> <li>• Describe treatment procedures and their indications and potential complications of treatment procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with swelling on sites of salivary glands</li> <li>• Perform clinical examination of a patient with swelling relevant to salivary gland</li> </ul>	Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Mass neck</b>	Evaluation of mass neck neoplastic, inflammatory, congenital	<ul style="list-style-type: none"> <li>• Devise a systematic plan to evaluate a patient with a neck mass</li> <li>• Classify neck masses, according to etiology</li> <li>• Diagnose neck mass based on history, clinical examination basic laboratory tests and radiologic examinations.</li> <li>• Suggest special examinations of the nasopharynx and larynx where required</li> <li>• Develop an appropriate differential diagnosis and provisional diagnosis</li> <li>• Justify the role of surgery for adult neck mass</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with a neck mass</li> <li>• Perform clinical examination of a patient with a neck mass</li> </ul>	CPC/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

## Breast and Endocrine

<b>Breast Lump</b>	Benign Breast Disease	<ul style="list-style-type: none"> <li>Classify Benign Breast Disease</li> <li>Diagnose Benign breast disease based on history and clinical presentation</li> <li>Enumerate the Diagnostic investigations of Benign Breast Diseases</li> <li>Design management plan for Benign Breast Disease and its complication</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with breast lump</li> <li>Perform clinical examination of a patient with breast lump</li> <li>Counsel the patient about the importance of completion of treatment</li> </ul>	Lecture & bedside teaching /CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Ca Breast	<ul style="list-style-type: none"> <li>Suggest management plan for Ca breast and its complications applying basic concepts of anatomy and lymphatic drainage of the area.</li> <li>Diagnose Ca Breast based on signs and symptoms and investigations</li> </ul>			
<b>Thyroid swelling</b>	Simple Goitre Toxic Goitre/ Thyrotoxicosis	<ul style="list-style-type: none"> <li>Corelate the clinical presentation of simple and toxic goitre to anatomical and physiological basis of thyroid gland</li> <li>Suggest the diagnostic investigations needed to rule out other thyroid conditions</li> <li>Enumerate the Treatment options for goiter</li> <li>Propose management plan for goitre and its complications.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with neck /thyroid swelling</li> <li>Perform clinical examination of a patient with neck /thyroid swelling</li> <li>Counsel the patient about the progression of disease</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Ca Thyroid	<ul style="list-style-type: none"> <li>Diagnose Ca thyroid based on clinical presentation and investigations</li> <li>Classify Ca Thyroid</li> <li>List tumor markers for Ca Thyroid</li> <li>Develop management plan for Ca Thyroid and its Complications</li> </ul>			
<b>Parathyroid glands</b>	Disorders of Parathyroid glands	<ul style="list-style-type: none"> <li>Diagnose disorders of parathyroid based on clinical presentation and investigations</li> <li>Develop management plan</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	Lecture/CBL/S DL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

<b>Adrenal glands</b>	Disorders of Adrenal glands	<ul style="list-style-type: none"> <li>• Diagnose disorders of adrenal glands based on clinical presentation and investigations</li> <li>• Develop management plan</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture/CBL/SDL	MCQ/SEQ/SAQ/OSPE/Long case/ short case
<b>Abdomen</b>					
<b>Acute Abdomen</b>	<ul style="list-style-type: none"> <li>• Acute intestinal obstruction</li> <li>• Acute peritonitis</li> <li>• Acute Appendicitis</li> <li>• Acute Cholecystitis</li> <li>• Intestinal perforation</li> <li>• Abdominal aortic aneurysm</li> <li>• Acute Diverticulitis.</li> <li>• Duodenal ulcer perforation</li> </ul> <p><b>Radiological diagnosis</b></p> <ul style="list-style-type: none"> <li>• complications that can result from small bowel obstruction including: ischaemia, perforation and biochemical derangement.</li> <li>• Difficulties with fluid management and electrolyte derangements, including oliguria and acute kidney injury.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the symptoms, signs, and differential diagnosis for patients presenting with an acute abdomen.</li> <li>• Discuss the investigations and management of patients with acute abdominal pain</li> <li>• Choose the appropriate imaging in the investigation of acute abdominal pain</li> <li>• Generate differential diagnoses for small bowel obstruction.</li> <li>• Summarize complications that can result from small bowel obstruction</li> <li>• Describe the pre-and postoperative management of an acutely unwell patient who requires emergency surgery.</li> <li>• evaluate the difficulties with fluid management and electrolyte derangements</li> <li>• Demonstrate understanding of pathological basis of appendicitis, acute pancreatitis, acute cholecystitis, abdominal aortic aneurysm and diverticular disease.</li> <li>• Assess the indications for surgery and other treatment options</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with acute abdomen</li> <li>• Perform clinical examination of a patient with acute abdomen</li> </ul>	Lecture/CBL & bedside teaching/SDL	MCQ/SEQ/SAQ/OSPE/Long case/ short case

<b>Chronic abdomen</b>	Mass Abdomen	<ul style="list-style-type: none"> <li>• outline relevant investigations for abdominal swelling due to various pathological causes.</li> <li>• Describe the aetiology, presentation and management of intestinal obstruction.</li> <li>• Generate differential diagnosis, and management of patients presenting with a left iliac fossa mass.</li> <li>• provide the pathophysiological basis of a swelling in the epigastrium</li> <li>• Justify the need for emergency care</li> <li>• Evaluate the role of surgery in patient with mass abdomen</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with mass abdomen</li> <li>• Perform clinical examination of a patient with mass abdomen</li> </ul>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Colorectal Carcinoma	<ul style="list-style-type: none"> <li>• Discuss the pathological basis of Ca colon</li> <li>• Elaborate specific Tumor markers</li> <li>• Elaborate the staging of ca colon</li> <li>• Diagnose Ca colon and chronic abdomen based on clinical presentation</li> <li>• Develop management and prevention of Ca Colon and chronic abdomen and their associated complications plan for</li> </ul>	<p>Take history of a patient with colorectal cancer</p> <p>Perform clinical examination of a patient with colorectal cancer</p>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Intestinal tuberculosis	<ul style="list-style-type: none"> <li>• Explain the Pathophysiological basis of abdominal TB</li> <li>• Diagnose TB based on clinical features and investigations</li> <li>• Formulate a differential diagnosis</li> <li>• evaluate the role of anti-tuberculous therapy in patient management</li> <li>• Justify the use of appropriate surgical procedures in management of this disease.</li> </ul>	<p>Take history of a patient with Intestinal tuberculosis</p> <p>Perform clinical examination of a patient with Intestinal tuberculosis</p>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
		<ul style="list-style-type: none"> <li>• Formulate management plan for complications</li> </ul>			

<b>Abdominal Wall, Hernias</b>	<ul style="list-style-type: none"> <li>Inguinal Hernia</li> <li>Femoral hernia</li> <li>Ventral Hernias</li> </ul>	<ul style="list-style-type: none"> <li>Differentiate between direct, indirect, incarcerated and strangulated hernias</li> <li>Develop a differential diagnosis in a case of a mass in the inguinal or femoral region, or in the scrotum, making reference to those features which may distinguish hernias from other soft tissue masses.</li> <li>Discuss the various investigations that help in diagnosis</li> <li>Describe the principles of a surgical repair of a direct and indirect inguinal hernia</li> <li>Describe the complications of untreated abdominal wall defects</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with mass in the inguinal or femoral region, or in the scrotum</li> <li>Perform clinical examination of a patient with mass in the inguinal or femoral region, or in the scrotum</li> </ul>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Hepatobiliary Surgery</b>					
<b>Liver – SOL liver</b>	Amoebic liver, Hydatid disease & Liver Carcinoma	<ul style="list-style-type: none"> <li>Generate differential diagnosis of SOL Liver</li> <li>Develop plan for diagnosis, treatment and prevention of SOL liver and its complications</li> </ul>	Take history of a patient with SOL liver  Perform clinical examination of a patient with SOL liver	Lecture/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Stones in biliary tract</b>	Cholelithiasis	<ul style="list-style-type: none"> <li>Discuss the Etiology of Cholelithiasis with relevance to anatomical and pathological basis</li> <li>Understand the Clinical presentation of Cholelithiasis</li> <li>Elaborate the clinical significance of Charcot triangle</li> <li>Diagnose cholelithiasis based on clinical presentation and investigations</li> <li>Manage cholelithiasis and its complications</li> </ul>	Take history of a patient with cholelithiasis  Perform clinical examination of a patient with cholelithiasis	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
			Counsel the patient about planning surgery before it leads to complications		

	Obstructive jaundice	<ul style="list-style-type: none"> <li>• provide physiological and anatomical basis of different types of jaundice</li> <li>• Diagnose obstructive jaundice on the basis of clinical presentation and diagnostic tests</li> <li>• Plan management of obstructive jaundice and its complications</li> </ul>	<p>Take history of a patient with obstructive jaundice</p> <p>Perform clinical examination of a patient with obstructive jaundice</p>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Inflammation</b>	Acute and Ch Cholecystitis	<ul style="list-style-type: none"> <li>• Discuss causes of Cholecystitis</li> <li>• Relate structural anomalies and pathological changes to predisposition to cholecystitis</li> <li>• Discuss the Signs and Symptoms</li> <li>• Discuss the diagnosis and management</li> <li>• Discuss the emergency and elective approach to management of Cholecystitis, and its complications.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with chronic cholecystitis</li> <li>• Perform clinical examination of a patient with chronic cholecystitis</li> </ul>	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Surgical intervention- Laparoscopic Surgery</b>	Principles of Laparoscopic Surgery	List the general principles of laparoscopic surgery and its complications		Lecture/ Demo/SD L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Upper GI Surgery – Stomach/Intestine/Pancreas</b>					
<b>Upper GI bleed/ Hematemesis</b>	<p>Differential diagnosis with management of Upper GI bleed</p> <ul style="list-style-type: none"> <li>• duodenal ulcer, gastric ulcer, gastric erosions,</li> </ul>	<ul style="list-style-type: none"> <li>• State the pathophysiological basis of common causes of upper GI bleeding</li> <li>• Discuss the Immediate Management of Upper GI Bleed</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with Hematemesis</li> <li>• Perform clinical examination of a patient with Hematemesis</li> </ul>	Lecture /CPC/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

	oesophageal varices, Mallory Weiss tear and oesphagogastric cancer.	<ul style="list-style-type: none"> <li>Enumerate the Criteria for admission of Upper GI Bleed</li> <li>Discuss the fluid resuscitation of Upper GI Bleed</li> <li>Diagnose Upper GI Bleed</li> <li>Elaborate the preventive methods of Upper GI Bleed</li> <li>Elaborate the Complications of and their management</li> </ul>			
<b>Tumors</b>	Ca stomach	<ul style="list-style-type: none"> <li>Discuss the causes of Ca stomach</li> <li>Discuss the warning signs which lead to the diagnosis of Ca stomach</li> <li>Discuss the presenting complaints of Ca stomach</li> <li>list the investigations needed to diagnose the case</li> <li>Describe the staging and grading of cancer.</li> <li>Describe the management plan for a patient with Ca stomach</li> </ul>	<p>Take history of a patient with Ca stomach</p> <p>Perform clinical examination of a patient with Ca stomach</p>	Lecture & bedside teaching /CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
	Ca Pancreas	<ul style="list-style-type: none"> <li>Discuss the etiology of Ca Pancreas</li> <li>Discuss the Clinical Presentation of Ca Pancreas</li> <li>Enumerate the Signs and symptoms of Ca pancreas</li> <li>Discuss diagnostic criteria for Ca Pancreas</li> <li>stage the cancer</li> <li>Plan the treatment of Ca Pancreas and its complications</li> </ul>	<p>Take history of a patient with Ca Pancreas</p> <p>Perform clinical examination of a patient with Ca Pancreas</p>	Lecture/CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Inflammation</b>	Acute and Ch Pancreatitis	<ul style="list-style-type: none"> <li>Diagnose pancreatitis using Ranson and Glasgow criteria</li> <li>Enumerate causes of pancreatitis and its predisposing factors</li> </ul>	Take history of a patient with Ca lung	CBL & Bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long

