



# **CURRICULUM DOCUMENT**

## **(Final Year MBBS)**

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### **STANDARD OPERATING PROCEDURES**



**LAHORE MEDICAL AND DENTAL COLLEGE**  
**DEPARTMENT OF MEDICAL EDUCATION**

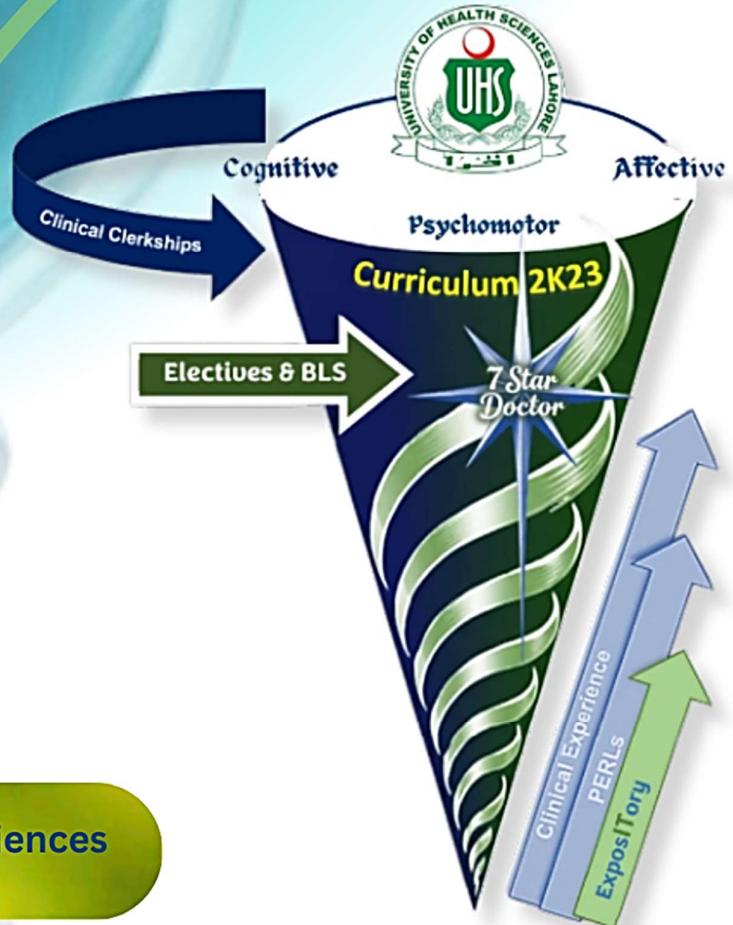
**MBBS  
YEAR  
05**



**Volume-05**



**Modular Integrated  
Curriculum 2K23**  
*Final Version*



**University of Health Sciences  
Lahore**

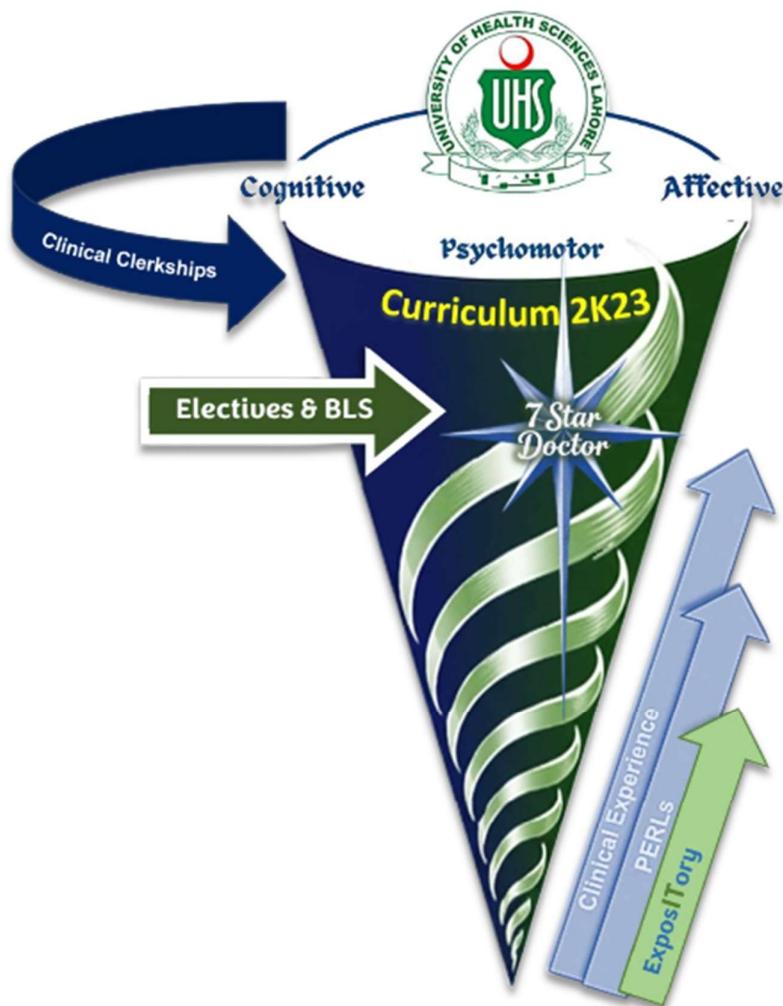


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# Modular Integrated Curriculum 2K23

Volume-05 / Year-05





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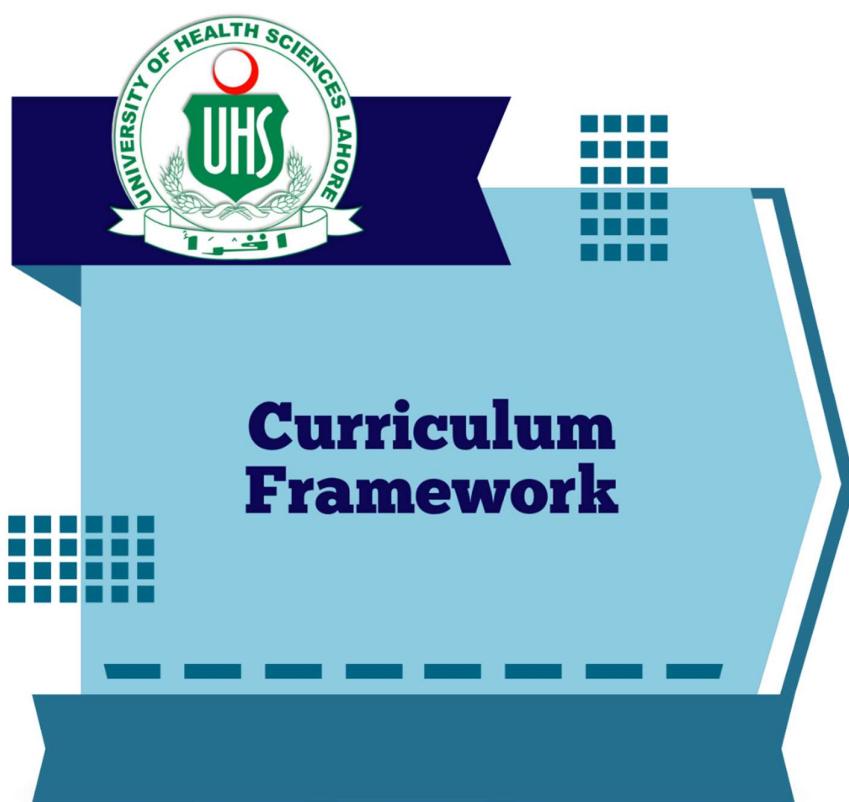


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01

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# Modular Integrated Curriculum 2K23 Framework

## YEAR-1

### BLOCK-I

FOUNDATION-I

HEMATOPOIETIC &amp; LYMPHATIC

### BLOCK-II

MUSCULOSKELETAL &amp; LOCOMOTION-I

### BLOCK-III

CARDIOVASCULAR-I

RESPIRATORY-I

## MODULES

QURAN-1  
PERLS-1  
EXPOSITORY-1ISLAMIYAT /  
CIVICS  
PAKISTAN STUDIESC-FRC 1  
(CLINICAL-FOUNDATION,  
ROTATION, CLERKSHIPS)

## YEAR-2

GIT &amp; NUTRITION-I

RENAL-I

ENDOCRINOLOGY &  
REPRODUCTION-IHEAD & NECK,  
SPECIAL SENSES

NEUROSCIENCES-I

INFLAMMATION

## MODULES

QURAN-2  
PERLS-2  
EXPOSITORY-2ISLAMIYAT /  
CIVICS  
PAKISTAN STUDIESC-FRC 2  
(CLINICAL-FOUNDATION,  
ROTATION, CLERKSHIPS)

## YEAR-3

### BLOCK-VII

FOUNDATION-2 & EBM  
GENERAL & CLINICAL PHARMACOLOGYHEMATOPOIETIC & IMMUNITY &  
TRANSPLANTFORENSIC MEDICINE & TOXICOLOGY-I  
NEOPLASIA

### BLOCK-VIII

INFECTIOUS DISEASE

MUSCULOSKELETAL &amp; LOCOMOTION-II

FORENSIC MEDICINE & TOXICOLOGY-II  
CARDIOVASCULAR-II

### BLOCK-IX

RESPIRATORY-II

COMMUNITY MEDICINE &amp; FAMILY HEALTH-I

FORENSIC MEDICINE &amp; TOXICOLOGY-III

## MODULES

PERLS-3  
EXPOSITORY-3C-FRC 3  
(CLINICAL-FOUNDATION,  
ROTATION, CLERKSHIPS)

## YEAR-4

COMMUNITY MEDICINE &  
FAMILY HEALTH-IIGIT & NUTRITION-II  
EYE & ENT-I

NEUROSCIENCES-II

PSYCHIATRY & BEHAVIORAL  
SCIENCES

RENAL-II

EYE &amp; ENT-II

ENDOCRINOLOGY &  
REPRODUCTION-II

DERMATOLOGY

EYE &amp; ENT-III

## MODULES

BLS WORKSHOPS  
ELECTIVES  
PERLS-4  
EXPOSITORY-4C-FRC 4  
(CLINICAL-FOUNDATION,  
ROTATION, CLERKSHIPS)

## YEAR-5

SURGERY

GYNECOLOGY &  
OBSTETRICS

MEDICINE

PEDIATRICS

## CLERKSHIPS

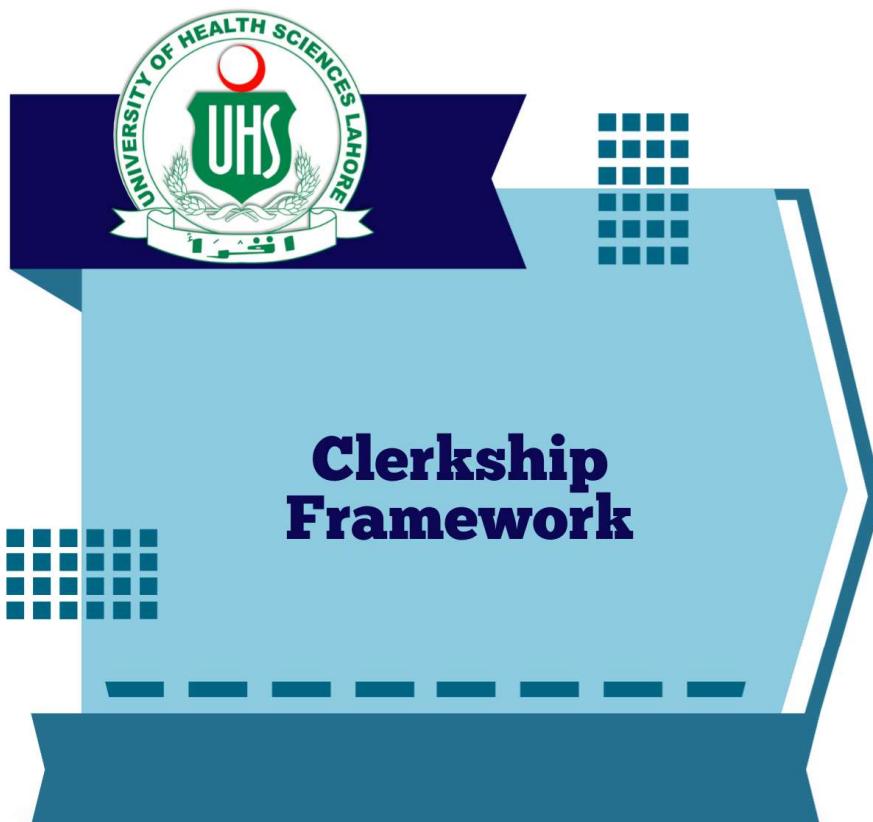
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(CLINICAL-FOUNDATION,  
ROTATION, CLERKSHIPS)



02



Section



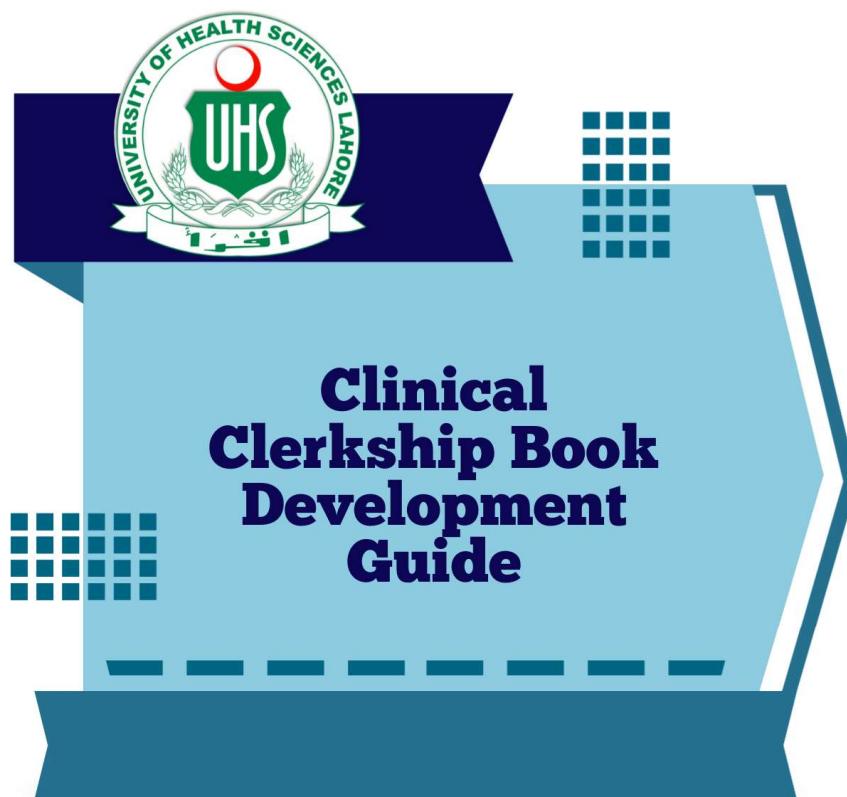
## Final Year MBBS C2K23

### Clerkship Framework

		<b>BLOCK A</b> <b>Medicine &amp; Paediatrics</b> <b>(16 weeks)</b>	<b>BLOCK B</b> <b>Surgery &amp; Gynecology-Obstetrics</b> <b>(16 weeks)</b>
<b>Classroom teaching</b> <b>(16 weeks)</b>	Medicine Clinical Rotation (8 weeks)	Surgery Clinical Rotation (8 weeks)	
	End Rotation Clinical Exam (Medicine)	End Rotation Clinical Exam (Surgery)	
	Paediatrics Clinical Rotation (8 weeks)	Gynecology & Obstetrics Clinical Rotation (8 weeks)	
	End Rotation Clinical Exam (Paediatrics)	End Rotation clinical exam (Gynecology & Obstetrics)	
	Block A Exam Theory	Block B Exam Theory	

03

*Section*



# Clinical Clerkship Book Development Guide

## I. Introduction of the Specialty:

Students will begin the clinical clerkship with an orientation session introducing the respective specialty. The orientation will include the objectives, learning outcomes, assessment methods, and departmental expectations.