		<ul style="list-style-type: none"> <li>Elaborate the Diagnosis of pancreatitis based on its signs and symptoms</li> <li>Manage pancreatitis and its complications</li> </ul>	Perform clinical examination of a patient with chronic pancreatitis		case/ short case
<b>Lower GI Surgery – Appendix/Colon/Rectum/Anal Canal</b>					
<b>Change in bowel habit / rectal bleeding</b>	colorectal cancer, diverticular disease, haemorrhoids, anal fissures and inflammatory bowel disease	<ul style="list-style-type: none"> <li>Explain the aetiopathology of the common causes of rectal bleeding.</li> <li>List the common causes of diarrhoea and constipation.</li> <li>Relate the signs and symptoms for colorectal cancer and its underlying pathology</li> <li>Explain the management for rectal bleeding, including relevant investigations and the indications for surgical intervention.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with change in bowel habit / rectal bleeding</li> <li>Perform clinical examination of a patient with change in bowel habit / rectal bleeding</li> </ul>	Lecture & bedside teaching/CBL/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Abscess/Fissure</b>	Perianal Abscess Anal fissure	<ul style="list-style-type: none"> <li>Corelate the etiology and pathophysiology of perianal abscess/ fissure to its clinical presentation</li> <li>make an appropriate differential diagnosis on the basis of clinical presentation</li> <li>Review the surgical anatomy of anal region and classification of anal abscess/ fissure</li> <li>Develop a plan for work up, management and postop care of a patient with perianal abscess.</li> </ul>	<p>Take history of a patient with perianal abscess</p> <p>Perform clinical examination of a patient with abscess/ fissure</p>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Fistula</b>	Fistula in ano	<ul style="list-style-type: none"> <li>Explain the etiology and pathophysiology of anal fistula</li> <li>make an appropriate differential diagnosis based on patient presentation</li> <li>Develop a plan for work up, management and postop care of a patient with fistula in ano</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with anal fistula</li> <li>Perform clinical examination of a patient with anal fistula</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

## Urology

<b>Haematuria</b>	Haematuria originating at different levels of urinary tract	<ul style="list-style-type: none"> <li>• Identify basis for diagnosing hematuria.</li> <li>• Recognize those pigments that may discolor the urine, mimicking hematuria.</li> <li>• Give a differential diagnosis for hematuria originating in the different anatomical parts of the urinary tract.</li> <li>• justify the significance of the information gathered from the palpation of the prostate rectally.</li> <li>• List the radiological investigations available for the assessment of the urinary tract</li> <li>• Manage the patient with visible and non-visible hematuria.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with hematuria</li> <li>• Perform clinical examination of a patient presenting with hematuria</li> </ul>	Lecture & bedside teaching/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
<b>Urinary Obstruction and Urological emergencies</b>	<ul style="list-style-type: none"> <li>• Diagnostic modalities</li> <li>• Levels of obstruction</li> <li>• Acute urethral obstruction</li> <li>• Bladder Outlet Obstruction</li> <li>• Urolithiasis</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between obstruction at different levels of the urinary tract based on history, Clinical features and diagnostic modalities</li> <li>• Discuss the presenting features, signs and symptoms of urological emergencies</li> <li>• Generate a prioritized differential of the most important and likely causes of a patient's emergency</li> <li>• Study the classification of urological emergencies based on etiology</li> <li>• Discuss the appropriate investigations leading to a definite diagnosis</li> <li>• Devise a management plan according to clinical presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Take History of a patient with hematuria</li> <li>• Perform clinical and examination of a patient with hematuria</li> <li>• Take history of a patient and perform clinical examination of a patient acute urethral obstruction/urolithiasis.</li> </ul>	Lecture/CBL/ Demo/SDL	MCQ/SEQ/SA Q/ OSPE/Long case/ short case

<b>Tumours</b>	<ul style="list-style-type: none"> <li>• Renal cell carcinoma and</li> <li>• Transitional cell carcinoma</li> <li>• Basal cell carcinoma</li> </ul>	<ul style="list-style-type: none"> <li>• Review the epidemiology and causes</li> <li>• List the risk factors for carcinoma of urinary tract</li> <li>• Outline the initial diagnostic workup for patients suspected of having carcinoma of urinary system</li> <li>• Discuss the grading and staging of carcinoma of urinary tract</li> <li>• Plan the general management and pre-operative workup of patient</li> <li>• Suggest the potential options for treatment of carcinoma of urinary tract</li> <li>• Implement effective treatment options for advanced and metastatic basal cell carcinoma (BCC) based on efficacy data and current guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with carcinoma of urinary tract</li> <li>• Perform clinical examination of a patient with carcinoma of urinary tract</li> <li>• Counsel the patient about the completion of treatment and prognosis of disease</li> </ul>	Lecture/ CBL/SD  L	MCQ/SEQ/SA Q/ OSPE/Long case/ short case
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**Procedural skills to be acquired in clinical training**

**At the end of clinical rotation, student should be able to:**

<b>Learning Outcomes</b>	<b>Procedure (minimum no required)</b>
<b>Year III</b>	
Observe	Foley's catheterization (10)
Observe	Passage of Nasogastric Tube (5)
Assists	Antiseptic Dressing (10)
Performs under direct supervision on mannequin	Intravenous Line (10)
Performs under direct supervision	Intra Muscular Injection (10)
Performs under direct supervision	Subcutaneous Injection (5)
<b>Year IV</b>	
Assists	Application of POP(5)
Assists	Endotracheal intubation (3)
Assists	Lumbar puncture/ Spinal Anaesthesia(3)
Assists	Stitching of wounds(5)
Performs under direct supervision	Intravenous Line (10)
Performs under direct supervision	Foley's catheterization (10)
Performs under direct supervision	Passage of Nasogastric Tube (5)
Performs under indirect supervision	Intra Muscular Injection (10)
Performs under direct supervision	Subcutaneous Injection (5)
Performs under direct supervision	Taking blood samples(5)
Performs under direct supervision	Removal of surgical drains(5)
Performs under indirect supervision	Antiseptic Dressing (10)
<b>Year V</b>	
Assists	Chest tube insertion (2)
Assists	Venous cut down (3)
Assists	FNAC/True cut biopsy(2+2)
Assists	Lumbar puncture/ Spinal Anaesthesia (3)
Assists	Stitching of wounds(5)
Assists	Taking blood samples(5)
Assists	Removal of surgical drains(5)
Assists	In growing toe nail (3)
Assists	Circumcision (3)
Assists	Excision biopsy under local anaesthesia (3)
Assists	Contrast Xray studies (5)
Performs under direct supervision	Application of POP(5)
Performs under direct supervision on mannequin	Endotracheal intubation (3)
Performs under direct supervision	Intravenous Line (10)
Performs under direct supervision	Foley's catheterization (10)
Performs under direct supervision	Passage of Nasogastric Tube (5)

# Obstetrics & Gynecology



## Preamble:

Obstetrics and Gynaecology is an integral part of the undergraduate curriculum. Basis of Obstetrics and Gynaecology is established in the initial years through contribution from basic sciences. It is being taught as a major subject in the last two years of undergraduate program. Aim is to train and develop medical students to practice as a safe obstetrician and gynaecologist and to advance in the field of Obstetrics and Gynaecology

## Course Outcomes

**To equip them with essential knowledge, skill and attitude in order to enable them to:**

- Diagnose common Obstetric and Gynecological problems, suggest and interpret appropriate investigation, rationalize treatment plan and if appropriate, refer patient for specialist opinion/management.
- Suggest preventive measure for the common public health problem in the community
- Perform relevant procedures
- Convey relevant information and explanations accurately to patients, families, colleagues and other professionals
- Participate effectively and appropriately in an inter professional health care team
- Understand medical ethics and its application pertaining to Obstetrics and Gynaecology and maintain the confidentiality of the patient.
- Adapt research findings appropriately to the individual patient situation or relevant patient population

## Expectations from students

- Be professional in behavior and dress code when communicating with patient and her family
- Respect patient and their family's wishes along with social and cultural norms
- Examine patients with their permission in the presence of chaperon
- Inculcate behavior of regular self-learning for academic sessions & clinical problem encounters
- Keep yourself abreast with current relevant information about your patients
- Document and update patient's progress in her file regularly

## Teaching hours – Obs & Gynae

Sessions	YEARS	CONTACT HOURS
2020-2021	V	220
2021-2022	IV	60
2022-2023	III	25
2023-2024	II	10

## Learning Opportunities

- Interactive lectures
- Teaching Ward Rounds
- Case presentations
- Case based Discussion
- Short cases in OPD
- Bedside Discussion

- Team-based learning
- Small Group Discussion
- Self-learning Activities
- Skill Lab Activity
- Observation of operations in OT

### **Venues for learning opportunities**

- Outpatient clinic
- Emergency room
- Labour room
- Operation room
- Inpatient ward
- Tutorial room
- Libraries including audio-visuals

### **Specific Learning Outcomes**

Learning outcomes specific to the Obstetrics and Gynaecology course have been tabulated below in the table of specification and matched with educational strategies.

### **Recommended Readings**

- Obstetrics by Ten Teachers
- Gynaecology by Ten Teachers

### **Reference books**

- Evidence based text for MRCOG by David M. Luesley
- Dewhurst's Text book of Obs and Gynae by Keith Edmonds
- Royal College of Obs & Gynae and American College of Obs & Gynae guidelines
- PM&DC approved journals

## SPECIFIC LEARNING OBJECTIVES IN OBSTETRICS

The table below gives details of all content, distribution of which across the three years and rotations is upon the discretion of the medical College/Institute

Clinical Problem/ Theme	Goals / Competencies	Learning Objectives		Instructional Strategy	Assessment Tool
		At the end of teaching session, the student should be able to:			
		Knowledge	Skills/Attitude		
<b>PREGNANCY AND LABOUR</b>					
<b>Maternal Anatomy/Physiology in Pregnancy and Labor</b>	<ul style="list-style-type: none"> <li>Anatomy of the pelvis</li> <li>Physiological changes in maternal systems during pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of anatomy of the pelvis</li> <li>Compare normal physiological changes of body systems in pregnant and non-pregnant patient.</li> <li>Compare the important effects in a pregnant woman of estrogen and progesterone and correlate their function.</li> <li>Appraise the factors that are implicated in the onset of labour</li> </ul>	<ul style="list-style-type: none"> <li>Take and present an obstetric history</li> <li>Perform clinical examination of heart, lungs, thyroid and breast of healthy pregnant women.</li> <li>Counsel a normal pregnant woman the reasons why it can be normal to experience breathlessness, urinary frequency, constipation and heat intolerance.</li> </ul>	SGD, Self-Directed Learning Case presentation/ OPD	OSCE SAQs/ MCQs

<b>Pre-Pregnancy Care</b>	<ul style="list-style-type: none"> <li>Principles of pre-pregnancy care</li> <li>Genetic mode of inheritance and common structural abnormalities of fetuses resulting from abnormal development</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of genetic mode of inheritance and common structural abnormalities of fetuses</li> <li>Identify the maternal conditions that require pre-pregnancy care and discuss the principles of management.</li> <li>Appraise the screening tests that may be performed in pre-pregnancy counseling of apparently healthy women.</li> </ul>	<ul style="list-style-type: none"> <li>Summarize ethical issues relevant to pre-pregnancy screening of genetic disorders.</li> <li>Counsel apparently healthy women regarding benefits of pre-pregnancy care.</li> </ul>	SGD, Self-Directed Learning, OPD	OSCE SAQs/ MCQs
<b>Antenatal Care</b>	<ul style="list-style-type: none"> <li>Principles of antenatal care</li> <li>Concept of preconception care</li> <li>Minor pregnancy complications</li> </ul>	<ul style="list-style-type: none"> <li>Plan hematological investigations performed at the booking visit.</li> <li>Select the infections screened for at the booking visit, and summarize the possible adverse sequelae associated with these infections.</li> <li>Plan a schedule of antenatal visits for a normal pregnant woman.</li> <li>Diagnose and manage minor pregnancy complications in antenatal clinic.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate history taking of a pregnant woman at booking.</li> <li>Perform clinical examination of a pregnant patient.</li> <li>Prepare a patient for regular antenatal checkups even though she is completely healthy</li> </ul>	Self-Directed Learning/ Case presentation/ OPD	OSCE SAQs/ MCQs