## II. Importance of Maintaining a Clinical Logbook:

Each student must maintain a Clinical Clerkship Logbook documenting their daily activities, patient interactions, and procedures observed or performed.

- The logbook serves as evidence of clinical exposure, reflection, and competency development.
- Entries should be signed and stamped by the supervising faculty member.
- The logbook will be evaluated as part of the clerkship assessment at the time of the exit examination.

## III. Learning Outcomes for Rotations:

Learning outcomes for each rotation are already provided in the Clerkship Manual.

All clinical cases must be allocated as per importance and frequency of the ailments essential for a final year student as mentioned in the curricular document.

## IV. Indoor Rotations:

### Morning Shifts:

- Minimum 10 mandatory cases to be completed during the rotation.
- Each case must include:
  - Patient history
  - Physical examination findings
  - Differential diagnosis (D/D)
  - Management plan
  - Discussion with supervisor

Sr #	Date	Patient Initials / ID	Diagnosis	History & Exam Summary	Differential Diagnosis	Management Plan	Supervisor's Signature & Stamp
1							
2							

### Evening Shifts:

- Minimum 8 cases must be completed.
- Students should record date, day, and brief summary of each case.

S.No.	Date	Day	Case Summary	Learning Points	Supervisor's Signature
1					
2					

### V. Outdoor (OPD) Rotations:

- Minimum 12 cases to be documented.
- For each case following must be recorded:
  - Short history
  - Management plan
  - Follow-up review

S.No.	Date	Patient Initials / ID	Diagnosis / Condition	Short History	Management Plan	Follow-up Review / Remarks	Supervisor's Signature
1							
2							

### VI. Emergency Duties:

- Each student must complete a minimum of ten (10) emergency duties.
- During emergency duties, students are expected to:
  - Attend to patients presenting in the emergency or casualty department.

- Assist in the initial assessment, stabilization, and management of acute and critical cases under supervision.
- Participate in the documentation, follow-up, and handover of cases as per hospital protocol.
- Students should demonstrate professional conduct, effective communication, and teamwork during all emergency encounters.
- Attendance and performance during emergency duties will be verified by the supervising faculty through logbook entries.
- Each department will plan and schedule emergency duties to ensure equitable exposure and learning opportunities for all students.
- Departments must ensure that students experience a range of clinical scenarios covering both medical and surgical emergencies, in alignment with the learning outcomes defined by the University of Health Sciences (UHS).

S.No.	Date	Duration / Shift	Type of Emergency Case	Role of Student (Observer / Assistant / Performer)	Procedures Assisted / Performed	Learning Points
1						
2						

### **VII. Operation Theatre (OT) Notes:**

- Students are required to maintain Operation Theatre (OT) Notes as part of their clinical logbook throughout concerned specialty rotation.
- The OT notes should document all observed and assisted surgical or procedural cases, clearly stating the student's level of involvement (observer, assistant, or performer under supervision).
- Each entry should include:
  - Patient details (without identifiers), diagnosis, and indication for surgery.
  - Procedure name, steps observed, instruments used, and principles applied.
  - Role of the student and skills demonstrated or practiced.

- Intraoperative learning points, such as aseptic technique, teamwork, and communication.

Sr #	Date	Procedure Name	Diagnosis / Indication	Student's Role	Key Steps Observed / Performed	Instruments Used	Learning Points
1							
2							

### **VII. Assessment Components:**

The students must be encouraged to be involved in pre operation case preparation and later on post operation protocols for their allocated cases in each rotation. They must be encouraged to write biopsy description etc.

Assessment Tool	Minimum Required	Date	Case / Procedure	Assessor's Name & Signature	Remarks / Feedback
Mini-CEX	05				
DOPS	05				

### **Note:**

All assessments must be completed within the clerkship rotation period and should include major clinical cases in which the student participated.

### **X. Documentation and Submission:**

A properly compiled and signed book will be assessed in the rotation end examination (internal assessment) and in the final examination as well, verified by The Head of The Department.

### **SUPERVISOR:**

Any senior doctor as nominated by the head of the department for clinical teaching in specific settings.

04

*Section*



## Modular Integrated Curriculum 2K23

Final Version

# SURGERY CLERKSHIP



YEAR-05

**Curriculum 2k23**  
**Final Year MBBS Clerkship**

**SURGERY CLERKSHIP**

**Learning Outcomes**

By the end of the Surgery clerkship, a student will be able to:

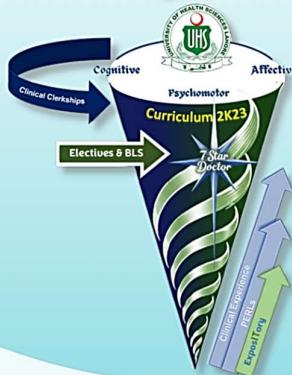
- Identify life-threatening surgical emergencies such as trauma, intestinal obstruction, perforation, and hemorrhage, and initiate prompt resuscitation and referral.
- Take focused surgical histories, perform thorough physical examinations (including system-specific exams), and interpret bedside findings accurately.
- Interpret essential laboratory, radiological, and endoscopic investigations relevant to surgical diseases.
- Practice ethical principles, use informed consent processes, maintain confidentiality, and follow safety checklists to ensure patient safety in clinical and operative settings.
- Participate in preoperative preparation, intraoperative assistance, and postoperative care, including fluid management, pain control, infection prevention, and recognition of complications.
- Communicate effectively with patients, families, and healthcare teams, and contribute to multidisciplinary decision-making.
- Identify human factors in surgical errors, report adverse events appropriately, and contribute to clinical audit and quality improvement processes.
- Demonstrate accountability, engage in self-directed learning, and reflect on clinical experiences to prepare for safe, independent practice.



**Modular Integrated  
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Final Version

# SURGERY-I

## General Principles of Surgery



## PREOPERATIVE ASSESSMENT OF SURGICAL PATIENT

### Theory

Code	Topic	Clinical Methods/Skills
S1-001	Pre-operative evaluation	<ul style="list-style-type: none"> <li>Discuss the steps of preoperative history-taking, physical examination, and baseline investigations in surgical patients</li> <li>Explain the evaluation and optimization of patients with cardiovascular, neurological, respiratory, gastrointestinal, hepatic and renal, neurological, endocrine and metabolic disorders, including malnutrition, obesity, diabetes, and thyroid dysfunction in the preoperative settings.</li> </ul>
S1-002	Pre-operative investigations	<ul style="list-style-type: none"> <li>Enlist the pre-operative investigations.</li> <li>Interpret common abnormalities in lab reports relevant to surgical patients.</li> <li>Explain the role of blood glucose monitoring in ensuring perioperative safety.</li> <li>Interpret ECG and chest X-ray in surgical patients.</li> </ul>
S1-003	High-risk patient	<ul style="list-style-type: none"> <li>Describe risk stratification tools in surgery, including POSSUM, RCRI, and ACS-NSQIP, and their role in predicting perioperative morbidity and mortality</li> </ul>
S1-004	Optimization	<ul style="list-style-type: none"> <li>Discuss strategies to reduce perioperative morbidity and mortality in high-risk surgical patients.</li> </ul>
S1-005	Consent for surgery <i>(integrate with Forensic Medicine)</i>	<ul style="list-style-type: none"> <li>Explain the process of taking informed consent in surgical practice and its medico-legal significance.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-006	Pre-operative evaluation	<ul style="list-style-type: none"> <li><b>Take</b> pre-operative history.</li> <li><b>Perform</b> systemic examination.</li> <li><b>Record and interpret</b> ECG in a patient.</li> <li><b>Assist</b> in obtaining arterial blood gases and interpreting</li> </ul>

		<p>results.</p> <ul style="list-style-type: none"> <li>• <b>Counsel</b> patients for necessary investigations</li> <li>• <b>Assess</b> airway and anesthetic risk.</li> <li>• <b>Calculate</b> ASA grade and surgical risk scores.</li> <li>• <b>Communicate</b> patients/families for informed consent.</li> <li>• <b>Document</b> comorbidities and prior surgical history.</li> <li>• <b>Identify and refer</b> high-risk patients for specialist optimization.</li> <li>• <b>Follow</b> OT protocols for patient preparation (e.g., fasting, medications, marking surgical site).</li> </ul>
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## POSTOPERATIVE CARE

### Theory

Code	Topic	Clinical Methods/Skills
S1-007	Immediate recovery care	<ul style="list-style-type: none"> <li>• Describe monitoring standards in post-anesthesia care unit (PACU).</li> <li>• Describe the role of nurses, physiotherapists, and ICU team in post-op care.</li> <li>• Explain the use of repeat labs and imaging to detect complications early.</li> </ul>
S1-008	Postoperative complications	<ul style="list-style-type: none"> <li>• List common respiratory, cardiac, renal, and neurological complications encountered during postoperative care.</li> <li>• Describe strategies for prevention and immediate management of postoperative complications.</li> </ul>
S1-009	Post-operative wound care	<ul style="list-style-type: none"> <li>• Outline wound assessment, steps of wound dressing, and infection control in post-operative care.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-010	Post-operative Care & ICU	<ul style="list-style-type: none"> <li>• <b>Monitor</b> vital signs and fluid balance post-surgery.</li> <li>• <b>Assess</b> post-op airway and breathing of a patient.</li> <li>• <b>Examine</b> the surgical wounds.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Identify and assist</b> in immediate management of hemorrhage, shock, DVT, PE.</li> <li>• <b>Apply</b> wound dressings.</li> <li>• <b>Remove</b> drains/catheters under supervision.</li> <li>• <b>Counsel</b> patient and relatives regarding complications and progress.</li> <li>• <b>Follow</b> ICU and OT protocols in the post-op setting.</li> </ul>
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## NUTRITION, FLUID, ELECTROLYTE AND ACID-BASE BALANCE

### Theory

Code	Topics	Specific Learning Objectives
S1-011	Malnutrition in surgical patients	<ul style="list-style-type: none"> <li>• Enlist the causes of malnutrition in surgical patients.</li> <li>• Describe the consequences of malnutrition in surgical patients.</li> <li>• Identify the risk groups prone to malnutrition.</li> </ul>
S1-012	Nutritional assessment	<ul style="list-style-type: none"> <li>• Explain the role of BMI in assessing nutritional status and surgical risk.</li> <li>• Describe the use of anthropometric measurements in evaluating malnutrition in surgical patients.</li> <li>• Explain the significance of serum proteins in predicting surgical outcomes.</li> <li>• Describe key clinical indicators of malnutrition relevant to perioperative assessment.</li> </ul>
S1-013	Nutritional support	<ul style="list-style-type: none"> <li>• Compare enteral vs. parenteral nutrition.</li> <li>• Describe complications.</li> </ul>
S1-014	Fluid & electrolytes	<ul style="list-style-type: none"> <li>• Describe the body fluid compartments and their relevance in surgical patients.</li> <li>• Explain the daily fluid and electrolyte requirements in the perioperative period.</li> <li>• Identify and describe insensible fluid losses and their significance in surgical management.</li> </ul>
S1-015	Perioperative fluid	<ul style="list-style-type: none"> <li>• Explain maintenance versus replacement fluid therapy and</li> </ul>

	management	<p>their roles in perioperative fluid management.</p> <ul style="list-style-type: none"> <li>Describe the differences between crystalloids and colloids and their appropriate use in surgical patients.</li> </ul>
S1-016	Acid-base balance	<ul style="list-style-type: none"> <li>Identify the types of acid-base disorders seen in surgical patients.</li> <li>Interpret arterial blood gas (ABG) results to identify the underlying disturbance.</li> <li>Describe the basic management principles for correcting acid-base imbalances in the perioperative setting.</li> </ul>

### Clinical Skills

Code	Topics	Clinical Methods/Skills
S1-017	Perioperative Care	<ul style="list-style-type: none"> <li><b>Perform</b> nutritional assessment at bedside (BMI, mid-arm circumference, skin fold).</li> <li><b>Calculate</b> fluid and electrolyte requirements.</li> <li><b>Observe/assist</b> in setting up IV fluids correctly and <b>monitor</b> input/output.</li> <li><b>Identify</b> signs of dehydration, fluid overload, and electrolyte imbalance.</li> <li><b>Interpret</b> serum electrolyte abnormalities and their clinical significance in surgical patients.</li> <li><b>Observe/assist</b> in collection and interpretation of arterial blood gases (ABG).</li> <li><b>Counsel</b> patient/family about nutritional support and risks.</li> </ul>

### SHOCK, HEMMORRHAGE, AND WOUND

#### Theory

Code	Topics	Specific Learning Objectives
S1-018	Metabolic response to injury	<ul style="list-style-type: none"> <li>Define homeostasis.</li> <li>List the mediators of response and describe their actions.</li> <li>Describe “ebb &amp; flow” phases.</li> </ul>

S1-019	Shock	<ul style="list-style-type: none"> <li>Classify types of shock.</li> <li>Discuss cardiovascular and metabolic features of shock.</li> <li>Identify the signs of severity.</li> <li>Outline principles of IV fluid replacement, blood, and blood component therapy.</li> </ul>
S1-020	Blood transfusion (See Annexure-I)	<ul style="list-style-type: none"> <li>Classify hemorrhage.</li> <li>List the indications for blood transfusion.</li> <li>Describe transfusion reactions and management.</li> <li>Identify avoidable factors that worsen injury response.</li> <li>Describe the hazards of massive transfusion.</li> </ul>
S1-021	Wound management	<ul style="list-style-type: none"> <li>Describe the steps of acute wound care.</li> <li>Describe different types of dressings and their indications based on wound characteristics.</li> <li>Explain chronic wound management.</li> <li>Describe the rationale and indications for contracture release and strategies to prevent recurrence.</li> </ul>
S1-022	Compartment syndrome	<ul style="list-style-type: none"> <li>Explain the pathophysiology of compartment syndrome.</li> <li>Identify the clinical features.</li> <li>Describe the surgical management, including indications for and steps of fasciotomy.</li> <li>Identify early warning signs to prevent irreversible tissue damage.</li> <li>Describe postoperative care and monitoring after fasciotomy.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-023	Critical Care Skills in Shock Management	<ul style="list-style-type: none"> <li><b>Perform</b> clinical assessment of patient in shock (airway, breathing, circulation).</li> <li><b>Record</b> vital signs, urine output, and fluid balance charting.</li> <li><b>Monitor</b> IV fluids, central lines, and blood transfusion.</li> <li><b>Identify</b> signs of transfusion reaction and <b>observe/assist</b> in initiating the immediate management.</li> <li><b>Counsel</b> patient/family regarding consent for blood</li> </ul>

		<p>transfusion.</p> <ul style="list-style-type: none"> <li>• <b>Follow</b> OT and ICU protocols for perioperative resuscitation.</li> </ul>
<b>SURGICAL INFECTIONS</b>		
<b>Theory</b>		
Code	Topics	Specific Learning Objectives
S1-024	Risk factors and sources	<ul style="list-style-type: none"> <li>• Describe causative organisms, endogenous and exogenous sources leading to surgical infections.</li> <li>• Explain host and procedural factors influencing infection risk.</li> </ul>
S1-025	Surgical site infections (SSI)	<ul style="list-style-type: none"> <li>• Define SSI</li> <li>• Differentiate major vs. minor infections</li> <li>• Discuss “decisive period.”</li> </ul>
S1-026	Specific wound infections	<ul style="list-style-type: none"> <li>• Describe gas gangrene, necrotizing fasciitis, cellulitis with their management.</li> </ul>
S1-027	Systemic infections	<ul style="list-style-type: none"> <li>• Define bacteremia and describe its clinical significance and laboratory investigations.</li> <li>• Explain septicemia, its pathophysiology, clinical features, and potential complications.</li> <li>• Identify the criteria for SIRS and differentiate it from infectious and non-infectious causes.</li> <li>• Define sepsis, identify its clinical manifestations, and explain its progression from infection to organ dysfunction.</li> </ul>
S1-028	Viral infections in surgery	<ul style="list-style-type: none"> <li>• Describe the transmission routes of HIV in surgical settings and outline standard precautions to prevent infection.</li> <li>• Describe the transmission routes of Hepatitis B and C in surgical settings and outline standard precautions to prevent infection.</li> </ul>
S1-029	Hospital-acquired & tropical infections	<ul style="list-style-type: none"> <li>• Identify the clinical features, diagnostic methods, and surgical relevance of tuberculosis in abdominal and other organ involvement.</li> <li>• Describe the clinical manifestations, complications, and surgical considerations of typhoid infection, amoebiasis,</li> </ul>

		ascariasis, and hydatid disease.
S1-030	Prevention & treatment	<ul style="list-style-type: none"> <li>Discuss the aseptic techniques and protocols in surgical and clinical procedures to prevent infection.</li> <li>Explain the principles and indications of antimicrobial prophylaxis in surgery.</li> <li>Demonstrate rational use of antibiotics, including g selection, dosing, and duration, to prevent resistance and optimize patient outcomes.</li> </ul>

### Clinical Skills

Code	Topics	Clinical Methods/Skills
S1-031	Infection control and management of infected wounds	<ul style="list-style-type: none"> <li><b>Examine</b> wound for signs of infection.</li> <li><b>Collect</b> wound swab/aspirate for culture &amp; sensitivity.</li> <li><b>Observe/assist</b> in wound debridement and abscess drainage.</li> <li><b>Follow</b> protocols for safe handling of infected material and proper specimen labeling.</li> <li><b>Counsel</b> and take consent from patients regarding HIV/Hepatitis testing.</li> <li><b>Follow</b> infection control measures in OT and ICU including hand hygiene, PPE, sterilization.</li> </ul>

## PRINCIPLES OF ANESTHESIA AND ANALGESIA

### Theory

Code	Topics	Specific Learning Objectives
S1-032	General Anesthesia	<ul style="list-style-type: none"> <li>Enlist the indications.</li> <li>Describe the phases of general anesthesia.</li> <li>Explain airway management during general anesthesia.</li> <li>Discuss principles of muscle relaxation and artificial ventilation during general anesthesia.</li> <li>Identify the causes of failure to awake after anesthesia.</li> <li>Discuss the complications with their management.</li> </ul>
S1-033	Regional Anesthesia	<ul style="list-style-type: none"> <li>Classify the types of regional anesthesia with indications.</li> </ul>

		<ul style="list-style-type: none"> <li>Identify the contraindications to spinal/epidural anesthesia.</li> <li>Differential between spinal and epidural anesthesia.</li> <li>Describe complications and their management.</li> </ul>
S1-034	Pain Management	<ul style="list-style-type: none"> <li>Identify the methods of acute pain relief.</li> <li>Enlist the causes of chronic pain.</li> <li>Describe principles of chronic pain management.</li> </ul>
S1-035	ICU Monitoring and Care	<ul style="list-style-type: none"> <li>Discuss indications for ICU admission.</li> <li>Explain basic ICU monitoring.</li> <li>Describe principles of ICU care.</li> </ul>

### Clinical Skills

Code	Topics	Clinical Methods/Skills
S1-036	Patient preparation and anesthesia fitness	<ul style="list-style-type: none"> <li><b>Interpret</b> relevant investigation reports for anesthesia fitness (under supervision).</li> <li><b>Observe/assist</b> in preparing patient for general anesthesia.</li> <li><b>Observe/assist</b> in mask ventilation and endotracheal intubation</li> <li><b>Identify</b> landmarks for spinal or epidural anesthesia.</li> </ul>

### PRINCIPLES OF RADIOLOGY

#### Theory & Clinical Skills

Code	Topics	Specific Learning Objectives
S1-037	Chest X-ray	<ul style="list-style-type: none"> <li>Identify normal chest anatomy and standard projections.</li> <li>Identify radiological features of pneumothorax, pneumonia, pleural effusion, cardiomegaly, pulmonary oedema, fractures, surgical emphysema, neoplastic disease, and chronic inflammatory conditions.</li> </ul>
S1-038	Skull X-ray	<ul style="list-style-type: none"> <li>Identify normal skull anatomy and projections.</li> <li>Identify fractures, lytic and sclerotic lesions, calcifications, pituitary fossa abnormalities, and paranasal sinus pathology.</li> </ul>
S1-039	Abdominal X-ray	<ul style="list-style-type: none"> <li>Identify normal abdominal anatomy and projections.</li> <li>Detect renal and urinary tract stones, gallstones, and other calcifications.</li> </ul>

		<ul style="list-style-type: none"> <li>Identify free gas under the diaphragm indicating perforation.</li> <li>Identify radiological signs of hepatomegaly and splenomegaly.</li> </ul>
S1-040	Spine X-ray	<ul style="list-style-type: none"> <li>Identify normal spinal anatomy and projections.</li> <li>Identify disc space reduction and vertebral collapse.</li> </ul>
S1-041	Barium Studies	<ul style="list-style-type: none"> <li>Identify normal anatomy and projections on barium meal and double-contrast studies.</li> <li>Interpret radiological features of gastric outlet obstruction, filling defects, stomach masses, esophageal varices and strictures.</li> <li>Identify intussusception, colonic defects, malabsorption patterns, strictures, ulcerative colitis, and ulcers.</li> </ul>
S1-042	Specialized Imaging	<ul style="list-style-type: none"> <li>Identify hydronephrosis and renal masses on Intravenous Urogram (IVU).</li> <li>Identify vesicoureteric reflux on Micturating Cystourethrogram (MCU).</li> <li>Identify gall bladder diseases and gallstones on Cholecystogram.</li> </ul>
S1-043	Advanced Imaging	<ul style="list-style-type: none"> <li>Interpret basic echocardiography reports.</li> <li>Interpret basic CT scan reports relevant to common clinical conditions.</li> <li>Describe the basic principles of MRI and interpret simple MRI reports.</li> </ul>

## BURN INJURIES

### Theory

Code	Topics	Specific Learning Objectives
S1-044	Assessment and Management of Burn Injuries	<ul style="list-style-type: none"> <li>Define burn injury and classify burns according to cause and depth.</li> <li>Describe the pathophysiology of burn injuries.</li> <li>Explain assessment of burn patients, including severity and extent of burns.</li> <li>Describe the Rule of Nines for estimation of total body surface</li> </ul>

		<p>area (TBSA) involved in burns.</p> <ul style="list-style-type: none"> <li>• Discuss initial management of burn injuries.</li> <li>• Explain principles of fluid resuscitation in burn patients.</li> <li>• Describe local wound management in burns.</li> <li>• Identify complications of burn injuries.</li> <li>• Explain basic principles of rehabilitation and prevention of burn injuries.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-045	Burn management	<p><b>Observe/assist in:</b></p> <ul style="list-style-type: none"> <li>• initial burn care, including airway support and oxygen administration.</li> <li>• fluid resuscitation for burn patients under supervision.</li> <li>• wound cleaning and dressing of burn injuries using aseptic technique.</li> <li>• monitoring vital signs and urine output in burn patients.</li> </ul>

## RECONSTRUCTIVE AND PLASTIC SURGERY

### Theory

Code	Topics	Specific Learning Objectives
S1-046	Basics of Plastic Surgery	<ul style="list-style-type: none"> <li>• Describe the basic anatomy and physiology of tissues used in reconstruction.</li> <li>• Explain principles of wound healing relevant to reconstructive surgery.</li> <li>• Describe the types of grafts used in surgery and discuss their clinical uses.</li> <li>• Explain the types of flaps used in reconstructive surgery and discuss their indications.</li> <li>• Discuss the role of plastic and reconstructive surgery in the management of difficult and complex tissue loss.</li> </ul>

## PRINCIPLES OF LAPAROSCOPIC AND ROBOTIC SURGERY

### Theory

Code	Topics	Specific Learning Objectives
S1-047	Minimally Invasive Surgery	<ul style="list-style-type: none"> <li>• Describe the physics of pneumoperitoneum in laparoscopic surgery.</li> <li>• Compare laparoscopy and robotic surgery with open surgery regarding technique, benefits, and outcomes.</li> <li>• Enlist the common intraoperative risks in minimally invasive surgery.</li> <li>• Identify common procedures suitable for laparoscopic and robotic approaches.</li> <li>• Explain the principles of postoperative care in surgical patients.</li> <li>• Describe the benefits of early mobilization, effective pain management, and strategies to achieve faster recovery.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-048	Minimally Invasive Surgery	<ul style="list-style-type: none"> <li>• <b>Assist</b> in laparoscopic procedures (camera holding, basic instrument handling).</li> <li>• <b>Identify and assist</b> in safe handling of laparoscopic ports, trocars, and robotic arms.</li> <li>• <b>Observe</b> setting up laparoscopic tower (light source, insufflator, camera).</li> <li>• <b>Counsel</b> a patient about minimally invasive vs. open approach and <b>take</b> consent.</li> </ul>

## SURGICAL ETHICS & PATIENT SAFETY

### Theory

Code	Topics	Specific Learning Objectives
S1-049	Surgical ethics	<ul style="list-style-type: none"> <li>• Describe the process and importance of obtaining informed consent in surgical practice.</li> <li>• Discuss the significance of confidentiality in patient care.</li> </ul>

		<ul style="list-style-type: none"> <li>Explain the impact of communication and teamwork on surgical safety and outcomes.</li> <li>Describe how fatigue and stress contribute to surgical errors and strategies to mitigate them.</li> </ul>
S1-050	Patient safety	<ul style="list-style-type: none"> <li>Explain the purpose and components of the WHO Surgical Safety Checklist in reducing operative risks.</li> <li>Describe key infection control measures in the surgical environment.</li> <li>Outline strategies to prevent retained surgical items, including counting protocols, checklists, radiopaque tools, team communication, and documentation.</li> </ul>
S1-051	Medico-legal aspects <i>(Integrate with Forensic Medicine)</i>	<ul style="list-style-type: none"> <li>Explain the concepts of negligence and malpractice in surgical practice.</li> <li>Describe the importance of accurate documentation in patient care.</li> <li>Discuss the principles of disclosure of medical errors to patients and families.</li> </ul>

## VASCULAR AND NERVE DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
S1-052	Limb ischemia (acute and chronic)	<ul style="list-style-type: none"> <li>Diagnose acute limb ischemia based on the signs and symptoms (6 P's) with potential complications.</li> <li>Differentiate it from chronic limb ischemia.</li> <li>List the differential diagnoses.</li> <li>Explain the relevant investigations to confirm diagnosis.</li> <li>Outline the management strategies for acute and chronic limb ischemia.</li> <li>Discuss potential complications.</li> </ul>
S1-053	Gangrene	<ul style="list-style-type: none"> <li>Describe gangrene with pathophysiology.</li> <li>Differentiate between dry, wet, and diabetic gangrene based on etiology and presentation.</li> </ul>

		<ul style="list-style-type: none"> <li>Outline investigations with management strategies.</li> <li>List the potential complications and outcomes.</li> </ul>
S1-054	Varicose veins	<ul style="list-style-type: none"> <li>Describe the signs and symptoms of varicose veins.</li> <li>Discuss potential complications and outline the management.</li> </ul>
S1-055	Venous thromboembolism	<ul style="list-style-type: none"> <li>Identify risk factors for deep vein thrombosis and pulmonary embolism.</li> <li>Diagnose deep vein thrombosis and pulmonary embolism based on signs and symptoms.</li> <li>Describe potential complications of venous thromboembolism.</li> <li>Explain strategies for prevention.</li> <li>Outline the emergency management.</li> </ul>
S1-056	Peripheral nerve injuries	<ul style="list-style-type: none"> <li>Enlist the causes of peripheral nerve injuries.</li> <li>Outline the basic principles of management of peripheral nerve injuries.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-057	Clinical assessment of arterial disease	<ul style="list-style-type: none"> <li><b>Palpate</b> peripheral pulses (femoral, popliteal, dorsalis pedis, posterior tibial).</li> <li><b>Examine</b> varicose veins through inspection, palpation, and special tests e.g., Trendelenburg.</li> <li><b>Perform</b> bedside assessment of ischemia (capillary refill, temperature, Doppler signals).</li> <li><b>Demonstrate</b> application of compression bandaging/stockings.</li> <li><b>Demonstrate</b> the clinical differentiation between arterial and venous ulcers through inspection, palpation, and assessment of local signs.</li> <li><b>Assist</b> in wound care for gangrene and pre/post-op care.</li> <li><b>Counsel</b> patients/families regarding limb salvage vs. amputation.</li> <li><b>Follow</b> OT and ICU protocols for vascular emergencies.</li> </ul>