<b>Prenatal Diagnosis</b>	Prenatal diagnosis and methods available for prenatal diagnosis.	<ul style="list-style-type: none"> <li>• Appraise the anomaly scan in detail with its purpose and systems examined.</li> <li>• Identify pregnant women who need prenatal diagnosis.</li> <li>• Plan the tests that are necessary for prenatal diagnosis.</li> </ul>	<p>Interpret the following investigations:</p> <ul style="list-style-type: none"> <li>• The result of Down's syndromes screening tests</li> <li>• The reports from an anomaly scan. Counsel a patient with fetal anomaly.</li> </ul>	SGD, Self-Directed Learning Case presentation/ OPD	OSCE, SAQ, MCQ.
<b>Labour and Delivery</b>	<p><b>Normal labour and its management:</b></p> <ul style="list-style-type: none"> <li>• Analgesia in labour</li> <li>• Fetal surveillance during labour</li> <li>• Abnormal labour and its management</li> <li>• Intrapartum haemorrhage</li> <li>• Spontaneous vaginal delivery</li> <li>• Operative vaginal delivery</li> <li>• VBAC and TOLAC</li> </ul>	<ul style="list-style-type: none"> <li>• Manage 1st and 2nd stages of labour</li> <li>• Manage abnormal labour</li> <li>• Appraise operative vaginal delivery</li> <li>• Identify patient suitable for VBAC and TOLAC</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare and interpret partogram of normal laboring women.</li> <li>• Predict fetal distress on CTG.</li> <li>• Participate in management of labour.</li> <li>• Conduct normal vaginal delivery.</li> <li>• Observe/ assist operative vaginal delivery.</li> <li>• Communicate clearly and effectively to a laboring woman and her partner.</li> <li>• Counsel a patient regarding operative vaginal delivery and LSCS.</li> </ul>	Self-Directed Learning Case presentation, labour room, ward rounds	OSCE/ SAQ/ MCQ

<b>Third Stage of Labour</b>	<ul style="list-style-type: none"> <li>• Management of third stage of labor</li> <li>• Complications of third stage of labour including perineal tear, postpartum haemorrhage</li> </ul>	<ul style="list-style-type: none"> <li>• Compare active and physiological management of third stage of labor.</li> <li>• Summarize the causes and management of primary &amp; secondary PPH.</li> <li>• Appraise postnatal complications that cause maternal deaths.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate delivery of placenta by controlled cord traction on a mannequin.</li> <li>• Conduct / assist third stage of labor.</li> <li>• Estimate blood loss at delivery/C section</li> </ul>	Self-Directed Learning Case presentation, labour room, Workshop	OSCE/ SAQ's/ MCQ's
<b>Puerperium</b>	<ul style="list-style-type: none"> <li>• Normal puerperium</li> <li>• Complications of puerperium</li> <li>• postpartum amenorrhoea, lactational problems, medical and psychiatric disorders, puerperal pyrexia, postpartum pyrexia</li> </ul>	<p>Compare the benefits of breast feeding and bottle feeding</p> <p>Manage postpartum amenorrhoea, lactational problems, medical and psychiatric disorders, puerperal pyrexia, postpartum pyrexia on the basis of its etiology</p>	<ul style="list-style-type: none"> <li>• Counsel a woman on exclusive breast feeding.</li> <li>• Counsel a woman regarding postpartum contraception</li> </ul>	Self-Directed Learning Case presentation	OSCE/ SAQs/ MCQs
<b>MEDICAL DISORDERS IN PREGNANCY(Acute/chronic):</b>					
<b>Anaemia/ Pallor In Pregnancy</b>	<ul style="list-style-type: none"> <li>• <b>Effects of following diseases on maternal and fetal outcome</b></li> <li>• <b>Effects of pregnancy on following diseases</b></li> </ul> <p>Anaemia in pregnancy</p>	Manage anemic women on the basis of relevant investigations	<ul style="list-style-type: none"> <li>• Perform examination of a patient with anemia</li> <li>• Interpret the patterns of abnormality found on full blood count that are indicative of iron deficiency anemia, Beta thalassemia minor, B12</li> </ul>	SGD, Self Directed Learning Case presentation/ OPD	OSCE/ SAQs/ MCQs

			<p>and folic acid deficiency anemia.</p> <ul style="list-style-type: none"> <li>• Counsel a patient with Beta thalassemia trait.</li> </ul>		
<p><b>Hypertension and Proteinuria/ Eclampsia:</b></p>	<p>Hypertension and proteinuria in pregnancy</p>	<ul style="list-style-type: none"> <li>• Categorize a hypertensive patient in pregnancy according to standard classification</li> <li>• Compare the principles of management of pre eclampsia with chronic essential hypertension.</li> <li>• Critically appraise the drugs used in the management of pre eclampsia</li> <li>• Identify the maternal and fetal complications of pre eclampsia and eclampsia</li> </ul>	<ul style="list-style-type: none"> <li>○ Perform following tests; <ul style="list-style-type: none"> <li>• Measure B.P using mercury sphygmomanometer</li> <li>• Dipstick urine analysis</li> <li>• Elicit ankle jerk and clonus</li> </ul> </li> <li>○ Interpret following investigations <ul style="list-style-type: none"> <li>• Renal function tests</li> <li>• Liver function tests</li> <li>• Coagulation tests <ul style="list-style-type: none"> <li>• Urine microscopy, culture and sensitivity</li> </ul> </li> <li>• Analyze the ethical issues relevant to delivery of a baby for maternal versus fetal safety</li> <li>• Counsel a patient concerning the maternal and fetal complications associated with pre eclampsia and eclampsia</li> </ul> </li></ul>	<p>SGD, Self Directed Learning Case presentation/ OPD</p>	<p>OSCE/ SAQs/ MCQs</p>

<b>Diabetes Mellitus</b>		<ul style="list-style-type: none"> <li>Evaluate the screening</li> <li>tests for diabetes in pregnancy</li> <li>Summarize the principles of management of Diabetes in pregnancy</li> <li>Compare and contrast effects on fetus and mother of Gestational Diabetes</li> </ul>	<ul style="list-style-type: none"> <li>Interpret lab tests used to screen Diabetes mellitus in pregnancy</li> <li>Check random blood sugar by glucometer</li> <li>Construct diet chart for a pregnant patient</li> <li>Counsel a pregnant patient the reason for screening for Diabetes in pregnancy and effects of poorly controlled Diabetes.</li> </ul>	SGD, Self-Directed Learning Case presentation/ OPD	OSCE/ SEQs/ MCQs
<b>Cardiac, Respiratory, Renal and Liver Disease</b>	<ul style="list-style-type: none"> <li>Diabetes mellitus in pregnancy</li> <li>Cardiac, Respiratory, Renal and Liver disease</li> <li>Obesity</li> <li>Thyroid disease in pregnancy: <ul style="list-style-type: none"> <li>Hypothyroidism</li> <li>Hyperthyroidism</li> <li>Autoimmune conditions and dermatological conditions</li> </ul> </li> </ul>	Compare and contrast effects of pregnancy in general on women with Cardiac, Respiratory, Renal and Liver disease	<ul style="list-style-type: none"> <li>Examine cardiovascular system of a pregnant patient</li> <li>Interpret RFT's and LFT's</li> <li>Counsel a pregnant woman about a medical disorder in pregnancy</li> </ul>	SGD, Self-Directed Learning Case presentation/ OPD/ Clinical Methods	OSCE/ SAQs/ MCQs
<b>Obesity in pregnancy</b>		Compare and contrast effects of obesity on mother and fetus in pregnancy	Counsel a pregnant woman about complications of obesity in pregnancy and weight reduction by changing life style and diet	SGD, Self-Directed Learning Case presentation/ OPD/ Clinical Methods	OSCE SAQs/ MCQS
<b>Thyroid.</b>		<ul style="list-style-type: none"> <li>Compare and contrast effects of hypothyroidism and hyperthyroidism on</li> </ul>	<ul style="list-style-type: none"> <li>Examine thyroid gland</li> <li>Counsel a pregnant patient with goiter</li> </ul>	SGD, Self-Directed Learning	OSCE/ SAQs/ MCQs

		<p>mother and fetus in pregnancy</p> <ul style="list-style-type: none"> <li>• Interpret TFT's.</li> </ul>		Case presentation/ OPD/ Clinical Methods	
<b>Autoimmune Conditions and Dermatological Conditions</b>		Appraise general effects of Autoimmune conditions and dermatological conditions on mother and fetus		SGD, Self-Directed Learning	OSCE/ SAQs/ MCQs
<b>Neurological Conditions</b>	<b>Epilepsy</b>	Appraise general effects of epilepsy on pregnancy and effects of anti-epileptic medicines on the fetus	Counsel a pregnant patient with epilepsy	SGD, Self-Directed Learning Case presentation/ OPD/ Clinical Methods	OSCE/ SAQs/ MCQs
<b>Drug and Alcohol Misuse/Smoking</b>	Drug and alcohol misuse, Smoking	Appraise general effects of Drug and alcohol misuse, smoking on pregnancy and effects of drugs/alcohol on the fetus	Counsel a pregnant patient about effects of drug abuse/smoking on fetus	SGD, Self-Directed Learning Case presentation/ OPD/ Clinical Methods	OSCE/ SAQs/ MCQs
<b>HIGH RISK INTRA PATUM EVENTS</b>					
<b>Ante Partum Hemorrhage</b>	<ul style="list-style-type: none"> <li>• Differentiation of different causes of Ante partum hemorrhage</li> <li>• Principles of management of: <ul style="list-style-type: none"> <li>○ Placenta praevia</li> <li>○ Abruptio placentae</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Draw a diagram showing position of placenta in major and minor placenta previa</li> <li>• Compare and contrast symptoms and signs found in women with vaginal</li> </ul>	<ul style="list-style-type: none"> <li>• Insert large bore I/V cannula</li> <li>• Interpret a hard copy of ultrasound image of pregnant uterus at greater than 24 weeks and identify site of placenta</li> </ul>	SGD, Self-Directed Learning Case presentation, Clinical Methods, ER	OSCE/ SAQs/ MCQs

	<ul style="list-style-type: none"> <li>○ Incidental bleeding</li> </ul>	<p>bleeding secondary to placental abruption and placenta previa</p> <ul style="list-style-type: none"> <li>● Draw a flow chart of investigations for a patient with ante-partum hemorrhage</li> <li>● Evaluate the investigations and management of patients with ante-partum hemorrhage</li> </ul>	<ul style="list-style-type: none"> <li>● Counsel a woman whose baby has died following placental abruption</li> </ul>		
<b>Pre-maturity and Post Maturity</b>	<p>Diagnosis and management of prematurity Principles of management of:</p> <ul style="list-style-type: none"> <li>● Preterm pre-labour rupture of membranes</li> <li>● Preterm labour</li> <li>● IUD</li> <li>● Postdates and post term pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>● Differentiate between Threatened preterm labour, Preterm pre-labor rupture of membranes and preterm labor</li> <li>● Appraise the principles of diagnosis and management of Threatened preterm labor, Preterm pre-labor rupture of membranes and Preterm labor.</li> <li>● Identify the causes of IUD</li> <li>● Outline the management plan of IUD</li> <li>● Differentiate between postdates and Post term pregnancy and appraise the policy of Induction of labor in each instance</li> </ul>	<ul style="list-style-type: none"> <li>○ Interpret a contractions trace from a CTG</li> <li>○ Interpret the following investigations: <ul style="list-style-type: none"> <li>● C Reactive proteins</li> <li>● White Blood Cell count</li> <li>● Fibronectin vaginal swab</li> <li>● Anicardioli p n antibodies</li> <li>● Urine culture sensitivities and microscopy</li> </ul> </li> <li>○ Counsel a woman whose baby has died in the womb</li> <li>○ Explain to a patient reason for administering antenatal steroids</li> </ul>	SGD, Self-Directed Learning Case presentation, Clinical Methods, ER	OSCE/SAQs/MCQs