PEDIATRIC SURGERY		
Theory		
Code	Topics	Specific Learning Objectives
S1-058	Cleft Lip	<ul style="list-style-type: none"> <li>Describe cleft lip with embryological basis.</li> <li>Enumerate clinical features.</li> <li>Outline timing of repair and treatment plan</li> </ul>
S1-059	Cleft Palate	<ul style="list-style-type: none"> <li>Describe cleft palate with embryological basis.</li> <li>Enumerate complications of non-treatment.</li> <li>Outline management principles with referral for treatment to Pediatric Surgical Setting</li> </ul>
S1-060	Clubfoot (Congenital Talipes Equinovarus)	<ul style="list-style-type: none"> <li>Describe the clinical features.</li> <li>Outline principles of management, including conservative and surgical options</li> <li>Identify possible complications and importance of long-term follow-up</li> </ul>
S1-061	Anorectal Malformation (ARM)	<ul style="list-style-type: none"> <li>Identify the spectrum of anorectal anomalies with embryologic basis.</li> <li>Identify associated anomalies in ARM.</li> <li>Describe typical presentations such as absence of anal opening and failure to pass meconium.</li> <li>Discuss principles of diagnosis, need for careful perineal examination, and referral for surgical planning.</li> </ul>
S1-062	Hirschsprung's Disease	<ul style="list-style-type: none"> <li>Define Hirschsprung's disease as congenital aganglionosis of the bowel.</li> <li>Explain pathophysiology and its functional effects leading to obstruction.</li> <li>Enlist key clinical features.</li> <li>Outline diagnostic investigations and treatment plan.</li> </ul>
S1-063	Umbilical hernia, Umbilical anomalies, granuloma/adenoma	<ul style="list-style-type: none"> <li>Differentiate umbilical hernia and granuloma/adenoma.</li> </ul>

		<ul style="list-style-type: none"> <li>• Describe etiology and natural history.</li> <li>• Enumerate clinical features.</li> <li>• Identify indications for surgical intervention.</li> </ul>
S1-064	Gastroschisis and Omphalocele.	<ul style="list-style-type: none"> <li>• Differentiate gastroschisis and omphalocele with embryological origin.</li> <li>• Enumerate clinical features.</li> <li>• Identify complications of mis/non treatment.</li> <li>• Outline steps of resuscitation.</li> </ul>
S1-065	Intussusception and causes of intestinal obstruction in children	<ul style="list-style-type: none"> <li>• Define intussusception.</li> <li>• Classify types of intussusception and pathophysiology with common age group and etiology.</li> <li>• Describe the classical triad of symptoms.</li> <li>• Outline diagnostic methods and management plan.</li> </ul>
S1-066	Infantile Hypertrophic pyloric stenosis (IHPS)	<ul style="list-style-type: none"> <li>• Describe etiopathogenesis of infantile hypertrophic pyloric stenosis.</li> <li>• Describe the classical clinical features.</li> <li>• Identify importance and correction of metabolic abnormalities.</li> <li>• Outline the management plan.</li> </ul>
S1-067	Esophageal atresia and Tracheoesophageal fistula (TOF)	<ul style="list-style-type: none"> <li>• Define esophageal atresia and tracheoesophageal fistula.</li> <li>• Classify types and pathophysiology of esophageal atresia.</li> <li>• Identify clinical features.</li> <li>• Outline management plan.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S1-068	Clinical skills-Pediatric Surgery	<ul style="list-style-type: none"> <li>• <b>Take</b> history and <b>perform</b> focused clinical examination in newborns and children presenting with common pediatric surgical conditions (e.g., cleft lip</li> </ul>

		<p>and palate, umbilical anomalies, gastroschisis, omphalocele, genitourinary anomalies, hydrocephalus, spina bifida, CTEV, DDH).</p> <ul style="list-style-type: none"> <li>• <b>Observe/assist</b> in OT procedures.</li> <li>• Identify indications for referral, counsel caregivers regarding timing of surgery, contraindications, and follow-up.</li> </ul>
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## UROGENITAL CONDITIONS

### Theory

Code	Topics	Specific Learning Objectives
S1-069	Renal calculi	<ul style="list-style-type: none"> <li>• Identify causes and types of renal calculi.</li> <li>• Explain clinical features and sequelae.</li> <li>• Describe basic principles of diagnosis and management.</li> </ul>
S1-070	Enlarged Prostate	<p><b>Benign Prostatic Hyperplasia (BPH)</b></p> <ul style="list-style-type: none"> <li>• Describe benign prostatic hyperplasia and its pathophysiology.</li> <li>• Explain its clinical features and complications.</li> <li>• Describe investigations and basic principles of management.</li> </ul> <p><b>Prostate Cancer</b></p> <ul style="list-style-type: none"> <li>• Describe prostate cancer and its risk factors.</li> <li>• Explain clinical features and staging of prostate cancer.</li> <li>• Describe investigations used in diagnosis of prostate cancer.</li> <li>• Discuss basic principles of management of prostate cancer.</li> </ul>
S1-071	Scrotal and Testicular Swellings	<ul style="list-style-type: none"> <li>• Describe causes of scrotal and testicular swellings.</li> <li>• Explain clinical features and evaluation of scrotal and testicular swellings.</li> </ul>

		<ul style="list-style-type: none"> <li>Describe basic principles of management of scrotal and testicular swellings.</li> </ul>
S1-072	Bladder lesions	<ul style="list-style-type: none"> <li>Explain common bladder lesions, including cystitis, bladder stones, and bladder tumors.</li> <li>Discuss the clinical presentation of bladder diseases (e.g., hematuria, dysuria, urinary frequency).</li> <li>Explain the principles of diagnosis, including urine analysis, imaging, and cystoscopy.</li> <li>Discuss basic management principles of bladder conditions, including medical and surgical approaches.</li> <li>Identify potential complications of bladder diseases and their management.</li> </ul>

### Clinical Skills

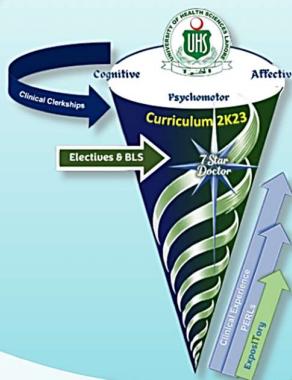
Code	Topic	Clinical Methods/Skills
S1-073	Clinical skills-Urology	<ul style="list-style-type: none"> <li><b>Take focused history</b> from patients with renal calculi, bladder lesions, enlarged prostate (BPH and prostate cancer), and scrotal/testicular swellings.</li> <li><b>Perform physical examination</b> of the abdomen, genitourinary system, prostate (digital rectal exam), and scrotum/testes.</li> <li><b>Interpret laboratory investigations</b>, including urinalysis, urine culture, and relevant blood tests.</li> <li><b>Interpret imaging investigations</b>, including ultrasound, X-ray KUB, CT scan, and cystoscopy.</li> <li><b>Observe/assist</b> in the operating theatre (OT) during urological procedures such as cystoscopy, bladder tumor resection, prostate surgery, and scrotal/testicular surgery.</li> </ul>



**Modular Integrated  
Curriculum 2K23**  
Final Version

# SURGERY-II

## Systemic Diseases



## HEAD, FACE, AND NECK SURGERY

### Theory

Code	Topics	Specific Learning Objectives
S2-001	Head injuries	<ul style="list-style-type: none"> <li>Outline the principles of management of head injuries.</li> <li>Enlist the common complications of head injuries.</li> </ul>
S2-002	Diseases of oral cavity	<ul style="list-style-type: none"> <li>Identify leukoplakia, erythroplakia, and oral lichen planus.</li> <li>Outline the risk factors associated with these oral premalignant lesions.</li> <li>Describe the clinical features of oral cavity malignancies.</li> <li>Explain the investigations used for diagnosis and assessment.</li> <li>Outline the staging systems for oral cavity cancers.</li> <li>Discuss the treatment options, including surgical, radiotherapy, and multidisciplinary approaches</li> <li>Discuss etiology, clinical features, investigations, and management of tongue ulcer</li> </ul>
S2-003	Salivary gland disorders	<ul style="list-style-type: none"> <li>Differentiate benign and malignant diseases of parotid, submandibular, sublingual glands.</li> </ul>
S2-004	Neck lumps	<ul style="list-style-type: none"> <li>Identify lymph node enlargements in the neck.</li> <li>Differentiate common surgical causes of cervical lymphadenopathy.</li> <li>Outline the principles of surgical evaluation of cervical lymph nodes.</li> <li>Classify thyroid swellings.</li> <li>Identify clinical features suggestive of benign and malignant thyroid disease.</li> <li>Outline indications for surgical management of thyroid disorders.</li> <li>Describe causes of parathyroid enlargement.</li> <li>Recognize clinical features of hyperparathyroidism relevant</li> </ul>

		<p>to surgery.</p> <ul style="list-style-type: none"> <li>Outline indications for surgical management of parathyroid disease.</li> </ul>
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## Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-005	Clinical examination- Head, face, and neck	<ul style="list-style-type: none"> <li><b>Take</b> a focused history for oral/tongue ulcers and suspicious lesions.</li> <li><b>Examine</b> oral cavity, lips, and palate for lesions.</li> <li><b>Examine</b> salivary glands through inspection, palpation, and functional tests.</li> <li><b>Perform</b> head and neck lymph node examination.</li> <li><b>Perform</b> clinical examination of thyroid gland (inspection, palpation, auscultation).</li> <li><b>Assist</b> in biopsy specimens' collection and ensuring proper labeling.</li> <li><b>Counsel</b> patients about risk factors (tobacco, alcohol, poor oral hygiene).</li> </ul>

## BREAST SURGERY

### Theory

Code	Topics	Specific Learning Objectives
S2-006	Surgical anatomy	<ul style="list-style-type: none"> <li>Describe surgical anatomy and lymphatic drainage of breast.</li> </ul>
S2-007	Triple assessment	<ul style="list-style-type: none"> <li>Describe the signs and symptoms assessed during clinical examination of the breast in suspected malignancy.</li> <li>Explain the role of imaging, including ultrasound and mammography, in breast evaluation.</li> <li>Discuss tissue sampling techniques such as fine-needle aspiration and core biopsy for diagnosis.</li> </ul>
S2-008	Benign breast diseases	<ul style="list-style-type: none"> <li>Tabulate benign breast diseases to compare clinical</li> </ul>

		presentation, common age group, investigations, and management for fibroadenoma, breast cysts, mastitis, and gynecomastia.
S2-009	Malignant breast disease	<ul style="list-style-type: none"> <li>Describe the clinical signs and symptoms of malignant breast disease.</li> <li>Explain the staging systems used for breast cancer.</li> <li>Discuss prognostic factors influencing outcomes.</li> <li>Outline the treatment options, including surgical, medical, and radiotherapy approaches.</li> <li>Outline indications and types of breast reconstruction.</li> <li>Identify features, staging, and treatment of male breast carcinoma.</li> </ul>
S2-010	Nipple and areola diseases	<ul style="list-style-type: none"> <li>Identify common nipple and areola pathologies, including eczema, duct ectasia, and Paget's disease.</li> <li>Describe the clinical features of these conditions.</li> <li>Outline management strategies for each pathology.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	Clinical Methods/Skills
S2-011	Clinical examination of breast	<ul style="list-style-type: none"> <li><b>Demonstrate</b> breast examination through inspection, palpation, and lymph node exam.</li> <li><b>Observe/assist</b> in fine-needle aspiration cytology (FNAC) and core biopsy.</li> <li><b>Interpret</b> mammography and ultrasound reports under supervision.</li> <li><b>Counsel</b> patients regarding benign vs malignant breast conditions.</li> <li><b>Practice</b> communication skills for delivering sensitive information.</li> <li><b>Follow</b> OT protocols for breast surgery and specimen labeling.</li> </ul>

THORACIC DISEASES		
Theory		
Code	Topics	Specific Learning Objectives
S2-012	Surgical Anatomy	<ul style="list-style-type: none"> <li>Identify critical structures to preserve during thoracic surgery, such as the phrenic and vagus nerves, recurrent laryngeal nerves, major blood vessels, and the esophagus.</li> </ul>
S2-013	Blunt and Penetrating Injuries	<ul style="list-style-type: none"> <li>Differentiate between blunt and penetrating injuries.</li> <li>Outline initial assessment and stabilization.</li> <li>Identify common complications and their basic management.</li> </ul>
S2-014	Lung Abscess	<ul style="list-style-type: none"> <li>Enlist common causes and risk factors of lung abscess.</li> <li>Describe clinical features and basic diagnostic approach.</li> <li>Outline principles of medical and surgical management.</li> <li>Identify possible complications and their prevention.</li> </ul>
S2-015	Empyema Thoracis	<ul style="list-style-type: none"> <li>Enlist common causes and predisposing conditions of empyema.</li> <li>Describe clinical presentation and diagnostic methods.</li> <li>Outline principles of management, including drainage and supportive care.</li> <li>Enlist the complications.</li> </ul>
S2-016	Lung Tumors	<ul style="list-style-type: none"> <li>Describe the clinical features, diagnostic evaluation, and general management of common benign thoracic tumors.</li> <li>Explain the staging, prognostic indicators, and treatment modalities for malignant thoracic tumors, including primary lung cancer and mediastinal</li> </ul>

		<p>masses.</p> <ul style="list-style-type: none"> <li>Outline the indications, operative techniques, and postoperative complications associated with lung-resection procedures.</li> </ul>
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## Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-017	Respiratory system examination and surgical skills	<ul style="list-style-type: none"> <li><b>Perform</b> a structured respiratory examination, including inspection, palpation, percussion, and auscultation.</li> <li><b>Interpret</b> findings on chest X-rays and CT scans relevant to common thoracic conditions.</li> <li><b>Observe/Assist</b> in thoracocentesis and chest-drain insertion under supervision.</li> <li><b>Observe and record</b> key steps of bronchoscopy procedures.</li> <li><b>Monitor</b> post-thoracotomy care, including chest-drain function, pain control, and respiratory physiotherapy.</li> <li><b>Counsel</b> patients on smoking cessation and risks associated with lung cancer.</li> <li><b>Follow</b> ICU postoperative protocols for patients after thoracic surgery.</li> </ul>

## GASTROINTESTINAL SURGERY

### Theory

Code	Topics	Specific Learning Objectives
S2-018	Surgical Anatomy	<ul style="list-style-type: none"> <li>Identify key structures that must be preserved during gastrointestinal surgery.</li> </ul>
S2-019	Esophageal obstruction	<ul style="list-style-type: none"> <li>Enlist common benign and malignant causes of esophageal obstruction.</li> <li>Describe clinical features and basic diagnostic approach.</li> <li>Outline principles of surgical and non-surgical management</li> <li>Identify possible complications and basic preventive measures.</li> <li>Discuss causes, clinical signs, and surgical management of esophageal perforation.</li> </ul>
S2-020	Peptic Ulcers	<ul style="list-style-type: none"> <li>Identify clinical features, diagnostic methods, complications, and treatment options.</li> <li>Describe the role of <i>H. pylori</i> in gastritis and peptic ulcer disease.</li> </ul>
S2-021	Gastric volvulus and perforation	<ul style="list-style-type: none"> <li>Diagnose gastric volvulus through clinical signs and imaging findings.</li> <li>Describe the causes, presentation, and diagnosis of gastric perforation.</li> <li>Plan the surgical management for gastric volvulus and perforation.</li> </ul>
S2-022	Gastric tumors	<ul style="list-style-type: none"> <li>Explain classification, staging, prognosis, and surgical management.</li> <li>Outline GIST, lymphomas, and benign gastric and duodenal tumors, with surgical relevance.</li> </ul>
	Inflammatory bowel disease	<ul style="list-style-type: none"> <li>Describe the anatomical involvement, pathological features, and complications of Crohn's disease</li> </ul>