			○ Explain to a patient the reason for Induction of labor for Post Term pregnancy		
<b>MALPRESENTATIONS</b>					
<b>Malpresentations</b> <ul style="list-style-type: none"> <li>• <b>Breech Presentation</b></li> <li>• <b>Transverse Lie</b></li> <li>• <b>Brow, Face and Shoulder Presentation</b></li> <li>• <b>Cord Presentation and Prolapse</b></li> <li>• <b>Compound Presentation</b></li> <li>• <b>Malpositions</b></li> </ul>	Diagnosis and principles of management of: <ul style="list-style-type: none"> <li>• Breech presentation</li> <li>• Transverse lie</li> <li>• Brow, face and shoulder presentation</li> <li>• Cord presentation and prolapse</li> <li>• Compound presentation</li> <li>• Malpositions</li> <li>• Persistent occipitoposterior position</li> <li>• Deep transverse arrest</li> </ul>	<ul style="list-style-type: none"> <li>• Appraise breech presentation, its incidence, predisposing factors, diagnosis and principles of management in the antenatal period and in labor</li> <li>• Compare maternal and fetal outcomes in vaginal breech delivery with delivery by Elective Lower Segment Caesarean section</li> <li>• Summarize the principles of diagnosis and management of Brow, Face and Shoulder presentation</li> <li>• Summarize the principles of management of Malpositions</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate types of breech presentation on a mannequin</li> <li>• Identify the fontanelles and diameters on a fetal skull. Assemble the Ventouse apparatus and explain the principles of its application</li> <li>• Counsel a patient with breech presentation about external cephalic version</li> <li>• Counsel a patient with breech presentation requesting vaginal delivery the pros and cons of vaginal breech delivery</li> </ul>	SGD, Self-Directed Learning Case presentation/ OPD	OSCE/ SAQ/ MCQ

**MULTIPLE PREGNANCY**

<b>Multiple Pregnancy</b>	Diagnosis and principles of management in multiple pregnancy and labor	<ul style="list-style-type: none"> <li>• Differentiate between monozygotic and dizygotic twins in terms of mechanism, diagnosis and complications in antenatal period and labor</li> <li>• Appraise the role of clinical examination and ultrasound examination in the diagnosis of multiple pregnancy</li> <li>• Summarize the maternal and fetal complications in pregnancy and labor</li> <li>• Appraise the principles of management in pregnancy and labor and how he/ she will determine zygosity at birth</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret a hard copy of ultrasound picture of twin pregnancy at 12 weeks gestation</li> <li>• Counsel a patient with twin pregnancy regarding her nutrition</li> </ul>	SGD, Self-Directed Learning Case presentation/ OPD	SAQ/ MCQ/ OSCE
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**FETAL GROWTH DISORDERS**

<b>Intra Uterine Growth Restriction and Small for Gestational Age (IUGR/ SGA). Macrosomia</b>	Differentiate between Intra Uterine Growth Restriction and Small for Gestational Age (IUGR/ SGA). Diagnosis and management of fetal Macrosomia	<ul style="list-style-type: none"> <li>• Differentiate between the terms Small for Gestational Age and Intrauterine Growth restriction</li> <li>• Diagnose Intrauterine Growth Restriction through relevant history,</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret plots on a fetal growth curve</li> <li>• Counsel a patient of symmetrical IUGR regarding prenatal diagnosis and prognosis</li> </ul>	SGD, Self Directed Learning Case presentation/ OPD	OSCE/ SAQ/ MCG
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		<p>clinical examination and ultrasound examination</p> <ul style="list-style-type: none"> <li>• Distinguish between symmetrical and asymmetrical IUGR</li> <li>• Compare and contrast etiological factors, pathogenesis, principles of management and prognosis of symmetrical and asymmetrical IUGR</li> <li>• Appraise how he/ she will reach a diagnosis of fetal Macrosomia</li> <li>• Summarize the maternal and fetal complications associated with this condition and how best to avoid them</li> </ul>			
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**LIQUOR VOLUME ABNORMALITIES**

<b>Oligohydramnios and Polyhydramnios</b>	<p>Causes of oligohydramnios and polyhydramnios Diagnosis and management of liquor volume abnormalities</p>	<ul style="list-style-type: none"> <li>• Appraise the diagnosis and the maternal and fetal conditions which can cause polyhydramnios and associated complications</li> <li>• Categorize the causes of oligohydramnios Appraise the diagnostic modalities and how the etiological factors would</li> <li>• modify your management</li> </ul>	<p>Interpret the largest single vertical pool of liquor on a hard copy of an ultrasound scan</p> <p>Counsel a patient of polyhydramnios regarding her discomfort with empathy</p>	<p>SDL, SGD Case presentation/ OPD</p>	<p>SAQ/ MCQ/ OSCE</p>
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### BAD OBSTETRIC HISTORY

<b>Poor pregnancy outcome</b>	Previous history of foetal loss and problems in early pregnancy	<ul style="list-style-type: none"> <li>Identify the possible causes of recurrent foetal loss</li> <li>Critically appraise the factors leading to recurrent foetal loss and means to reduce it</li> <li>Outline the management plan</li> </ul>	Counsel a woman who has had a recurrent fetal loss	CBL/OPD	SAQ/ MCQ/ OSCE
<b>Foetal infections</b>	Foetal infections	Recognize possible causes of foetal infections		Lecture	SAQ/ MCQ/ OSCE
<b>Hydrops Fetalis:</b>	Principles of prevention and management of Rhesus incompatibility	<ul style="list-style-type: none"> <li>Distinguish between immune and non-immune causes of hydrops fetalis</li> <li>Draw a diagram showing the mechanism of Rhesus immunization</li> <li>Appraise how Rhesus immunization can be prevented</li> </ul>	<ul style="list-style-type: none"> <li>Calculate the right dose of anti D injection according gestational age and clinical conditions which dictates its use</li> <li>Counsel a rhesus negative woman who has delivered a rhesus positive baby the reasons why she needs anti-D injection with -in 72 hours of delivery</li> </ul>	SDL, SGD	SAQ/ MCQ/ OSCE

### OBSTETRICAL EMERGENCIES

<b>Obstetrical Collapse and Maternal resuscitation</b>	Causes of obstetrical collapse Principles of diagnosis and management of obstetrical collapse	<ul style="list-style-type: none"> <li>Categorize the obstetric and non-obstetric causes of maternal collapse and explain the general</li> </ul>	<ul style="list-style-type: none"> <li>Insert an airway</li> <li>Insert a large bore cannula</li> <li>Insert a Foleys catheter</li> <li>Interpret an input and output record</li> </ul>	SDL, Case presentation/ ER	SAQ/ MCQ/ OSCE
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	<ul style="list-style-type: none"> <li>• General</li> <li>• specific</li> </ul>	<p>principles of management of obstetric shock</p> <ul style="list-style-type: none"> <li>• Apprise the principles of specific management of the following obstetric emergencies: <ul style="list-style-type: none"> <li>○ Obstetric haemorrhage</li> <li>○ Eclampsia</li> <li>○ Cord Prolapse</li> <li>○ Obstructed labor</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Interpret FBC, Electrolytes, coagulation screen and Blood gases</li> <li>• Monitor pulse, B.P, oxygen saturation, urinary output and conscious state</li> <li>• Counsel a patient's relatives regarding the patient, the proposed management and prognosis</li> </ul>	<p>Clinical Methods, Labour room Role plays</p>	
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**SPECIFIC LEARNING OBJECTIVES IN GYNAECOLOGY**

Core Clinical Concepts/ Themes	Contents	Learning Objectives		Instructional Strategy	Assessment Tool
		At the end of teaching session, the student should be able to			
		Knowledge	Skills/Attitude		

**PUBERTY & ADOLESCENCE**

<b>Puberty &amp; Adolescence</b>	<ul style="list-style-type: none"> <li>• Concept of precocious and delayed puberty</li> <li>• Adolescent Menorrhagia</li> </ul>	<ul style="list-style-type: none"> <li>• Apprise the changes and their sequence of appearance at puberty and describe disorders of puberty like premature and delayed puberty</li> <li>• Apprise the malformations of uterus and vagina their examination and treatment.</li> <li>• Describe the relationship of genital tract abnormalities with urinary tract abnormalities.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the uterus in a hard copy of pelvic USG</li> <li>• Counsel a young women with delayed puberty</li> </ul>	<p>Lecture/CBL/SDL/ bedside training</p>	<p>SAQ/ MCQ/ OSCE</p>
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**SUBFERTILITY & CONTRACEPTION**

<b>Primary and secondary subfertility</b>	Primary and secondary subfertility: <ul style="list-style-type: none"> <li>• Male factors</li> <li>• Female factors</li> <li>• ART</li> </ul> Surgical intervention for subfertility	<ul style="list-style-type: none"> <li>• Differentiate between primary and secondary subfertility and devise a classification for the causes of subfertility</li> <li>• Draw a graph of the changes in serum levels of estrogen, progesterone, LH and FSH during the menstrual cycle</li> <li>• Identify women at risk of tubal damage</li> <li>• Appraise the general principles of treatment of infertile couple</li> </ul>	<ul style="list-style-type: none"> <li>• Take a history from a couple presenting with subfertility</li> <li>• Interpret the following:</li> <li>• Female follicular phase hormonal profile</li> <li>• Female luteal phase progesterone changes</li> <li>• Male semen analysis</li> <li>• Explain the principles of dealing with sensitivity and</li> </ul>	Lecture/CBL/SDL/ bedside training	SAQ/ MCQ/ OSCE
			sympathetically with subfertile couple		
<b>Contraception</b>	<ul style="list-style-type: none"> <li>• Mechanism of action/efficacy of contraceptives</li> <li>• Physiological methods</li> <li>• Reversible methods:                         <ul style="list-style-type: none"> <li>▪ Hormonal</li> <li>▪ Intrauterine devices</li> <li>▪ Barrier methods</li> <li>▪ Permanent methods</li> <li>▪ Emergency Contraception</li> </ul> </li> <li>• WHO medical eligibility criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Categorize methods of contraception</li> <li>• Discuss pros and cons of each with their failure rates and complications</li> <li>• Distinguish between different modes / mechanism of action of different methods</li> <li>• Compare and contrast male and female sterilization</li> </ul>	<ul style="list-style-type: none"> <li>• Explain insertion of IUCD</li> <li>• Counsel and explain the methods of use of oral Contraceptive pills</li> <li>• Explain family planning in terms of social, cultural, economic and regional context</li> </ul>	Lecture/CBL/SDL/ bedside training	SAQ/ MCQ/ OSCE