S2-023		<p>relevant to surgery.</p> <ul style="list-style-type: none"> <li>Discuss the diagnostic approaches, including imaging and endoscopic findings, that guide surgical decision-making.</li> <li>Outline the indications, principles, and techniques of surgical management, including resection, stricturoplasty, and management of fistulas or abscesses.</li> </ul>
S2-024	Tuberculosis	<ul style="list-style-type: none"> <li>Describe the clinical presentation and imaging features of intestinal tuberculosis.</li> <li>Discuss surgical principles, including indications for resection or stricturoplasty.</li> </ul>
S2-025	Diverticula	<ul style="list-style-type: none"> <li>Differentiate congenital (Meckel's) and acquired diverticula.</li> <li>List the complications.</li> <li>Discuss surgical management strategies for complicated diverticula.</li> </ul>
S2-026	Intestinal Obstruction	<ul style="list-style-type: none"> <li>List the common causes of intestinal obstruction.</li> <li>Define intussusception and volvulus.</li> <li>Explain the pathophysiology of obstruction and potential progression to strangulation.</li> <li>Identify key clinical features.</li> <li>List the investigations required to reach the diagnosis.</li> <li>Outline initial management including resuscitation, NG decompression, fluid and electrolyte replacement, and antibiotics.</li> <li>Describe surgical indications.</li> <li>List the complications.</li> </ul>
S2-027	Stomas	<ul style="list-style-type: none"> <li>Describe types of stomas (ileostomy, jejunostomy) and indications.</li> <li>List common complications and principles of stoma care.</li> </ul>

S2-028	Fistulas	<ul style="list-style-type: none"> <li>Identify causes and clinical presentation of enterocutaneous fistulas.</li> <li>Discuss diagnostic approaches and surgical management principles.</li> </ul>
S2-029	Short Bowel Syndrome	<ul style="list-style-type: none"> <li>Describe etiologies and nutritional consequences of short bowel syndrome.</li> <li>Outline medical, nutritional, and surgical management strategies.</li> </ul>
S2-030	Small Intestinal Tumors	<ul style="list-style-type: none"> <li>Differentiate benign (adenomas, lipomas) from malignant (adenocarcinoma, lymphoma, sarcoma) small intestine tumors.</li> <li>Discuss diagnostic workup and surgical management plan.</li> </ul>
S2-031	Ulcerative colitis	<ul style="list-style-type: none"> <li>Describe pathological features, extent of disease, and mucosal involvement.</li> <li>Describe clinical features, complications (toxic megacolon, bleeding), and indications for surgery.</li> <li>Outline the management plan including surgical options, including colectomy and ileal pouch-anal anastomosis.</li> </ul>
S2-032	Vascular lesions	<ul style="list-style-type: none"> <li>Diagnose angiodysplasia and ischemic colitis clinically and on imaging.</li> <li>Discuss plan of surgical and endoscopic management.</li> </ul>
S2-033	Large Intestine Tumors	<ul style="list-style-type: none"> <li>Differentiate benign polyps/adenomas from malignant adenocarcinoma.</li> <li>Discuss staging, prognosis, and surgical management options.</li> </ul>
S2-034	Acute and chronic Appendicitis	<ul style="list-style-type: none"> <li>Identify classical signs of acute appendicitis.</li> <li>Describe atypical presentations.</li> <li>Differentiate acute from chronic appendicitis based on symptom duration, severity, and presentation.</li> </ul>

		<ul style="list-style-type: none"> <li>Outline differential diagnoses including mesenteric adenitis, Meckel's diverticulitis, gynecological, and urinary conditions.</li> <li>List the investigations to reach diagnosis.</li> <li>Identify complications of appendicitis.</li> </ul>
S2-035	Appendix Tumors	<ul style="list-style-type: none"> <li>Differentiate benign (mucinous cystadenoma) and malignant (carcinoid, adenocarcinoma) tumors.</li> <li>Describe surgical approaches and extent of resection based on tumor type and size.</li> </ul>
S2-036	Appendectomy	<ul style="list-style-type: none"> <li>Outline indications for appendectomy in acute and chronic appendicitis.</li> <li>Describe the steps of open and laparoscopic appendectomy.</li> <li>List post-operative complications.</li> </ul>
S2-037	Hemorrhoids	<ul style="list-style-type: none"> <li>Explain pathophysiology and classification.</li> <li>Diagnose hemorrhoids based on clinical features, complications, and indications for surgery.</li> <li>Outline the management plan.</li> </ul>
S2-038	Anal Fissure	<ul style="list-style-type: none"> <li>Differentiate acute and chronic fissures.</li> <li>Discuss conservative and surgical treatment (lateral internal sphincterotomy).</li> <li>List complications and describe preventive strategies.</li> </ul>
S2-039	Fistula-in-Ano	<ul style="list-style-type: none"> <li>Describe etiology and common classification (Park's classification).</li> <li>Outline surgical plan including fistulotomy, seton placement, and sphincter preservation.</li> </ul>
S2-040	Pilonidal Sinus	<ul style="list-style-type: none"> <li>Describe the clinical features and differentiate from sebaceous cyst, gluteal/perianal abscess, dermoid cyst.</li> <li>List common complications.</li> <li>Describe surgical management.</li> </ul>
S2-041	Anal Canal Tumors	<ul style="list-style-type: none"> <li>Differentiate benign (papilloma, adenoma) and</li> </ul>

		<p>malignant tumors (squamous cell carcinoma, adenocarcinoma).</p> <ul style="list-style-type: none"> <li>Discuss staging, prognosis, and surgical or oncological management options.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-042	Small Intestine	<ul style="list-style-type: none"> <li><b>Take detailed history</b> for dyspepsia, hematemesis, and melaena.</li> <li><b>Perform</b> clinical examination for anemia, abdominal mass, and peritonitis.</li> <li><b>Perform</b> focused abdominal examination to assess obstruction, masses, and tenderness</li> <li><b>Observe/assist</b> in inserting nasogastric tube.</li> <li><b>Counsel</b> patients on H. pylori eradication therapy and lifestyle modifications.</li> <li><b>Interpret</b> imaging studies (X-ray, CT, enteroclysis) for small bowel obstruction and other small intestine lesions.</li> <li><b>Observe/assist</b> in biopsy procedures and ensure proper specimen handling and labeling.</li> <li><b>Follow</b> ICU and OT protocols in the management of small bowel emergencies.</li> </ul>
S2-043	Large Intestine	<ul style="list-style-type: none"> <li><b>Take focused history</b> for altered bowel habits, rectal bleeding, and abdominal pain.</li> <li><b>Demonstrate</b> thorough abdominal and per rectal examination, including digital rectal exam.</li> <li><b>Interpret</b> colonoscopy and barium enema findings.</li> <li><b>Observe/assist</b> in colonoscopy or biopsy procedures and ensure proper specimen labeling.</li> <li><b>Assist</b> in providing pre- and post-operative care for patients undergoing colectomy or other colorectal surgeries.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Counsel</b> patients regarding IBD management, colorectal cancer, and lifestyle modifications.</li> <li>• <b>Follow</b> OT protocols for bowel preparation, sterile technique, and specimen handling</li> </ul>
S2-044	Intestinal Obstruction	<ul style="list-style-type: none"> <li>• <b>Take</b> focused history for bowel obstruction, including abdominal pain, vomiting, and constipation.</li> <li>• <b>Perform</b> abdominal examination to assess distension, peristaltic activity, and tenderness.</li> <li>• <b>Interpret</b> imaging studies, including X-rays, for air-fluid levels and obstruction patterns.</li> <li>• <b>Observe/assist</b> in NG tube insertion for decompression and monitor its effectiveness.</li> <li>• <b>Assist</b> in initiating IV fluid resuscitation and monitor electrolytes and hemodynamic status.</li> <li>• <b>Observe/assist</b> in laparotomy or other surgical interventions for intestinal obstruction.</li> <li>• <b>Counsel</b> patients and attendants regarding the risks and postoperative expectations of emergency surgery.</li> <li>• <b>Follow</b> ICU protocols for postoperative care, monitoring for complications, and early recognition of recurrence.</li> </ul>
S2-045	Appendicitis	<ul style="list-style-type: none"> <li>• <b>Take</b> focused history for acute abdominal pain suggestive of appendicitis.</li> <li>• <b>Perform</b> McBurney's point tenderness, Rovsing's sign, and Psoas sign.</li> <li>• <b>Interpret</b> imaging findings from ultrasound and CT to confirm diagnosis.</li> <li>• <b>Observe/assist</b> in open and laparoscopic appendectomy, ensuring safe operative technique.</li> <li>• <b>Assist</b> in post-operative care, including wound care and drain monitoring.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Counsel</b> patients regarding the procedure, post-operative recovery, and follow-up.</li> <li>• <b>Follow</b> OT protocols and ensure proper specimen handling and labeling.</li> </ul>
S2-046	Anal canal	<ul style="list-style-type: none"> <li>• <b>Take history</b> for rectal pain, bleeding, discharge, or perianal swelling.</li> <li>• <b>Perform</b> clinical examination, including inspection, digital rectal exam, and proctoscopy.</li> <li>• <b>Observe/assist</b> in procedures such as hemorrhoid banding, sclerotherapy, and surgical hemorrhoidectomy.</li> <li>• <b>Observe/assist</b> in fistula-in-ano and pilonidal sinus surgeries, ensuring safe operative technique.</li> <li>• <b>Assist in providing</b> post-operative care, including wound care, dressing changes, and monitoring for complications.</li> <li>• <b>Counsel</b> patients on hygiene, diet, and long-term follow-up to prevent recurrence.</li> <li>• <b>Ensure</b> proper handling and labeling of surgical specimens for biopsy.</li> </ul>

## HERNIA

### Theory

Code	Topics	Specific Learning Objectives
S2-047	Hernia formation	<ul style="list-style-type: none"> <li>• Explain the mechanical and biological processes that weaken the abdominal wall and lead to hernia formation.</li> <li>• Describe the rectus sheath, linea alba, inguinal canal, and weak areas important in hernia formation and repair.</li> </ul>
S2-048	Inguinal hernia	<ul style="list-style-type: none"> <li>• Identify the clinical signs and symptoms of inguinal hernia.</li> </ul>

		<ul style="list-style-type: none"> <li>• Differentiate between direct and indirect inguinal hernias.</li> <li>• Explain possible complications.</li> <li>• Describe surgical and non-surgical management.</li> </ul>
S2-049	Femoral hernia	<ul style="list-style-type: none"> <li>• Identify the clinical features of femoral hernia.</li> <li>• Explain the risks and potential complications associated with femoral hernia.</li> <li>• Describe the principles of surgical and non-surgical management.</li> </ul>
S2-050	Ventral hernias	<ul style="list-style-type: none"> <li>• Identify types of ventral hernias.</li> <li>• Describe the clinical features of each type of ventral hernia (umbilical, incisional, parastomal, and traumatic hernias).</li> <li>• Explain the risks and potential complications associated with ventral hernias.</li> <li>• Outline the principles of surgical management for ventral hernias.</li> </ul>
S2-051	Peritonitis	<ul style="list-style-type: none"> <li>• Enlist the etiology of peritonitis.</li> <li>• Outline the clinical features and diagnostic evaluation, including laboratory tests and imaging.</li> <li>• Outline the surgical and supportive management plan in acute peritonitis.</li> <li>• Discuss the prognosis and factors influencing patient outcomes in peritonitis.</li> <li>• Identify the major complications associated with untreated or severe peritonitis.</li> </ul>
S2-052	Intraperitoneal abscess	<ul style="list-style-type: none"> <li>• Describe the clinical presentation and common sites of intraperitoneal abscesses.</li> <li>• Describe the diagnostic role of laboratory tests and imaging modalities.</li> <li>• Explain the procedure of abscess drainage, including percutaneous and surgical approaches.</li> </ul>

S2-053	Adhesions & torsion	<ul style="list-style-type: none"> <li>Explain the pathophysiology of intra-abdominal adhesions and torsion.</li> <li>Describe the clinical presentation and complications associated with adhesions and torsion.</li> <li>Plan the surgical management for adhesions and torsion.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-054	Clinical examination of hernia	<ul style="list-style-type: none"> <li><b>Perform</b> clinical examination of the abdominal wall and common hernia sites.</li> <li><b>Examine</b> groin of a patient to distinguish inguinal from femoral hernias through inspection, palpation, cough impulse, deep ring and femoral canal palpation, Valsalva maneuver, and assessment of reducibility.</li> <li><b>Identify</b> the signs of obstruction and strangulation during patient assessment.</li> <li><b>Assist</b> in open and laparoscopic hernia repair procedures.</li> <li><b>Observe and assist</b> in handling and fixing surgical mesh safely.</li> <li><b>Counsel</b> patients regarding elective versus emergency hernia surgery.</li> <li><b>Follow</b> operating theatre protocols, including proper handling of specimens from strangulated bowel.</li> </ul>
S2-055	Peritonitis	<ul style="list-style-type: none"> <li><b>Perform</b> abdominal examination for guarding, rigidity, ascites, masses.</li> <li><b>Observe/assist</b> in ascitic tap.</li> <li><b>s</b> in post-op care for peritonitis and septic patients in ICU.</li> </ul>

PANCREAS		
Theory		
Code	Topics	Specific Learning Objectives
S2-056	Pancreatitis (acute and chronic)	<ul style="list-style-type: none"> <li>Identify the major etiological factors contributing to pancreatitis.</li> <li>Explain the pathophysiological mechanisms leading to pancreatic inflammation.</li> <li>Identify the key clinical features and diagnostic criteria of pancreatitis.</li> <li>Outline essential investigations used to confirm diagnosis and assess severity.</li> <li>Discuss potential complications and their clinical implications.</li> <li>Plan medical and supportive management.</li> </ul>
S2-057	Pancreatic cancer	<ul style="list-style-type: none"> <li>Identify the major risk factors associated with pancreatic cancer.</li> <li>Describe its clinical presentation.</li> <li>Discuss the factors influencing prognosis in pancreatic cancer.</li> <li>Outline the main treatment modalities, including surgical, medical, and palliative options.</li> <li>Identify important neighbouring structures at surgical risk during pancreatic procedures.</li> </ul>
Clinical Skills		
Code	Topic	Clinical Methods/Skills
S2-058	Clinical skills-pancreatic diseases	<ul style="list-style-type: none"> <li><b>Perform</b> focused history-taking for abdominal pain, jaundice, and weight loss.</li> <li><b>Conduct</b> abdominal examination to assess epigastric tenderness, masses, and ascites.</li> <li><b>Interpret</b> CT and USG findings related to pancreatitis</li> </ul>

		<p>and pancreatic tumors.</p> <ul style="list-style-type: none"> <li>• <b>Observe/assist</b> in biopsy procedures and ensure accurate specimen labeling.</li> <li>• <b>Manage</b> the initial care of acute pancreatitis, including fluids, analgesia, and monitoring.</li> <li>• <b>Assist</b> in providing post-operative care for pancreatic surgery patients, with emphasis on drain monitoring and nutritional support.</li> <li>• <b>Counsel</b> patients regarding lifestyle modifications such as alcohol and smoking cessation in chronic pancreatitis.</li> </ul>
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## SPLEEN

### Theory

Code	Topics	Specific Learning Objectives
S2-059	Splenic trauma & rupture	<ul style="list-style-type: none"> <li>• Identify the common mechanisms of splenic injury.</li> <li>• Identify the clinical features and complications associated with splenic trauma.</li> <li>• Outline investigations for diagnosis and assessment of splenic injury.</li> <li>• Describe the surgical and non-surgical management of splenic rupture.</li> </ul>
S2-060	Splenomegaly & hypersplenism	<ul style="list-style-type: none"> <li>• Identify the common causes and systemic effects of splenomegaly and hypersplenism.</li> <li>• Outline the appropriate investigations for diagnosis and assessment.</li> </ul>
S2-061	Neoplasms	<ul style="list-style-type: none"> <li>• Differentiate between benign and malignant tumors of the spleen based on clinical and pathological features.</li> <li>• Recognize the key diagnostic approaches, including imaging and laboratory evaluation.</li> <li>• Discuss the principles of management for splenic</li> </ul>

		neoplasms, including surgical options.
S2-062	Splenectomy	<ul style="list-style-type: none"> <li>• List the common indications for splenectomy.</li> <li>• Identify the major structures at risk during splenic surgery.</li> <li>• Describe the surgical procedure and important operative considerations.</li> <li>• List the potential complications.</li> <li>• Describe overwhelming post-splenectomy infection (OPSI).</li> <li>• Outline preventive measures.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-063	Clinical skills-splenic diseases	<ul style="list-style-type: none"> <li>• <b>Perform</b> abdominal examination for splenomegaly.</li> <li>• <b>Interpret</b> USG and CT findings for splenic trauma, enlargement, or pathology.</li> <li>• <b>Assist</b> in providing initial care of splenic trauma.</li> <li>• <b>Observe/assist</b> in splenectomy and ensure proper specimen handling and labeling.</li> <li>• <b>Counsel</b> patients on appropriate vaccinations and preventive care post-splenectomy.</li> <li>• <b>Follow</b> ICU and OT protocols in the management of splenic emergencies.</li> </ul>

### GALLBLADDER AND BILE DUCTS

#### Theory

Code	Topics	Specific Learning Objectives
S2-064	Cholelithiasis	<ul style="list-style-type: none"> <li>• Identify major risk factors contributing to gallstone development.</li> <li>• Describe the common complications, including cholecystitis and choledocholithiasis.</li> </ul>

S2-065	Acute and chronic cholecystitis	<ul style="list-style-type: none"> <li>• List common causes and risk factors of cholecystitis</li> <li>• Describe clinical features and basic diagnostic evaluation</li> <li>• Outline principles of medical and surgical management, including cholecystectomy</li> <li>• Identify potential complications and basic preventive measures</li> </ul>
S2-066	Cholecystectomy	<ul style="list-style-type: none"> <li>• Identify the indications for cholecystectomy.</li> <li>• Describe the surgical anatomy relevant to cholecystectomy, including Calot's triangle and variations of the cystic duct and artery.</li> <li>• Outline the steps of open and laparoscopic cholecystectomy.</li> <li>• List intraoperative and postoperative complications.</li> <li>• Identify key structures to preserve during cholecystectomy.</li> </ul>
S2-067	Tumors of biliary tree	<ul style="list-style-type: none"> <li>• Differentiate between benign and malignant tumors of the biliary tree based on clinical and pathological features.</li> <li>• Describe the staging systems and their relevance to prognosis and treatment planning.</li> <li>• Discuss the principles of management, including surgical resection and palliative options.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	<b>Clinical Methods/Skills</b>
S2-068	Clinical Skills - Gallbladder and Bile Duct Surgery	<ul style="list-style-type: none"> <li>• <b>Take</b> focused history for biliary colic, jaundice, pruritus, and weight loss.</li> <li>• <b>Perform</b> abdominal examination to assess gallbladder disease and signs of obstructive jaundice.</li> <li>• <b>Interpret</b> imaging findings from USG, MRCP, and ERCP for biliary pathology.</li> <li>• <b>Observe/assist</b> in laparoscopic cholecystectomy and</li> </ul>

		<p>ensure proper specimen handling.</p> <ul style="list-style-type: none"> <li>• <b>Assist</b> in providing initial management for post-cholecystectomy complications.</li> <li>• <b>Counsel</b> patients regarding gallstone prevention, lifestyle modifications, and risks of malignancy.</li> <li>• <b>Follow</b> OT and ICU protocols during management of obstructive jaundice and biliary surgery.</li> </ul>
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## LIVER

### Theory

Code	Topics	Specific Learning Objectives
S2-069	Liver Trauma	<ul style="list-style-type: none"> <li>• Enlist common causes and types of liver injury.</li> <li>• Describe clinical features and initial assessment (including hemodynamic status).</li> <li>• Outline principles of management, including conservative and surgical approaches.</li> <li>• Identify possible complications and basic preventive measures.</li> </ul>
S2-070	Obstructive jaundice	<ul style="list-style-type: none"> <li>• Diagnose obstructive jaundice based on clinical presentation and investigations.</li> <li>• List the investigations (LFTs, USG, MRCP, and ERCP) in diagnosis and evaluation.</li> <li>• Outline the management plan.</li> </ul>
S2-071	Liver abscess	<ul style="list-style-type: none"> <li>• Differentiate amoebic and pyogenic liver abscesses.</li> <li>• List the investigations to reach the diagnosis.</li> <li>• Outline the management plan.</li> </ul>
S2-072	Hydatid disease	<ul style="list-style-type: none"> <li>• Explain the life cycle, clinical features, imaging findings, and surgical management of hydatid secondary disease.</li> </ul>

S2-073	Liver malignancies	<ul style="list-style-type: none"> <li>Describe clinical features and basic diagnostic evaluation, including imaging and tumor markers.</li> <li>Outline principles of surgical and non-surgical management</li> <li>Identify potential complications and basic preventive measures</li> </ul>
S2-074	Management principles	<ul style="list-style-type: none"> <li>Discuss the role of investigations such as LFTs, USG, CT, MRI, and tumor markers (AFP) in liver pathology.</li> <li>Outline management principles, including indications for surgery, drainage, resection, and palliative care.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-075	Clinical examination-liver	<ul style="list-style-type: none"> <li><b>Take</b> focused history for fever, jaundice, abdominal pain, and weight loss.</li> <li><b>Perform</b> abdominal examination to assess hepatomegaly, tenderness, and palpable masses.</li> <li><b>Interpret</b> imaging findings from USG and CT for liver abscesses, hydatid cysts, and tumors.</li> <li><b>Observe/assist</b> in percutaneous drainage of liver abscesses.</li> <li><b>Observe/assist</b> in surgical procedures for hydatid cyst removal and liver resection.</li> <li><b>Counsel</b> patients regarding prevention of hydatid disease and lifestyle modifications in liver malignancy.</li> <li><b>Follow</b> OT and ICU protocols for safe perioperative care in liver surgery.</li> </ul>

ORTHOPEDIC AND TRAUMA		
Theory		
Code	Topics	Specific Learning Objectives
S2-076	Bone Fractures and Complications	<ul style="list-style-type: none"> <li>• Describe the types and classification of bone fractures.</li> <li>• Explain the pathophysiology and healing of fractures.</li> <li>• Discuss the clinical features, diagnosis, and complications of fractures.</li> <li>• Explain basic principles of fracture management, including conservative and surgical approaches.</li> </ul>
S2-077	Injuries of Tendons and Bursae	<ul style="list-style-type: none"> <li>• Describe common tendon and bursal injuries.</li> <li>• Explain their clinical presentation and evaluation.</li> <li>• Discuss principles of management, including conservative and surgical treatment.</li> </ul>
S2-078	Arthritis	<ul style="list-style-type: none"> <li>• Describe the types of arthritis affecting joints.</li> <li>• Explain clinical features, basic investigations, and radiological findings.</li> <li>• Discuss principles of medical and surgical management of arthritis.</li> </ul>
S2-079	Spinal Trauma Spinal Deformities	<ul style="list-style-type: none"> <li>• Describe types and mechanisms of spinal injuries.</li> <li>• Explain clinical features and neurological assessment.</li> <li>• Discuss imaging modalities used in spinal trauma.</li> <li>• Explain basic principles of management, including immobilization and surgery.</li> <li>• Describe common spinal deformities (scoliosis, kyphosis, lordosis).</li> <li>• Explain their clinical assessment and radiological evaluation.</li> <li>• Discuss management options, including conservative and surgical approaches.</li> </ul>

S2-080	Bone and Cartilage Tumors Spinal Tumors	<ul style="list-style-type: none"> <li>Classify bone and cartilage tumors into benign and malignant.</li> <li>Describe clinical features and basic diagnostic approach.</li> <li>Discuss general principles of management and complications of bone and cartilage tumors.</li> <li>Classify spinal tumors.</li> <li>Describe clinical presentation and neurological signs.</li> <li>Explain diagnostic approach, including imaging.</li> <li>Discuss principles of management and potential complications.</li> </ul>
S2-081	Medico legal aspects of trauma	See annexure-II (Forensic Medicine)

### Clinical Skills

Code	Topic	Clinical Methods/Skills
S2-082	Clinical skills-Orthopedics and trauma	<ul style="list-style-type: none"> <li><b>Take</b> focused history from patients with bone fractures, tendon/bursa injuries, arthritis, bone/cartilage tumors, spinal trauma, spinal tumors, and spinal deformities.</li> <li><b>Perform</b> clinical examination, including inspection, palpation, range of motion, neurovascular assessment, and special tests for joints, bones, and spine.</li> <li><b>Interpret</b> X-rays of fractures, joint diseases, bone/cartilage tumors, and spinal deformities.</li> </ul>

## SURGICAL INSTRUMENTS

### **Cutting Instruments**

- Scalpel handle with #10 blade
- Metzenbaum scissors
- Mayo scissors (curved/straight)

### **Tissue Handling / Grasping**

- Adson forceps (with teeth)
- Debakey forceps
- Allis forceps
- Babcock forceps
- Kocher (Ochsner) forceps

### **Hemostatic / Clamping Instruments**

- Mosquito forceps
- Kelly forceps
- Crile forceps
- Rochester-Pean forceps

### **Needle Holders / Suturing**

- Mayo-Hegar needle holder
- Olsen-Hegar needle holder

### **Retractors**

- Senn retractor
- Army-Navy retractor
- Richardson retractor

### **Suction / Irrigation**

- Yankauer suction tip
- Poole suction tip

### **Other Essentials**

- Towel clips
- Sponge holding forceps

### **Suture Needles**

- Curved needle

- Straight needle

#### Common Sutures

- Absorbable: Vicryl, Dexon, Chromic catgut
- Non-absorbable: Nylon, Prolene, Silk

## ANNEXURE-I

### Transfusion Medicine for Undergraduate MBBS Students

#### Learning Objectives

By the end of the Rotation, the student will be able to:

1. Explain the principles of transfusion medicine, including types, indications, contraindications, and dosing of major blood components used in surgical practice.
2. Describe pre-transfusion requirements and safe transfusion procedures, including ABO/Rh typing, cross-match principles, consent, documentation, and perioperative transfusion protocols.
3. Classify transfusion reactions and explain their pathophysiology, covering acute and delayed reactions, clinical features, transfusion-transmissible infections, and preventive strategies.
4. Interpret laboratory data related to transfusion practice, including blood grouping reports, cross-match results, transfusion reaction work-up (DAT, LDH, bilirubin, coagulation profile), and outline evidence-based management steps.
5. Investigate and Recommend Corrective and Preventive Action of Transfusion Reactions

#### B. Psychomotor (Skills) Domain

By the end of the training, the student will be able to:

1. Perform correct bedside verification, including patient identity, blood unit details, and setting up equipment for safe administration of blood components.

2. Set up and administer blood transfusions safely, applying proper technique, aseptic measures, appropriate infusion rates, and completing necessary transfusion documentation.
3. Monitor patients during transfusion, accurately recording vital signs, identifying early signs of transfusion reactions, and collecting required samples for laboratory evaluation.
4. Interpret basic transfusion-related laboratory findings during clinical care, including recognizing incompatible blood group results, abnormal DAT, hemolysis markers, transfusion reaction reports (at least 5) and initiate appropriate first response actions (stop transfusion, maintain IV line, call senior, return samples/unit to blood bank).

**Reference Material:**

1. The administration of blood components: a British Society for Haematology Guideline
2. Guideline on the investigation and management of acute transfusion reactions, British Journal of Haematology 2023

**TRANSFUSION MEDICINE ROTATION LOGBOOK**

*For Undergraduate MBBS – General Surgery Rotation*

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**1. Student Information**

Field	Details
Name	
Roll Number	
College	
Rotation	General Surgery
Duration	____ weeks

Field	Details
Supervisor	Prof. _____
Department	General Surgery / Blood Bank Liaison

## 2. Record of Performed Skills

### A. Blood Grouping & Cross-Match Interpretation (Cognitive + Skill)

Task	Date	Attempt (O/S/D)*	Faculty Feedback	Signature
Interpret ABO/Rh typing report				
Identify incompatible cross-match results				
Interpret DAT, bilirubin, LDH, hemolysis indicators				
Documentation of transfusion reaction work-up form				

**O = Observed, S = Performed under Supervision, D = Demonstrated independently**

### B. Pre-Transfusion Verification & Preparation

Skill	Date	Attempt (O/S/D)	Remarks	Faculty Signature
Verified patient identity using 2 identifiers				
Matched blood unit details with request form				

Skill	Date	Attempt (O/S/D)	Remarks	Faculty Signature
Checked expiry date & compatibility label				
Prepared infusion set with filter aseptically				

### C. Administration of Blood Components

Skill	Date	Attempt (O/S/D)	Remarks	Signature
Set up transfusion with correct IV access				
Adjusted infusion rate according to protocol				
Completed consent and transfusion record				
Completed post-transfusion documentation				

### D. Monitoring & Early Detection of Reactions

Skill	Date	Attempt (O/S/D)	Feedback	Signature
Recorded baseline/15-min vitals accurately				
Identified early signs of transfusion reaction				
Responded appropriately (stop transfusion, maintain IV line, call senior)				
Collected blood bag, tubing & samples for reaction workup				

### E. Management of Transfusion Reactions

Task	Date	Attempt (O/S/D)	Remarks	Signature
Recognized type of reaction (FNHTR, Allergic, AHTR, TRALI, TACO, Sepsis)				
Interpreted reaction investigation report				
Completed documentation: transfusion reaction form				

### 3. Mini-CEX / DOPS (Workplace-Based Assessment)

#### 3. DOPS – Blood Transfusion Setup

Criteria	Rating (1–5)
Patient identity verification	
Equipment preparation	
Aseptic technique	
Infusion setup	
Documentation	
Global rating	

Faculty Comments:

Signature & Stamp: \_\_\_\_\_

#### B. Mini-CEX – Management of Transfusion Reaction

Domain	Rating (1–9)
History-taking / symptom recognition	
Clinical judgment	
Interpretation of lab results	

Domain	Rating (1–9)
Emergency response steps	
Communication with senior staff & patient	
Professionalism	
Overall competence	

Feedback:

Faculty: \_\_\_\_\_  
 Signature: \_\_\_\_\_

#### 4. Final Supervisor Evaluation

Attribute	Rating
Knowledge	Excellent / Good / Satisfactory / Needs Improvement
Skills	Excellent / Good / Satisfactory / Needs Improvement
Professional attitude	Excellent / Good / Satisfactory / Needs Improvement
Logbook completeness	Complete / Incomplete

Supervisor Comments:

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Signature & Stamp: \_\_\_\_\_

## ANNEXURE-II

### (Medico legal aspect of Trauma-Forensic Medicine)

- Describe the identification process of patient with history of trauma: CNIC, thumb impression, photograph, identification marks.
- Take consent considering the points:
  1. Type of consent (written, informed consent): in case of adult (self), in case of minor/insane, in case of custody, implied consent in case of emergency.
- Describe the process of recording dying declaration:
 

Who will record?