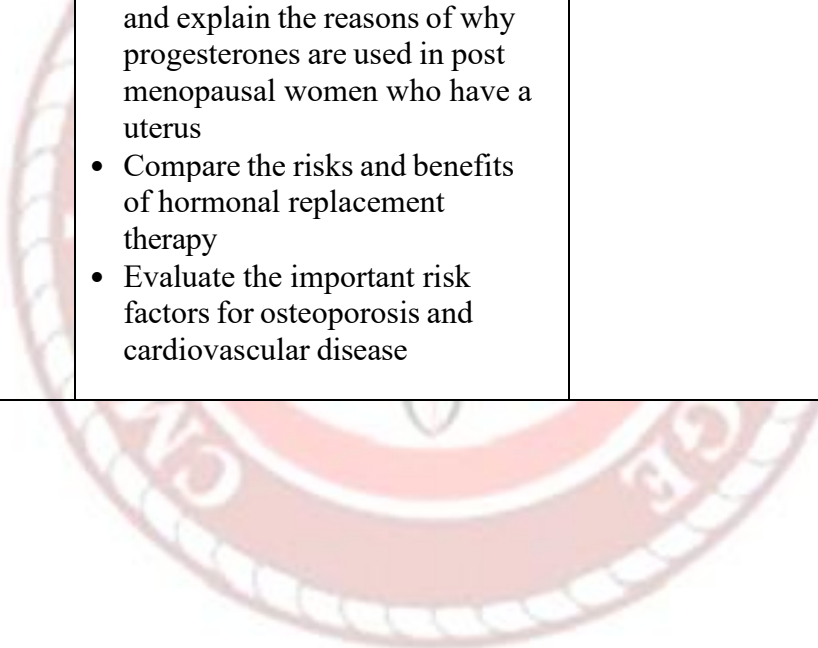
**MENSTRUAL DISORDERS**

<p><b>Heavy Menstrual Bleeding</b></p>	<p>Concept of hypothalamo-pituitary-ovarian-endometrial axis Principles of diagnosis and management of:</p> <ul style="list-style-type: none"> <li>• Heavy menstrual bleeding</li> <li>• Metorrhagia</li> <li>• Abnormal uterine bleeding</li> <li>• Post menopausal bleeding</li> <li>• primary and secondary amenorrhea</li> <li>• Dysmenorrhoea</li> <li>• Post coital bleeding</li> </ul>	<ul style="list-style-type: none"> <li>• Revise the hormonal changes in a menstrual cycle</li> <li>• Formulate a flow diagram for the treatment of heavy menstrual bleeding.</li> <li>• Differentiate between heavy menstrual bleeding and abnormal uterine bleeding/Metorrhagia</li> <li>• List the causes of heavy and irregular menstruation</li> <li>• Outline the management plan</li> </ul>	<ul style="list-style-type: none"> <li>• Take a detailed menstrual history</li> <li>• Assist/ perform:             <ul style="list-style-type: none"> <li>○ Pap smear</li> <li>○ Pipelle endometrial biopsy</li> </ul> </li> <li>• Communicate with the patient with explanation of the condition, treatment options and complications.</li> </ul>	<p>Lecture/CBL/SDL/ bedside training</p>	<p>SEQ/ MCQ/ OSCE</p>
<p><b>Amenorrhea</b></p>		<ul style="list-style-type: none"> <li>• Distinguish primary from secondary amenorrhea</li> <li>• Describe a scheme for classifying the causes of amenorrhea, based on the primary site of problem</li> <li>• Devise a scheme of relevant and appropriate investigations to reach a diagnosis</li> <li>• Appraise the principles of management available for:             <ul style="list-style-type: none"> <li>▪ Hypothalamic dysfunction</li> <li>▪ Pituitary dysfunction</li> </ul> </li> <li>• Ovarian dysfunction Outflow tract abnormalities</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate Body mass Index</li> <li>• Should have observed and be able to describe:             <ul style="list-style-type: none"> <li>○ Transvaginal USG</li> <li>○ Pipelle endometrial biopsy</li> <li>○ Hysteroscopy</li> <li>○ Laparoscopy</li> </ul> </li> <li>• Counsel a woman with amenorrhea.</li> <li>• Describe the ethical issues relevant to the methods available to achieve pregnancy in women with amenorrhea e.g. oocyte donation.</li> </ul>	<p>Lecture/CBL/SDL/ bedside training</p>	<p>SEQ/ MCQ/ OSCE</p>

<b>Post Menopausal Bleeding and Post coital bleeding</b>		Formulate a flow diagram of management of a woman with post menopausal bleeding/ Post coital bleeding	Should have observed and be able to describe: <ul style="list-style-type: none"> <li>• Transvaginal USG</li> <li>• Pipelle endometrial biopsy</li> <li>• Hysteroscopy</li> </ul> Counsel a woman with post menopausal bleeding/ Post coital bleeding about the condition, management and prognosis	Lecture/CBL/SDL/ bedside training	SAQ/ MCQ/ OSCE
<b>PCOs</b>	Diagnosis and management of Polycystic ovarian syndrome	Appraise the principles of management available for PCOs	Counsel a woman with PCOs about the condition, management and prognosis	Lecture/CBL/SDL/ bedside training	SAQ/ MCQ/ OSCE
<b>MISCARRIAGES:</b>					
<b>Miscarriages</b>	<ul style="list-style-type: none"> <li>• Principles of diagnosis and management</li> <li>• Spontaneous miscarriage</li> <li>• Recurrent miscarriage</li> <li>• Gestational trophoblastic disease</li> </ul>	<ul style="list-style-type: none"> <li>• Devise a classification of miscarriages</li> <li>• Differentiate between different types of spontaneous and induced abortions</li> <li>• Critically appraise the treatment available for different types of abortions</li> <li>• Formulate a list of investigations for recurrent pregnancy loss</li> <li>• Appraise the principles of management of benign and malignant Trophoblastic disease</li> </ul>	<ul style="list-style-type: none"> <li>• Take a relevant gynecological history in a woman complaining of vaginal bleeding and/ or abdominal pain in early pregnancy</li> <li>• Identify a hard copy of USG for complete hydatiform Mole</li> <li>• Counsel a patient following a spontaneous abortion</li> <li>• Counsel a patient regarding follow up for benign Trophoblastic disease</li> </ul>	Lecture/CBL/SDL/ bedside training	SEQ/ MCQ/ OSCE

**MENOPAUSE AND OSTEOPOROSIS:**

<b>Menopause and Osteoporosis:</b>	Diagnosis and management of menopause and osteoporosis.	<ul style="list-style-type: none"> <li>• Appraise menopause and its causes</li> <li>• Appraise the hormonal and physical changes that occur during climacteric</li> </ul>	<ul style="list-style-type: none"> <li>• Take a detailed history of climacteric problems and identify the risk factors for osteoporosis and cardiovascular disease</li> </ul>	Lecture/CBL/SDL/ bedside training	SEQ/ MCQ/ OSCE
		<ul style="list-style-type: none"> <li>• Classify the symptoms of climacteric in to short term and medium term</li> <li>• Critically appraise the different regimens of hormonal therapy and explain the reasons of why progesterones are used in post menopausal women who have a uterus</li> <li>• Compare the risks and benefits of hormonal replacement therapy</li> <li>• Evaluate the important risk factors for osteoporosis and cardiovascular disease</li> </ul>	<ul style="list-style-type: none"> <li>• Counsel a patient regarding menopausal issues and hormonal therapy</li> </ul>		



**URINARY PROBLEMS:**

<p><b>Urinary incontinence</b></p>	<ul style="list-style-type: none"> <li>• Urinary incontinence</li> <li>• Detrusor Instability</li> <li>• Urodynamic Stress</li> <li>• Incontinence overflow incontinence</li> <li>• True Incontinence</li> </ul>	<ul style="list-style-type: none"> <li>• Classify urinary incontinence and differentiate between detrusor instability and urodynamic stress incontinence</li> <li>• Categorize the symptoms that are associated with:               <ul style="list-style-type: none"> <li>• Urodynamic stress incontinence</li> <li>• Detrusor instability</li> <li>• Voiding difficulty</li> <li>• True incontinence</li> </ul> </li> <li>• Critically appraise the role of urodynamic investigations for the diagnosis of cause of urinary incontinence</li> </ul>	<ul style="list-style-type: none"> <li>• Identify a urodynamic trace</li> <li>• Explain the taboos related to urinary incontinence.</li> </ul>	<p>Lecture/CBL/SDL/ bedside training</p>	<p>SAQ/ MCQ/ OSCE</p>
		<ul style="list-style-type: none"> <li>• Appraise the principles of management of:               <ul style="list-style-type: none"> <li>• Urodynamic stress incontinence</li> <li>• Detrusor instability</li> <li>• Voiding difficulty</li> </ul> </li> </ul>			
<p><b>Urinary tract infections</b></p>	<p>Diagnosis and management of UTIs</p>	<p>Outline the management plan on the basis of its etiology</p>	<ul style="list-style-type: none"> <li>• Take relevant history</li> <li>• Perform clinical examination</li> </ul>	<p>Lecture/CBL/SDL/ bedside training</p>	<p>SEQ/ MCQ/ OSCE</p>

**UTEROVAGINAL PROLAPSE:**

<b>Uterovaginal Prolapse:</b>	Principles of diagnosis and management of uterovaginal prolapse. Concept of POP-Q classification	<ul style="list-style-type: none"> <li>• Differentiate between:                             <ul style="list-style-type: none"> <li>○ Cystocele and urethrocele</li> <li>○ Rectocele and enterocele</li> <li>○ Vaginal vault prolapse and uterine prolapse.</li> </ul> </li> <li>• Classify the uterine prolapse according to severity</li> <li>• Appraise the methods of treatment of uterovaginal prolapse and select factors that are important in the choice of best treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Place a woman in Sim's position</li> <li>• Should have observed the examination of prolapse</li> <li>• Able to describe the uses of Sim's speculum</li> <li>• Counsel a patient with uterovaginal prolapse</li> </ul>	Lecture/CBL/SDL/ bedside training	SEQ/ MCQ/ OSCE
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**ABDOMINOPELVIC PAIN:**

<b>Acute abdominopelvic pain</b>	Diagnosis and management of acute abdominal pain due to: <ul style="list-style-type: none"> <li>• Ectopic pregnancy</li> <li>• Ovarian cyst accident</li> <li>• first trimester d miscarriage</li> </ul>	<ul style="list-style-type: none"> <li>• Categorize the causes of acute onset of pelvic pain</li> <li>• Compare and contrast the signs and symptoms of ectopic pregnancy, ovarian cyst accident and first trimester d miscarriage</li> </ul>	<ul style="list-style-type: none"> <li>• Take history and emanation of patient with acute abdomen</li> <li>• The student should have observed and able to describe transvaginal pelvic ultrasound</li> </ul>	Lecture/CBL/SDL/ bedside training	SEQ/ MCQ/ OSCE
	Principles of diagnosis and management of chronic pelvic pain	<ul style="list-style-type: none"> <li>• Appraise the medical and surgical methods of treatment of ectopic pregnancy</li> <li>• Construct a flow diagram of management of ovarian cyst presenting with acute pelvic pain</li> </ul>			

<p><b>Chronic abdominopelvic pain</b></p>	<p>Chronic pelvic pain</p> <ul style="list-style-type: none"> <li>• Dysmenorrhea</li> <li>• Endometriosis</li> </ul> <p>Principles of diagnosis and management of endometriosis causing:</p> <ul style="list-style-type: none"> <li>• Pelvic pain</li> </ul> <p>Infertility</p>	<ul style="list-style-type: none"> <li>• Categorize the gynaecological and non gynaecological causes of chronic pelvic pain</li> <li>• Differentiate between primary and secondary dysmenorrhea and describe the differences in symptomatology of each</li> <li>• Appraise the treatment available for primary dysmenorrhea</li> <li>• Point out the investigations that may be undertaken for chronic pelvic pain and explain the reasons for each.</li> <li>• Explain what is meant by endometriosis along with theories of its etiology and possible associated signs and symptoms.</li> <li>• Appraise the medical and surgical treatment available for endometriosis.</li> </ul>	<p>The students should have observed and be able to describe the following procedures:</p> <ul style="list-style-type: none"> <li>• Laparoscopy</li> <li>• TVS P3</li> </ul> <p>Counsel and explain a patient the reasons for laparoscopy in the management of her pelvic pain. A3</p>	<p>Lecture/CBL/SDL/ bedside training</p>	<p>SEQ/ MCQ/ OSCE</p>
		<ul style="list-style-type: none"> <li>• Evaluate the policy of laparoscopy for all women with chronic pelvic pain.</li> </ul>			