  1. Duty doctor
  2. In the presence of two credible persons.
  3. Video recording of statement.
  4. It will be read to the patient and get signature (if possible).
  5. Seal the statement bearing signatures of the person recording it.
  6. Send this to Elaqa magistrate.
- Describe the detailed procedure of examination.
  1. GCS
  2. Conditions of clothes (cut, hole, tears, derangement, stains)
- Elaborate the local examination of injury:  
Site of the injury, location of the injury (distance from 2 anatomical points), type of injury (blunt, sharp, firearm, burn), size, color, age of injury, mobility, underlying bone exposed/not, deformity.
- Formulate opinion regarding injuries as per Qisas and Diyat act .Head and face (Shajjah), limbs (JGJ), cavities (JG/JGJ), Other neck injuries, burn.
- Manner: homicidal, suicidal, accidental
- Fabrication yes or no
- Weapon
- Condition of wound

05

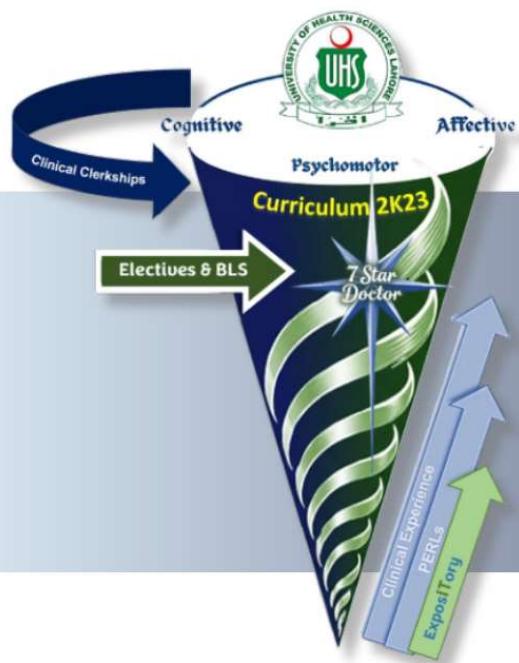
Section



## Modular Integrated Curriculum 2K23

Final Version

# GYNECOLOGY & OBSTETRICS CLERKSHIP



**YEAR-05**

**Curriculum 2k23**  
**Final Year MBBS Clerkship**

**GYNECOLOGY & OBSTETRICS CLERKSHIP**

**Learning Outcomes**

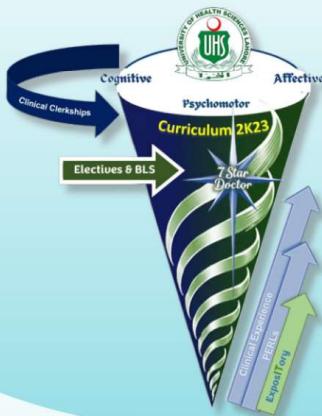
By the end of the gynecology & obstetrics clerkship, a student will be able to:

- Identify common obstetric and gynecological diseases and their clinical presentations.
- Formulate differential diagnoses based on history and examination findings.
- Interpret relevant investigations to aid diagnosis and management.
- Outline the management plans for common Gynaecological and Obstetrics conditions, including emergencies.
- Counsel patients and families effectively on reproductive health, family planning, and preventive care.
- Apply ethical principles and demonstrate professionalism in patient care.
- Collaborate effectively within a healthcare team to provide comprehensive patient care.



**Modular Integrated Curriculum 2K23**  
Final Version

# GYNECOLOGY



## BASICS OF FEMALE REPRODUCTIVE SYSTEM

### Theory

Code	Topic	Specific Learning Objectives
Gyn-001	Genitourinary development	<ul style="list-style-type: none"> <li>Describe the embryological development of female genitourinary structures.</li> <li>Explain the process of sexual differentiation in early embryonic life.</li> <li>Identify common congenital anomalies resulting from Müllerian tract developmental disorders</li> </ul>
Gyn-002	Female abdominal-pelvic anatomy	<ul style="list-style-type: none"> <li>Identify the layers and boundaries of the abdominal and pelvic walls.</li> <li>Describe the blood supply, lymphatic drainage, and innervation of the pelvis and perineum.</li> <li>Identify key anatomical landmarks in the abdomen, pelvis, and perineum.</li> <li>Identify anatomical structures that are vulnerable during common gynecological surgical procedures.</li> </ul>
Gyn-003	Normal puberty	<ul style="list-style-type: none"> <li>Describe the hormonal regulation and physiological changes during puberty.</li> <li>Identify the sequence and timing of secondary sexual characteristics, including breast development, pubic and axillary hair growth, and menarche.</li> <li>Differentiate variations of normal puberty from abnormal puberty.</li> <li>Discuss psychosocial aspects and health implications associated with pubertal development.</li> </ul>
Gyn-004	Precocious puberty	<ul style="list-style-type: none"> <li>Define precocious puberty and differentiate between central and peripheral causes.</li> <li>Describe the hormonal and physiological mechanisms leading to early pubertal onset.</li> </ul>

		<ul style="list-style-type: none"> <li>Identify clinical features that suggest precocious puberty.</li> <li>Discuss investigations, including hormonal assays and imaging, to evaluate early puberty.</li> <li>Explain management strategies, including medical and psychosocial interventions. (integrate with Psychiatry)</li> </ul>
Gyn-005	Delayed puberty	<ul style="list-style-type: none"> <li>Define delayed puberty and distinguish between hypogonadotropic and hypergonadotropic causes.</li> <li>Describe the hormonal and physiological mechanisms underlying delayed onset of puberty.</li> <li>Identify clinical features indicative of delayed puberty.</li> <li>Discuss investigations, including hormonal and imaging studies, to determine the cause.</li> <li>Explain management strategies, including medical treatment and counseling.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-006	Pelvic anatomy & surgical risk	<ul style="list-style-type: none"> <li><b>Identify</b> major pelvic organs, vessels, nerves, and relevant anatomical variations, including Müllerian anomalies (on anatomical models, diagrams, or imaging).</li> <li><b>Trace</b> the course of the ureters, uterine arteries, and pelvic ligaments on models or simulators to identify structures at risk during gynecologic procedures.</li> </ul>

## MENSTRUAL CYCLE

### Theory

Code	Topic	Specific Learning Objectives
<b>NORMAL MENSTRUAL CYCLE</b>		
Gyn-007	Physiology of menstrual cycle	<ul style="list-style-type: none"> <li>Describe the hypothalamic–pituitary–ovarian (HPO) axis and the hormonal regulation of the menstrual cycle.</li> <li>Explain the phases of the menstrual cycle and correlate</li> </ul>

		<p>hormonal changes with endometrial, cervical, and ovarian responses.</p> <ul style="list-style-type: none"> <li>Explain the physiology of ovulation, fertilization, implantation, and early pregnancy.</li> <li>Describe the normal physiological variations in the menstrual cycle and interpret their clinical relevance, including conditions such as anovulation, luteal phase defects, and menopause.</li> </ul>
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## MENSTRUAL DISORDERS

Gyn-008	Abnormal uterine bleeding	<ul style="list-style-type: none"> <li>Describe the causes, pathophysiology, and clinical features of abnormal uterine bleeding.</li> <li>List the relevant investigations for diagnosis.</li> <li>Plan the management considering both medical and surgical options.</li> <li>Describe patient counseling points regarding treatment choices, fertility implications, and follow-up.</li> </ul>
Gyn-009	Dysmenorrhea	<ul style="list-style-type: none"> <li>Define dysmenorrhea, etiology, and its types.</li> <li>List investigations to confirm the diagnosis.</li> <li>Outline management strategies for symptom relief and fertility preservation, including medical and surgical options.</li> </ul>
Gyn-010	Endometriosis, Adenomyosis	<ul style="list-style-type: none"> <li>Describe the etiology, pathophysiology, and common sites of endometriosis/adenomyosis.</li> <li>Identify the clinical features of endometriosis/adenomyosis.</li> <li>Describe the possible underlying mechanisms showing association of endometriosis with infertility.</li> <li>Differentiate adenomyosis from other causes of abnormal uterine bleeding and pelvic pain.</li> <li>Discuss the role of imaging and histopathology in diagnosis.</li> <li>Outline management strategies, including medical and surgical options.</li> <li>Explain patient counseling points regarding treatment options, symptom management, and fertility considerations.</li> </ul>

Gyn-011	Amenorrhea	<ul style="list-style-type: none"> <li>• Differentiate between primary and secondary amenorrhea List the aetiology.</li> <li>• List the relevant investigations to find out the cause.</li> <li>• Explain management strategies based on etiology and fertility considerations.</li> <li>• Describe patient counseling points regarding prognosis and psychosocial support.</li> <li>• Describe Asherman syndrome.</li> </ul>
Gyn-012	Polycystic ovarian syndrome	<ul style="list-style-type: none"> <li>• Describe the etiology and underlying pathophysiology of PCOS.</li> <li>• Diagnose PCOS based on the clinical manifestations and ultrasound criteria.</li> <li>• List differential diagnoses for hyperandrogenism and menstrual irregularities.</li> <li>• Outline management plan considering lifestyle modification, medical therapy, and fertility treatment.</li> </ul>
Gyn-013	Postmenopausal bleeding	<ul style="list-style-type: none"> <li>• Identify potential causes, emphasizing malignancy exclusion.</li> <li>• Establish the differential diagnosis based on signs and symptoms.</li> <li>• List the investigations to reach the diagnosis.</li> <li>• Plan the management including referral for surgical evaluation when indicated.</li> <li>• Describe patient counseling points regarding findings, treatment options, and follow-up care.</li> </ul>
Gyn-014	Premenstrual syndrome (PMS)	<ul style="list-style-type: none"> <li>• Describe clinical features, diagnostic criteria, and pathophysiology of PMS.</li> <li>• Explain the impact of symptoms on daily activities.</li> <li>• Plan the management.</li> <li>• Describe patient counseling points regarding symptom recognition, coping strategies, and treatment adherence.</li> </ul>
<b>PERIMENOPAUSE AND MENOPAUSE</b>		
Gyn-015	Menopause	<ul style="list-style-type: none"> <li>• Define menopause and differentiate it from perimenopause and premature ovarian failure.</li> </ul>

		<ul style="list-style-type: none"> <li>• Describe the physiological changes during menopause.</li> <li>• Identify clinical features.</li> <li>• List complications associated with menopause.</li> <li>• Outline investigations to evaluate menopausal status and exclude other causes of symptoms.</li> <li>• Plan management including lifestyle modifications, hormone replacement therapy (HRT), non-hormonal pharmacologic options, and preventive care.</li> <li>• Describe patient counseling points on symptom management, long-term health risks, and healthy aging strategies.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-016	Gynaecological history	<p><b>Take a structured gynecological history covering:</b></p> <ul style="list-style-type: none"> <li>• Patient's biodata.</li> <li>• Presenting complaint: onset, duration, severity, and progression of symptoms</li> <li>• Menstrual history: age of menarche, cycle regularity, flow, LMP, pattern of bleeding, amount of blood loss, intermenstrual/post-coital bleeding, period related pain, and medications.</li> <li>• Vaginal discharge: amount, colour, odour, presence of blood.</li> <li>• Cervical screening.</li> <li>• Obstetric history: pregnancies, outcomes, complications, and fertility issues</li> <li>• Gynecological symptoms: abnormal bleeding, pelvic pain, vaginal discharge dyspareunia</li> <li>• Sexual and contraceptive history: sexual activity, contraception, STIs, fertility desires</li> <li>• Past gynecological and surgical history</li> <li>• Relevant medical, family, drug, and allergy history</li> <li>• Social and lifestyle factors influencing reproductive health</li> <li>• Psychosocial factors affecting menstrual or reproductive well-being</li> </ul>

		<p>being</p> <p><b>Demonstrate</b> professional, empathetic, and culturally sensitive communication throughout the history-taking process.</p>
Gyn-017	Abdominopelvic examination	<p><b>Perform</b> a systematic abdominal and pelvic examination through following methods:</p> <ul style="list-style-type: none"> <li>• <b>Inspect</b> to assess abdominal contour, scars, masses, perineal and external genitalia</li> <li>• <b>Palpate</b> abdominal organs, pelvic masses, uterine size, adnexal tenderness</li> <li>• <b>Percuss</b> to assess organ size and fluid collections</li> <li>• <b>Auscultate</b> for bowel sounds and vascular bruits</li> <li>• <b>Observe/assist</b> in speculum examination for visualization of vagina and cervix, collection of samples if indicated</li> <li>• <b>Observe/assist</b> bimanual pelvic examination for uterine position, size, mobility, adnexa.</li> <li>• <b>Identify</b> important anatomical landmarks and structures relevant to gynecologic assessment</li> <li>• <b>Demonstrate</b> proper technique ensuring patient comfort, privacy, and cultural sensitivity</li> </ul>