**GENITAL TRACT INFECTIONS:**

<b>Vaginal Discharge/ Lower genital tract infections</b>	Concept of etiological factors, clinical diagnosis and management of: <ul style="list-style-type: none"> <li>• Vaginal Discharge</li> <li>• Lower genital tract infections</li> </ul>	<ul style="list-style-type: none"> <li>• Classify the causes of vaginal discharge</li> <li>• Describe the physiology, pathology and clinical picture of various types of vaginal discharge</li> <li>• Summarize methods of diagnosis of various types of vaginal discharge</li> </ul>	<ul style="list-style-type: none"> <li>• Elicit a sexual history from a patient giving consideration to the ethical and communication skills aspect.</li> <li>• Take HVS</li> <li>• Outline the issues of confidentiality</li> </ul>	Lecture/CBL/SDL/ bedside training	SEQ/ MCQ/ OSCE
<b>Upper genital tract infections</b>	Concept of etiological factors, clinical diagnosis and management of: Upper genital tract infections	Appraise the symptoms of presentation, criteria of diagnosis, relevant investigations and principles of treatment as well as prevention of PID	<ul style="list-style-type: none"> <li>• Interpret lab report of: <ul style="list-style-type: none"> <li>○ Urine examination</li> <li>○ HVS</li> </ul> </li> </ul>	Lecture/CBL/SDL/ bedside training	SEQ/ MCQ/ OSCE

**GYNAECOLOGICAL TUMORS/SEXUAL DISORDERS:**

<b>Benign</b>	<b>Benign:</b> <ul style="list-style-type: none"> <li>• Fibroid uterus</li> <li>• Benign tumors of Ovary</li> </ul>	<ul style="list-style-type: none"> <li>• Appraise the epidemiology, etiology, clinical presentation and principles of management of fibroid uterus.</li> <li>• Classify common benign tumors of ovary along with their clinical presentation and principles of management.</li> </ul>	Identify fibroids on a hard copy of USG. <ul style="list-style-type: none"> <li>• Explain the association of fibroid with infertility to a patient</li> </ul>	Lecture/CBL/SDL/ bedside training	SAQ/ MCQ/ OSCE
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<b>Malignant</b>	<b>Malignant:</b> <ul style="list-style-type: none"> <li>• Cervical cancer</li> <li>• Endometrial cancer</li> <li>• Ovarian cancer</li> <li>• Screening of gynecological cancer</li> <li>• Prevention</li> <li>• Radiotherapy and chemotherapy for uterine and ovarian cancers</li> </ul>	<b>Appraise the management of important gynaecological cancers namely:</b> Cervical squamous carcinoma, Endometrial adenocarcinoma, Surface epithelial tumors of ovary, Vulval & vaginal cancers along with their basic clinical pathology including principles of tumors staging.	<ul style="list-style-type: none"> <li>• Perform a cervical smear.</li> <li>• Explain the significance of pap smear result and appropriate management.</li> </ul>	Lecture/CBL/SDL/ bedside training	SAQ/ MCQ/ OSCE
Sexual disorders	<ul style="list-style-type: none"> <li>• Sexually transmitted infections(HIV)</li> <li>• Sexual dysfunction disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret the investigations of patient with sexually transmitted disease</li> <li>• Appraise the management of sexually transmitted infections(HIV) and sexual dysfunction disorders</li> </ul>	Counsel a woman with sexually transmitted disease and sexual dysfunction disorders		

**Procedural skills to be acquired in clinical training: Year IV**

<b>Level of Competency</b>	<b>Procedure</b>
Observe or ideally assist	Female Urinary catheterization
Observe or ideally assist	Passage of Nasogastric Tube
Observe or ideally assist	Surgical Dressing
Observe or ideally assist	Preparation of iron sucrose solution
Observe or ideally assist	Removal of sutures
Performs under direct supervision	Intra Muscular Injection
Performs under direct supervision	Subcutaneous Injection
Performs under direct supervision	Obstetrical examination
Performs under direct supervision	Intravenous Line

**Year V**

<b>Level of Competency</b>	<b>Procedure</b>
Observe or ideally assist	Female Urinary catheterization
Observe or ideally assist	Passage of Nasogastric Tube
Observe or ideally assist	Surgical Dressing
Observe or ideally assist	Preparation of iron sucrose solution
Observe or ideally assist	Removal of sutures
Observe or ideally assist	MVA
Observe or ideally assist	Pipelle
Observe or ideally assist	HSG
Observe or ideally assist	Conduct of delivery
Observe or ideally assist	Stitching of episiotomy
Observe or ideally assist	Scrubs and assists in C-section, hysterectomy and laparotomy
Observe or ideally assist	Wound closure(skin)
Observe or ideally assist	Performing CTG and its interpretation
Observe or ideally assist	Vaginal placement of prostaglandins
Observe or ideally assist	Cervical Foley

Observe or ideally assist	Trans abdominal and vaginal Ultrasound
Observe or ideally assist	Assisted Vaginal delivery
Observe or ideally assist	Cervical and vulval biopsy
Observe or ideally assist	Vaginal packing of UV prolapse
Observe or ideally assist	Bimanual uterine massage
Observe or ideally assist	Balloon tamponade
Observe or ideally assist	Colposcopy
Performs under direct supervision	Intra Muscular Injection
Performs under direct supervision	Subcutaneous Injection
Performs under direct supervision	Obstetrical examination
Performs under direct supervision	Intravenous Line
Performs under direct supervision	HVS
Performs under direct supervision	Pap smear
Counsel and demonstrate	Position for breast feeding



# Paediatrics



### 1. Context/Preamble:

Paediatrics is an integral part of the undergraduate curriculum. Basics of paediatrics is established in the initial years through contribution from basic sciences. It is being taught as a major subject in last two years.

Aim is to equip the average student with minimum essential knowledge, skill and attitude so as to enable them to manage patients appropriately.

### 2. Course Outcomes

To equip them with essential knowledge, skill and attitude in order to enable them to:

- a. Diagnose common Pediatric problems, suggest and interpret appropriate investigation, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management.
- b. Suggest preventive measure for the common public health problem in the community
- c. Perform relevant procedures
- d. Convey relevant information and explanations accurately to patients, families, colleagues and other professionals
- e. Participate effectively and appropriately in an inter professional health care team
- f. Understand medical ethics and its application pertaining to paediatrics and maintain the confidentiality of the patient.
- g. Adapt research findings appropriately to the individual patient situation or relevant patient population

### 3. Expectations from students

- a. Be professional in behavior and dress code when communicating with patient and his/her family
- b. Respect patient and their family's wishes along with social and cultural norms
- c. Examine patients with their permission in the presence of chaperon
- d. Inculcate behavior of regular self-learning for academic sessions & clinical problem encounters
- e. Keep yourself abreast with current relevant information about your patients
- f. Document and update patient's progress in his/her file regularly

### 4. Teaching hours - Paeds

Sessions	YEARS	CONTACT HOURS
2020-2021	V	220
2021-2022	IV	60
2022-2023	III	25
2023-2024	II	10

### 5. Learning Strategies

- Interactive lectures
- Teaching Ward Rounds
- Case presentations
- Case based Discussion
- Short cases in OPD
- Bedside Discussion
- Small Group Discussion
- Team-based learning
- Workshops: Three Workshops (Neonatal resuscitation, fluid & electrolyte balance and Oxygen therapy) will be held during the rotation. In addition, students will also attend a Basic Life Support (BLS) workshop (**only attendance is required to get marks**)
- Self-learning Activities
- Skill Lab Activity

### 6. Venues for learning opportunities

- a. Outpatient clinic
- b. Emergency room
- c. Inpatient ward
- d. Tutorial room

e. Libraries including audio-visuals

## 7. Specific Learning Outcomes

Learning outcomes specific to the Paediatrics course have been tabulated below in the table of specification and matched with educational strategies.

## 8. Implementation of curriculum

\*The university will give details of all content including learning outcomes and table of specifications, distribution of which across the three years and rotations is upon the discretion of the medical college/institute. Rotation plan is devised by the institute itself

## 9. Recommended Readings

- Basis of Paediatrics
- Current Pediatric Diagnosis & Treatment
- Harriet & Lane Handbook of Paediatrics
- Paediatrics illustrated text book



Themes	Topics	Learning Outcomes		Educationa l Strategies	Weighting	Assessment Tools
		Knowledge	Skill/Attitude			
<b>IMMUNIZATION AND NUTRITION</b>						
<b>Immunization</b>	<ul style="list-style-type: none"> <li>EPI Schedule</li> <li>Vaccine administration</li> </ul>	<p>Students should be able to</p> <ul style="list-style-type: none"> <li>Discuss the importance of immunization in healthcare field and identify vaccine preventable diseases.</li> <li>Tabulate the EPI immunization schedule</li> <li>Recognize important global vaccine preventable diseases.</li> <li>Discuss the childhood immunization plan according to age of child.</li> </ul>	Administer EPI vaccine to infants	Lecture demonstration in OPD		MCQ/SAQ/OSCE
<b>Nutrition</b>	<ul style="list-style-type: none"> <li>Basis of Pediatric Nutrition</li> <li>Breast feeding, infant feeding, weaning</li> <li>Protein Energy Malnutrition</li> <li>IMNCI Malnutrition</li> <li>Rickets</li> <li>Micronutrient/ vitamin deficiency</li> </ul>	<ul style="list-style-type: none"> <li>Assess nutritional status based on feeding history and clinical examination</li> <li>Interpret anthropometry, basic hematological and biochemical indices to identify basic dietary deficiency.</li> <li>Identify the causes, clinical presentation of child with PEM.</li> <li>Discriminate the assessment findings and laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Perform mid upper arm circumference and skin fold thickness to estimate body composition.</li> <li>Take weight, length, OFC of children.</li> <li>Calculate BMI</li> <li>advise appropriate nutritional measures for healthy and sick children (Breast feeding, avoidance of</li> </ul>	Bedside Teaching CBL  Lecture Demonstration in OPD		Short case Long Case OSCE

		<p>findings of kwashiorkor and marasmus.</p> <ul style="list-style-type: none"> <li>• Formulate the treatment plan for PEM.</li> <li>• Identify the causes and clinical signs of micronutrient deficiency</li> </ul>	<p>bottle, proper weaning)</p> <ul style="list-style-type: none"> <li>• Identify signs of micronutrient deficiencies</li> <li>• Doses of vitamins/ micronutrients for treatment of deficiency and maintenance therapy</li> </ul>			
<b>GROWTH AND DEVELOPMENT</b>						
<b>Genetics</b>	<p>Patterns of inheritance</p> <p>Down syndrome</p> <p>Common genetic disorder/malformation</p>	<ul style="list-style-type: none"> <li>• Recall Patterns of inheritance</li> <li>• Diagnose Down Syndrome</li> <li>• Diagnose common malformations</li> </ul>		<p>Bedside Teaching</p> <p>CBL</p> <p>Lecture</p> <p>Demonstration in OPD</p>		MCQ/SAQ/OSCE
<b>Growth and development</b>	<ul style="list-style-type: none"> <li>• Developmental Milestones</li> <li>• Anthropometry</li> </ul>	<p>Student should be able to</p> <ul style="list-style-type: none"> <li>• Recognize growth and development maturation.</li> <li>• Justify use the tools for measuring growth and development.</li> <li>• Identify the genetic, nutritional and environmental factors that can influence child growth and development.</li> </ul>	<ul style="list-style-type: none"> <li>• Plot weight and height on centile charts</li> <li>• To identify age appropriate centile charts.</li> <li>• Demonstrate use of weight and height to monitor growth and development.</li> <li>• Demonstrate effective skills aspects when communicating with children of various ages and family caregivers</li> </ul>	<p>Lecture demonstration in OPD</p>		<p>MCQs</p> <p>SEQs</p> <p>OSCE</p>

## RESPIRATORY SYSTEM

<b>Respiratory Diseases</b>	<p>Stridor</p> <p>Diphtheria</p> <p>Pertussis</p> <p>ARI (Acute respiratory infections)</p> <p>IMNCI</p> <p>Guidelines</p> <p>Asthma</p> <p>Pneumonia</p> <p>Tuberculosis (Pulmonary)</p> <p>Bronchiolitis</p> <p>Pleural effusion</p> <p>Cystic fibrosis</p> <p>Foreign body aspiration</p>	<ul style="list-style-type: none"> <li>• Student should be able to</li> <li>• Discuss the clinical presentation and common etiology of acute respiratory infections.</li> <li>• Generate differential diagnosis and choose appropriate lab investigations for acute respiratory infections.</li> <li>• Devise management plan for pneumonia, para pneumonic effusions and empyema.</li> <li>• Justify factors that predispose children to TB.</li> <li>• Interpret laboratory diagnosis and investigations for diagnosing TB.</li> <li>• Manage the Complications of TB in children.</li> <li>• Differentiate between pertussis and diphtheria.</li> <li>• Diagnose acute exacerbations of asthma</li> <li>• Propose management plan for acute exacerbation of asthma.</li> <li>• Discuss the steps of asthma management according to GINA guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between stridor and wheeze.</li> <li>• Perform bedside examination of children with diphtheria and pertussis, TB using the necessary precautionary measures</li> <li>• Perform BCG vaccination</li> <li>• Identify BCG scars</li> <li>• Demonstrate technique of inhaler use to patients care giver.</li> </ul>	<p>Lecture</p> <p>CBL</p> <p>Bedside</p> <p>Oxygen therapy workshop</p>	<p>Short case</p> <p>Long case</p> <p>SAQs</p>
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## INFECTIONS

<b>Infections</b>	<ul style="list-style-type: none"> <li>• Measles (Plus IMNCI)</li> <li>• Mumps</li> <li>• Chickenpox</li> <li>• Rheumatic Fever</li> <li>• Infective Endocarditis</li> <li>• Malaria/ cerebral malaria (+IMNCI)</li> <li>• Enteric Fever</li> <li>• Meningitis</li> <li>• Encephalitis</li> <li>• Poliomyelitis</li> <li>• Croup</li> <li>• Tetanus</li> <li>• AGE</li> <li>• Ear infections</li> <li>• HIV</li> <li>• Dengue</li> <li>• Rabies</li> </ul>	<ul style="list-style-type: none"> <li>• Recognize the incidence and etiology of Measles, Mumps and Rubella.</li> <li>• Identify the clinical presentation of Enteric fever.</li> <li>• Develop management plan for enteric fever</li> <li>• Develop management plan for Encephalitis, Poliomyelitis, Croup, Tetanus and AGE</li> <li>• Develop management plan for suspected Enteric fever</li> <li>• Elaborate complications and Preventive measures of Enteric fever.</li> <li>• Correlate pathological changes induced by malarial parasite to the clinical presentation and complications of different types of malaria in children.</li> <li>• Develop management plan for Malaria in children</li> <li>Identify the clinical presentation of HIV</li> <li>• infection in children</li> </ul>	<ul style="list-style-type: none"> <li>• Perform Immunization</li> </ul>	CBL  Lecture Demonstration in OPD	MCQs  SEQs  Short case Long case
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## GASTROINTESTINAL TRACT

<b>Gastroenterology</b>	<ul style="list-style-type: none"> <li>• Acute Gastroenteritis</li> <li>• IMNCI Diarrhoea</li> <li>• Recurrent abdominal pain</li> <li>• Acute hepatitis</li> <li>• Chronic Liver Disease</li> <li>• Chronic Diarrhoea</li> <li>• Dysentery</li> <li>• Celiac Disease</li> <li>• Malabsorption</li> <li>• Worm infestation</li> <li>• Giardia</li> <li>• Amoebiasis</li> <li>• Pharyngitis, upper respiratory tract infections</li> <li>• Otitis media (plus IMNCI)</li> </ul>	<ul style="list-style-type: none"> <li>• The student should be able to</li> <li>• Differentiate between organic and inorganic causes of recurrent abdominal pain</li> <li>• Identify signs and symptoms of hepatitis and hepatic encephalopathy</li> <li>• Identify the clinical presentation of malabsorption.</li> <li>• Identify the signs and symptoms of gluten enteropathy/ coeliac disease</li> <li>• Identify the clinical presentation of Worms infestation, Giardia and Amoebiasis</li> <li>• Describe the treatment options of Worms infestation, Giardia and Amoebiasis</li> </ul> <p>Correlate the common causes of diarrhoea to the pathophysiological changes seen in acute and chronic diarrhoea.</p>	<ul style="list-style-type: none"> <li>• Demonstrate use of hand hygiene</li> <li>• Recognize jaundice in children</li> <li>• Plan management of diarrhoea according to WHO guidelines.</li> </ul>	<p>Lectures</p> <p>CBLs</p> <p>Ward Teaching</p>		<p>SEQs</p> <p>MCQs</p>
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**NEONATOLOGY**

<p><b>Neonatology</b></p>	<ul style="list-style-type: none"> <li>• Normal newborn</li> <li>• Common birth injuries</li> <li>• Infant of diabetic mother</li> <li>• Neonatal Jaundice</li> <li>• Neonatal Sepsis</li> <li>• Low birthweight/ Preterm</li> <li>• Neonatal Convulsions</li> <li>• Vomiting in newborn</li> <li>• Resuscitation of Newborn</li> <li>• Respiratory disorders of newborn</li> <li>• Birth Asphyxia</li> <li>• Hemorrhagic diseases of the newborn</li> <li>• TORCH infections</li> <li>• Respiratory Distress Syndrome</li> <li>• Necrotizing Enterocolitis</li> <li>• Hypoxic Ischaemic Encephalopathy</li> </ul>	<ul style="list-style-type: none"> <li>• demonstrate understanding of the normal growth of newborn</li> <li>• Identify need for resuscitation in newborn and risks of birth asphyxia</li> <li>• Explain APGAR scoring system</li> <li>• Recognize signs and symptoms of neonatal jaundice.</li> <li>• Plan treatment of neonatal jaundice and its complications of neonatal jaundice</li> <li>• Devise treatment plan for neonatal convulsions based on the etiology.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate stepwise resuscitation protocol in newborn</li> <li>• Perform initial steps of resuscitation</li> <li>• Perform ambu bagging and ventilation</li> <li>• Perform cardiac compressions in neonates</li> <li>• Recognize jaundice in neonates</li> <li>• Recognize signs of bilirubin encephalopathy</li> <li>• Identify minor &amp; major malformations in neonates</li> </ul>	<p>Lectures</p> <p>CBLs</p> <p>Workshops (Resuscitation)</p>		<p>MCQs</p> <p>SEQs</p> <p>TOAC</p> <p>S</p>
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## CARDIOLOGY

<b>Congenital and Acquired Heart Disease</b>	<ul style="list-style-type: none"> <li>• Acyanotic Heart Diseases</li> <li>• Cyanotic heart disease</li> <li>• Tetralogy of Fallot</li> <li>• CCF in children</li> <li>Rheumatic Heart Disease</li>   <li>cardiomyopathy</li> </ul>	<p><b>Student should be able to</b></p> <ul style="list-style-type: none"> <li>• Differentiate between cyanotic and acyanotic heart diseases</li> <li>• Correlate pathophysiology of pediatric CCF to its clinical presentation.</li> <li>• Identify common pediatric cardiac failure syndromes</li> <li>• Discuss the treatment of CCF</li> </ul> <p>Identify clinical features of rheumatic heart disease</p>	<ul style="list-style-type: none"> <li>• Identify clinical signs of CCF in children</li> <li>• Recognize common types of murmurs</li> </ul>	<p>Lectures</p> <p>CBLs</p> <p>Bedside Learning</p>	<p>MCQs</p> <p>SAQs</p> <p>Long case</p> <p>Short case</p>
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## CENTRAL NERVOUS SYSTEM

<b>CNS Diseases</b>	<ul style="list-style-type: none"> <li>• Febrile Seizures</li> <li>• Epilepsy</li> <li>• Meningitis</li> <li>• Cerebral Palsy</li> <li>• Acute Flaccid Paralysis</li> <li>• Ataxia &amp; movement disorders</li> <li>• Neurodegenerative disorders</li> <li>• Neuromuscular disorders</li> <li>Floppy infant</li> </ul>	<p>Student should be able to</p> <ul style="list-style-type: none"> <li>• Identify diagnostic criteria for febrile, afebrile seizures and status epilepticus.</li> <li>• Recognize trends related to epilepsy and seizure management.</li> <li>• Identify different types of CP</li> <li>• Identify various causes of meningitis in different age groups</li> <li>• Plan management of meningitis in children</li> <li>• Recognize various forms of acute flaccid paralysis</li> <li>• Identify Ataxia &amp; movement disorders, Neuromuscular</li> </ul>	<ul style="list-style-type: none"> <li>• Recognize tonic/clonic epileptic seizure</li> <li>• Manage seizures in hospital setting</li> <li>• Perform lumbar puncture</li> <li>• Examine motor system of children</li> <li>Identify hypotonia on examination</li> </ul>	<p>Lectures</p> <p>CBLs</p> <p>Bedside</p>	<p>MCQs</p> <p>SEQs</p> <p>Long case short cases</p>
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		disorders and Neurodegenerative disorders				
		<ul style="list-style-type: none"> <li>Recognize hypotonia in children</li> </ul> <p>To enlist causes of hypotonia in children</p>				
<b>Psychological Paediatrics</b>	Enuresis, Encopresis, hyperactivity, Dyslexia, attention deficit order, child abuse, right of child	<ul style="list-style-type: none"> <li>Recognize these disorders in children</li> <li>To enlist causes of these disorders in children</li> </ul>		Lectures CBLs Bedside		MCQs SEQs Long case short cases
<b>ENDOCRINOLOGY</b>						
<b>Endocrinology</b>	<ul style="list-style-type: none"> <li>Diabetes Mellitus</li> <li>DKA</li> <li>Hypothyroidism</li> <li>Short stature</li> <li>Addison disease</li> <li>Cushing Disease</li> <li>Congenital adrenal hyperplasia</li> </ul>	The student should be able to: - <ul style="list-style-type: none"> <li>Identify common endocrinological diseases</li> </ul> <p>Develop management plans of short stature due to various causes</p>	Perform anthropometry and plot it on growth charts	Lectures CBL		MCQs SEQs Short cases
<b>BLOOD</b>						
<b>Hematology</b>	Common anemias (IDA, etc.) (plus IMNCI anemia) Thalassemia	The student should be able to <ul style="list-style-type: none"> <li>Explain classification and causes of anaemias.</li> <li>Classify bleeding disorders in children</li> </ul>	<ul style="list-style-type: none"> <li>Identify pallor, lymphadenopathy, visceromegaly in children on clinical examination</li> <li>Clinically differentiate</li> </ul>	CBL Lectures Bedside Teaching		MCQs SAQs Long case

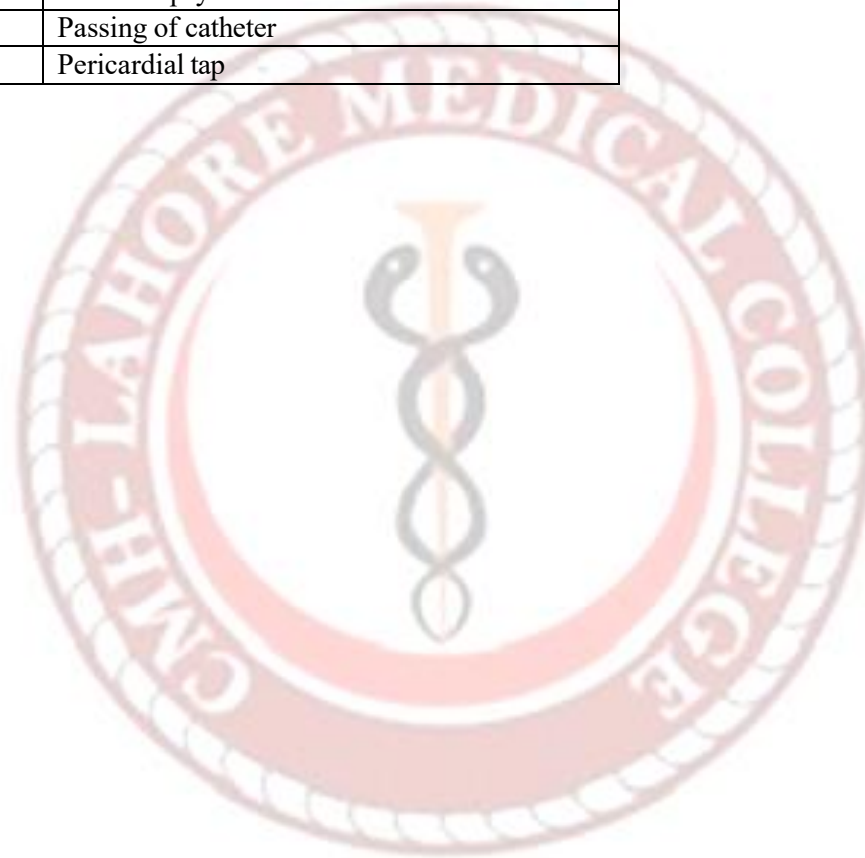
	Hemolytic anemias G6PD deficiencies Hereditary Spherocytosis Bleeding disorders Aplastic anemia ITP	<ul style="list-style-type: none"> <li>• Generate differential diagnosis based on Interpretation of investigations</li> <li>• Discuss management of anemias with special reference to nutritional rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• between petechiae, bruises and purpura.</li> <li>• Counsel mothers on proper nutrition</li> </ul>			
<b>Malignancies of childhood</b>	ALL AM L CM L CLL Lymphoma <ul style="list-style-type: none"> <li>• Neuroblastoma</li> <li>• Wilms tumour</li> </ul>	<p>The student should be able to</p> <ul style="list-style-type: none"> <li>• Describe the epidemiology of childhood malignancies</li> <li>• Identify different types of malignancies in children</li> <li>• Recognize the clinical presentation of the most common pediatric cancers</li> <li>• Interpret laboratory findings indicative of a possible cancer diagnosis</li> <li>• Determine the approaches to cancer treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Perform the clinical assessment of a child with cancer</li> </ul>	Lectures Bedside teaching		MCQs SEQs
<b>NEPHROLOGY/ UROLOGY</b>						
<b>Renal Diseases</b>	<ul style="list-style-type: none"> <li>• UTI</li> <li>• Nephrotic Syndrome</li> <li>• AKI</li> <li>• CKD</li> <li>• APSGN</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate nephrotic and nephritic syndromes</li> <li>• Manage nephrotic and nephritic syndrome according to Interpretation of initial investigations</li> </ul>	<ul style="list-style-type: none"> <li>• Perform and interpret dipstick urine</li> <li>• Measure Blood Pressure of a child.</li> </ul>	CBL Bedside Teaching Lectures		MCQs SEQs Short & Long case
		<ul style="list-style-type: none"> <li>• Recognize complications of common renal diseases in children.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of child with edema.</li> </ul>			

Poisoning						
<b>Childhood Poisoning</b>	Poisonings Snake bite	<ul style="list-style-type: none"> <li>Differentiate the various types of poisoning and their signs and symptoms</li> <li>Define the goals of treatment</li> </ul> <p>Appraise the pharmacological basis for enhancing elimination of drugs and use of specific antidotes</p>	<ul style="list-style-type: none"> <li>Perform stomach lavage in children with poisonings</li> </ul>	Lectures Bedside Teaching		MCQs
Paediatrics Surgery						
<b>Paeds Surgery</b>	Intestinal atresia Intussusception Hernia Tracheo Esophageal Fistula Hirschsprung Disease TEV DDH Cleft lip & Palate Vesico ureteral reflux, pyloric stenosis, myelomeningocele, hydrocephalus, birth trauma	To identify the management of these diseases	<ul style="list-style-type: none"> <li>Recognize</li> <li>TEV</li> <li>DDH</li> <li>Cleft lip &amp; palate</li> <li>myelomeningocele, hydrocephalus in children</li> </ul>	Lecture Bedside Teaching		<ul style="list-style-type: none"> <li>Short case</li> <li>TOACS</li> </ul>
<b>Bone and Rheumatologic disorders</b>	Osteomyelitis Juvenile Idiopathic Arthritis (JIA) Kawasaki Disease SLE					

**Procedural skills:**

**Observe the Following Procedures:**

Lumbar Puncture	Pericardiocentesis
Bone marrow aspiration	Liver Biopsy
Supra pubic puncture	Renal biopsy
Subdural tap	Passing of catheter
Thoracocentesis	Pericardial tap



# Clinical Skills in Medicine & Allied (NUMS MBBS Curriculum 2025)

## Levels of Student Engagement in Clinical Procedures:

- Observer status (O)
- Assistant status (A)
- Perform under supervision (PS)
- Perform independently (PI)

Sr #	Clinical Skills	Level Final Year MBBS
<b>1.</b>	<b>Course Title: CARDIOLOGY</b>	
	<b>CVS examination</b> <b>Systemic &amp; relevant general physical</b>	<b><u>PI</u></b>
	<b>CVP placement</b>	<b><u>A</u></b>
	<b>ETT placement</b>	<b><u>A</u></b>
	<b>ECG</b>	<b><u>A</u></b>
	<b>How to apply cardiac monitor</b>	<b><u>PI</u></b>
	<b>Exercise Treadmill Test</b>	<b><u>O</u></b>
	<b>Pacemaker placement</b>	<b><u>O</u></b>
	<b>Defibrillator use</b>	<b><u>PS</u></b>

Thallium Scan	<u>O</u>
Cardiac catheterization	
Angiography	

<b>2.</b>	<b>Course Title: Endocrinology &amp; Metabolic Disorders</b>	
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Systemic & relevant general physical Examination	PI
BP recording	PI
Glucometer Use	PI
Insulin Injection Technique	PI

<b>3.</b>	<b>Course Title: Pulmonology</b>	
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Respiratory system examination Systemic & relevant General physical	PI
Inhaler Technique & Peak Flow Meter	PI
Nebulization	PS
Use of pulse oximeter	PI
Pleural Tap	A
Pleural Biopsy	O
How to initiate O <sub>2</sub> therapy	PS
Endotracheal suction	PS
Under water seal aspiration	O
Pulmonary Function Tests/Spirometry	PS

	Bronchoscopy	O
<b>4.</b>	<b>Course Title: Nephrology</b>	
	Relevant Systemic & General Physical examination	PI
	Peritoneal Dialysis	O
	Double Lumen Catheter Placement	O
	Haemodialysis	O
	Renal Biopsy	O
<b>5.</b>	<b>Course Title: GASTROENTROLOGY</b>	
	GIT Systemic & Relevant General Physical Examination	PI
	Nasogastric tube placement	A
	Sangstaken Tube placement	O
	Ascetic tap	A
	Endoscopy ,Colonoscopy, ERCP	O
	Liver Biopsy	O
<b>6.</b>	<b>Course Title: NEUROLOGY</b>	
	CNS Examination Systemic & Relevant General Physical	PI
	Lumbar puncture	A
	EEG	O
	NCS, EMG	O

	Sleep Study	O
	Interpretation of related radiological investigations	PS
<b>7.</b>	<b>Course Title: RHEUMATOLOGY</b>	
	Locomotor system examination & Relevant General Physical Examination	PI
	Joint Aspiration	O
	Intra articular injection technique	O
<b>8.</b>	<b>Course Title: INFECTIOUS DISEASES</b>	
	Relevant General & Systemic Physical Examination	PI
	Injection I/V, I/M, S/C, intradermal	PI
	Urinary catheterization – collection of samples	PS
	Collection of blood samples/ blood film preparation	PS
	Branula	PI
	CVP	A
	<ul style="list-style-type: none"> <li>• Aspiration of fluids (Pleural, Pericardial, Peritoneal, Knee)</li> <li>• Lumbar Puncture</li> </ul>	O
<b>9.</b>	<b>Course Title: HAEMATOLOGY</b>	
	Systemic & relevant general physical Examination	PI
	Injection I/V, I/M, S/C, intradermal	PI
	Collection of samples of blood/blood film preparation	PS

	Placing I/V lines/fluids/blood/blood products, direct branula	A
	CVP line placement	O
	Bone marrow aspiration/ trephine	O
<b>10.</b>	<b>Course Title: DERMATOLOGY</b>	
	Systemic & relevant general physical Examination to identify specific skin lesions	PI
	Use of magnifying glass	PI
	Scraping for fungus	PS
	Skin biopsy	O
<b>11.</b>	<b>Course Title: PSYCHIATRY</b>	
	Systemic & relevant general physical Examination to identify mental state	PI
	Psychotherapy; CBT, Behavioral therapy, Interpersonal /family therapy	O
	ECT	O
	EEG	O
	Counseling and psychoanalysis especially in patients with suicidal and homicidal attitudes	O

# Clinical Procedures / Skills in Surgery & Allied

## (NUMS MBBS Curriculum 2025)

### Final year MBBS

#### Levels of Student Engagement in Clinical Procedures:

- Observer status (O)
- Assistant status (A)
- Perform under supervision (PS)
- Perform independently (PI)

Sr#	Skill / Procedure	Level of student engagement	Notes / Remarks
1.	Wound Dressing	PS	Supervised in minor OT
2.	Scrubbing, Gowning & Gloving	PS	Supervised in minor OT
3.	Suturing Techniques	A & PS	In skill lab/OT
4.	Incision & Drainage	A & PS	On surgical wards
5.	DRE / Proctoscopy	A & PS	Supervised in
6.	Chest Intubation	A	Skill lab
7.	Urinary	PS	Skill lab
8.	Passing NG Tube	PS	Skill lab
9	Placement of IV Canula, Intramuscular & Subcutaneous	PI	Skill lab
10	Endotracheal	A	Skill lab
11	Lumbar Puncture	A	Skill lab

## Pediatrics bed side skills for Final Year MBBS

S/No	Clinical Learning Activity	Level			
		O	A	PS	PI
1	Patient Safety				✓
2	Subcutaneous Injection			✓	
3	Intra-muscular Injection			✓	
4	Blood Sampling			✓	
5	Use of Glucometer				✓
6	Use of Inhalers Nebulizer				✓
7	Resuscitation of newborn (NRP)	✓			
8	Basic Life Support (BLS) Pediatrics			✓	
9	Anthropometric measurements/ Growth chart				✓
10	Measuring blood pressure				✓
11	Starting intravenous lines/ draw blood sample		✓		
12	Giving nebulizer therapy [bronchodilator]				✓
13	Administration of oxygen				✓
14	Lumbar puncture	✓			
15	Bone marrow aspiration	✓			
16	Supra pubic puncture	✓			
17	Observe passing of Urinary catheter	✓			
18	Nasogastric Tube Insertion	✓			

### Levels

**O-Observer Status**

**A-Assistant Status**

**P-S Performed Under Supervision**

**P-I Performed Independently**

## Procedural skills to be acquired in Gynae & Obs clinical training:

Level of Competency	Procedure
Observe	Female Urinary catheterization
Observe	Surgical Dressing
Observe	Preparation of iron sucrose solution
Observe	Removal of sutures
Observe	Intra Muscular Injection
Observe	Subcutaneous Injection
Observe	Obstetrical examination