## GENITAL INFECTIONS

### Theory

Code	Topic	Specific Learning Objectives
<b>LOWER GENITAL TRACT INFECTIONS</b>		
Gyn-018	Vulvovaginal candidiasis	<ul style="list-style-type: none"> <li>• Describe the etiology, risk factors, and pathophysiology.</li> <li>• Identify clinical features.</li> <li>• List differential diagnoses</li> <li>• Select appropriate investigations.</li> <li>• Outline management strategies and preventive measures.</li> </ul>
Gyn-019	Trichomonas	<ul style="list-style-type: none"> <li>• Describe the etiology, transmission, and pathophysiology.</li> </ul>

	vaginalis infection	<ul style="list-style-type: none"> <li>Identify signs and symptoms.</li> <li>List investigations to confirm diagnosis.</li> <li>Outline management plan.</li> </ul>
Gyn-020	Bacterial vaginosis	<ul style="list-style-type: none"> <li>List the etiology of bacterial vaginosis.</li> <li>Identify clinical features and list differential diagnoses.</li> <li>Outline management plan.</li> </ul>
Gyn-021	Gonorrhea	<ul style="list-style-type: none"> <li>Describe the etiology, transmission, and complications.</li> <li>Identify clinical features.</li> <li>List differential diagnoses.</li> <li>Outline investigations and management plan.</li> </ul>
Gyn-022	Genitourinary chlamydia	<ul style="list-style-type: none"> <li>Describe the modes of transmission of Chlamydia trachomatis with the characteristic clinical features.</li> <li>Identify asymptomatic presentation and its clinical significance.</li> <li>Explain potential complications.</li> <li>List appropriate diagnostic tests.</li> <li>Outline recommended antibiotic treatment regimens and partner therapy.</li> </ul>
Gyn-023	Genital Herpes Simplex	<ul style="list-style-type: none"> <li>Name the causative agents and describe mode of transmission.</li> <li>Describe the typical clinical features.</li> <li>Differentiate genital herpes from other causes of vulvar ulcers.</li> <li>Identify appropriate diagnostic methods.</li> <li>Outline the principles of management for primary, recurrent, and suppressive therapy.</li> <li>Discuss complications in pregnancy and summarize recommendations for delivery planning in women with active lesions.</li> </ul>
Gyn-024	Human Papillomavirus (HPV) Infection	<ul style="list-style-type: none"> <li>Describe the types of HPV and modes of transmission.</li> <li>Identify the clinical manifestations, including genital warts and asymptomatic infection.</li> <li>Explain the natural history of HPV infection and its role in cervical dysplasia and cervical cancer.</li> <li>Identify appropriate screening methods.</li> </ul>

		<ul style="list-style-type: none"> <li>Outline preventive strategies.</li> </ul>
Gyn-025	Syphilis	<ul style="list-style-type: none"> <li>Describe the modes of transmission of syphilis.</li> <li>Identify the clinical features.</li> <li>Discuss available diagnostic tests and their interpretation.</li> <li>Outline treatment options.</li> <li>Describe potential complications of untreated syphilis in women.</li> </ul>
Gyn-026	Urinary Tract Infection (UTI) in Women	<ul style="list-style-type: none"> <li>Describe the etiology and pathophysiology of UTIs in women.</li> <li>List risk factors for lower and upper urinary tract infections.</li> <li>Identify the typical clinical features.</li> <li>Differentiate UTIs from lower genital tract infections presenting with similar symptoms.</li> <li>List appropriate investigations for diagnosis.</li> <li>Outline management strategies.</li> <li>Discuss potential complications.</li> </ul>
<b>UPPER GENITAL TRACT INFECTIONS</b>		
Gyn-027	Pelvic inflammatory disease	<ul style="list-style-type: none"> <li>Describe the etiology including common causative organisms and pathophysiology of PID.</li> <li>Diagnose based on signs, symptoms, and lab findings.</li> <li>List the differential diagnosis.</li> <li>List the appropriate investigations for a definitive diagnosis.</li> <li>Outline management strategies, including outpatient versus inpatient antibiotic therapy, surgical intervention when necessary, and supportive care.</li> <li>Describe patient counseling points regarding sexual transmission, partner treatment, prevention of recurrence, and potential complications (infertility, chronic pelvic pain, ectopic pregnancy).</li> <li>Discuss the complications if left untreated.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	Clinical Methods/Skills

Gyn-028	Clinical examination for genitourinary infections	<ul style="list-style-type: none"> <li>• <b>Perform</b> pelvic examination under supervision and <b>observe/assist</b> in collecting swabs (vaginal, endocervical) while keeping the patient comfortable and informed.</li> <li>• <b>Counsel</b> the patient regarding treatment of genitourinary infection including medicine use, partner treatment (when needed), abstinence until treatment is completed, hygiene, and when to return.</li> <li>• <b>Maintain</b> respectful, non-judgmental communication, protect privacy, and reassure the patient.</li> <li>• <b>Demonstrate</b> how to explain the correct use of antifungal treatment to the patient, including where and how the medicine is applied/taken with appropriate counseling points.</li> </ul>
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## CONTRACEPTION

### Theory

Code	Topic	Specific Learning Objectives
Gyn-029	Barrier methods of contraception	<ul style="list-style-type: none"> <li>• Describe methods of natural contraception with success and failure rate.</li> <li>• Classify the types of barrier methods.</li> <li>• Explain the mechanism of action, effectiveness, advantages, and limitations.</li> <li>• Identify contraindications and common issues.</li> </ul>
Gyn-030	Hormonal contraception	<ul style="list-style-type: none"> <li>• Describe combined hormonal contraceptives, progestin-only pills, injectables, implants, patch, and vaginal ring.</li> <li>• Explain mechanisms of action, effectiveness, advantages, and side effects.</li> <li>• Identify contraindications and special considerations.</li> </ul>
Gyn-031	Intrauterine contraception	<ul style="list-style-type: none"> <li>• Classify intrauterine devices (IUDs).</li> <li>• Explain mechanism of action, effectiveness, advantages, complications, and follow-up requirements.</li> <li>• Identify indications and contraindications.</li> </ul>

Gyn-032	Emergency contraception	<ul style="list-style-type: none"> <li>Describe types of emergency contraception.</li> <li>Explain timing, effectiveness, and indications for use.</li> <li>Identify situations requiring follow-up.</li> </ul>
Gyn-033	Sterilization	<ul style="list-style-type: none"> <li>Describe female sterilization and male sterilization.</li> <li>Explain mechanism, effectiveness, indications, and complications.</li> <li>Discuss irreversible nature and need for informed consent.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-034	Clinical assessment and counseling in contraceptive care	<ul style="list-style-type: none"> <li><b>Take</b> a focused contraceptive history, including previous methods, preferences, menstrual pattern, sexual activity, and medical conditions.</li> <li><b>Narrate</b> proper use of hormonal methods and guide patients on adherence, missed doses, and side effects.</li> <li><b>Demonstrate counseling</b> about IUD insertion, post-insertion care, and warning signs.</li> <li><b>Counsel</b> regarding emergency contraception use, including timing, effectiveness, and follow-up if menstruation is delayed.</li> <li><b>Demonstrate counseling</b> about permanent contraception (tubal ligation, vasectomy), highlighting irreversible nature, post-procedure care, and follow-up.</li> <li><b>Counsel</b> all patients respectfully and non-judgmentally about method choice, side effects, adherence, partner involvement, and safe sex practices.</li> <li><b>Maintain</b> patient privacy, comfort, and cultural sensitivity during history-taking, demonstration, and counseling.</li> </ul>

### SUBFERTILITY

#### Theory

Code	Topic	Specific Learning Objectives
Gyn-035	Female subfertility	<ul style="list-style-type: none"> <li>Define female subfertility and distinguish it from infertility.</li> </ul>

		<ul style="list-style-type: none"> <li>• Enlist and describe causes.</li> <li>• Explain the role of investigations such as hormonal assays, ultrasound, hysterosalpingography (HSG), hysteroscopy, and laparoscopy.</li> <li>• Discuss basic management strategies including artificial reproductive techniques (ART).</li> <li>• Explain patient counseling points.</li> </ul>
Gyn-036	Male subfertility	<ul style="list-style-type: none"> <li>• Define male subfertility and distinguish it from infertility.</li> <li>• Enlist the causes leading to male subfertility.</li> <li>• Explain indications and interpretation of investigations: semen analysis, hormonal assays, scrotal ultrasound, and genetic tests.</li> <li>• Describe normal semen parameters and clinical significance of abnormal results.</li> <li>• Discuss basic management strategies.</li> <li>• Explain counseling points.</li> </ul>

## Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-037	Female Subfertility- History & Examination	<ul style="list-style-type: none"> <li>• <b>Take history</b> related to subfertility: occupation, length of time spent trying to conceive, menstrual pattern, ovulatory symptoms, sexual history, past pregnancies, contraception, previous history of pelvic inflammatory disease, fertility treatment, surgeries, and systemic illnesses, cervical smear history, screen for history of thyroid disorders.</li> <li>• <b>Perform</b> abdominal and bimanual pelvic examination to assess: <ul style="list-style-type: none"> <li>▪ Uterine size and tenderness</li> <li>▪ Adnexal masses or tenderness</li> <li>▪ Pelvic organ mobility</li> <li>▪ Signs of endometriosis or pelvic infection</li> </ul> </li> <li>• <b>Maintain privacy</b>, dignity, and cultural sensitivity during history-taking and examination.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Communicate</b> empathetically and non-judgmentally</li> </ul>
Gyn-038	Male Subfertility- History & Examination	<ul style="list-style-type: none"> <li>• <b>Take history related to subfertility:</b> Occupation, length of time spent trying for pregnancy, fathered any previous pregnancies, history of mumps, measles, testicular trauma, medical and surgical history.</li> <li>• <b>Perform</b> testicular examination for testicular volume, consistency, masses, absence of vas deferens, varicocele, evidence of surgical scars.(Surgery)</li> </ul>

## PROBLEMS IN EARLY PREGNANCY

### Theory

Code	Topic	Specific Learning Objectives
Gyn-039	Ectopic pregnancy	<ul style="list-style-type: none"> <li>• Describe the risk factors, common sites, and pathophysiology of ectopic pregnancy.</li> <li>• Identify key clinical features.</li> <li>• Differentiate ectopic pregnancy from other causes of early pregnancy bleeding and acute abdomino-pelvic pain.</li> <li>• Interpret essential investigations: urine/serum <math>\beta</math>-hCG, transvaginal ultrasound findings, and discriminatory zone concepts.</li> <li>• Outline management options: expectant, medical, and surgical approaches.</li> <li>• Describe the complications of ectopic pregnancy.</li> <li>• Explain counseling points regarding fertility impact, recurrence risk, and follow-up with serial <math>\beta</math>-hCG.</li> </ul>
Gyn-040	Gestational trophoblastic disorders (GTD)	<ul style="list-style-type: none"> <li>• Classify Gestational Trophoblastic Disorders.</li> <li>• Describe the risk factors of molar pregnancy and other GTDs.</li> <li>• Identify clinical features.</li> <li>• Interpret investigations: <math>\beta</math>-hCG levels, transvaginal ultrasound findings, chest imaging, and staging criteria.</li> </ul>

		<ul style="list-style-type: none"> <li>Outline management options.</li> <li>Discuss post-treatment surveillance, including β-hCG monitoring, contraception advice, and recurrence risk.</li> <li>Describe the complications.</li> </ul>
Gyn-041	Miscarriage	<ul style="list-style-type: none"> <li>Define miscarriage and classify types.</li> <li>List the causes and risk factors.</li> <li>Tabulate the clinical presentation and ultrasound findings of each type of miscarriage.</li> <li>List appropriate investigations.</li> <li>Outline management strategies including expectant, medical, surgical, and counselling services.</li> <li>Explain potential complications.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-042	Clinical assessment of ectopic pregnancy	<ul style="list-style-type: none"> <li><b>Take history</b> in patients with early pregnancy bleeding or abdominopelvic pain.</li> <li><b>Perform</b> abdominal and pelvic examination to assess for tenderness, adnexal mass, and signs of peritoneal irritation.</li> <li><b>Interpret</b> β-hCG results and transvaginal ultrasound findings in early pregnancy.</li> <li><b>Observe/assist</b> in emergency assessment and stabilization of patients with suspected ectopic pregnancy.</li> <li><b>Counsel</b> regarding options, fertility implications, and follow-up with serial β-hCG.</li> </ul>
Gyn-043	Clinical assessment of miscarriage	<ul style="list-style-type: none"> <li><b>Take history</b> of bleeding, pain, and prior pregnancy outcomes in a patient suspected of miscarriage.</li> <li><b>Perform</b> abdominal and pelvic examination to identify uterine size, tenderness, and passage of products.</li> <li><b>Interpret</b> ultrasound findings for different types of miscarriage.</li> <li><b>Counsel</b> patient empathetically about the warning signs and</li> </ul>

		follow-up.
<b>BENIGN AND MALIGNANT DISEASES OF OVARY, UTERUS, AND CERVIX</b>		
<b>Theory</b>		
Code	Topic	Specific Learning Objectives
Gyn-044	Benign diseases of ovary	<ul style="list-style-type: none"> <li>Classify common benign ovarian tumors based on the causes.</li> <li>Describe risk factor and typical age distribution.</li> <li>Identify clinical features.</li> <li>List differential diagnoses of a pelvic mass.</li> <li>List appropriate investigations.</li> <li>Outline management plan.</li> <li>Explain potential complications.</li> </ul>
Gyn-045	Benign diseases of uterus	<p><b>Uterine fibroids</b></p> <ul style="list-style-type: none"> <li>Define uterine fibroids and classify them based on location.</li> <li>Describe risk factors, pathophysiology, and epidemiology.</li> <li>Identify common clinical features and complications.</li> <li>List differential diagnoses.</li> <li>List appropriate investigations to confirm diagnosis.</li> <li>Outline management strategies including medical, surgical, and conservative approaches.</li> <li>Discuss implications for fertility and pregnancy outcomes.</li> </ul> <p><b>Endometrial polyps</b></p> <ul style="list-style-type: none"> <li>Describe the structure and histology of endometrial polyps.</li> <li>Identify risk factors and causes of endometrial polyps.</li> <li>List common signs and symptoms.</li> <li>Select appropriate investigations to diagnose polyps.</li> <li>Explain indications for removal of endometrial polyps.</li> <li>Discuss potential complications and outcomes of untreated polyps.</li> <li>Discuss implications for fertility and pregnancy outcomes.</li> </ul>
Gyn-046	Benign diseases of cervix	<b>Cervical ectropion</b>

		<ul style="list-style-type: none"> <li>Define cervical ectropion and describe its pathophysiology.</li> <li>Identify risk factors and common causes.</li> <li>List clinical features and appropriate investigations.</li> <li>Plan the management and list potential complications and follow-up requirements.</li> </ul> <p><b>Cervical stenosis</b></p> <ul style="list-style-type: none"> <li>Define cervical stenosis and describe its pathophysiology.</li> <li>Identify causes, including congenital, post-surgical, or post-radiation.</li> <li>List clinical features.</li> <li>Select appropriate investigations.</li> <li>Outline management strategies and discuss potential complications and implications for fertility.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-047	Clinical assessment for benign gynecological disorders	<ul style="list-style-type: none"> <li><b>Take</b> a focused gynecological and reproductive history, including menstrual pattern, bleeding, pain, infertility, and prior procedures.</li> <li><b>Perform</b> abdominal and bimanual pelvic examination to assess uterine size, contour, adnexal masses, tenderness, and cervical changes.</li> <li><b>Perform</b> speculum examination for cervical assessment when indicated.</li> <li><b>Interpret</b> relevant imaging or diagnostic findings, including ultrasound, MRI, hysteroscopy, and Pap smear/colposcopy.</li> <li><b>Counsel</b> patient regarding management options, potential complications, fertility implications, and follow-up.</li> </ul>
Gyn-048	Malignant ovarian tumours (Epithelial ovarian cancer, sex cord stromal tumours, germ cell tumours)	<ul style="list-style-type: none"> <li>Classify malignant ovarian tumors based on cell origin.</li> <li>Describe risk factors, pathophysiology, and epidemiology.</li> <li>Identify common clinical features and warning signs.</li> <li>List differential diagnoses for ovarian masses.</li> </ul>

		<ul style="list-style-type: none"> <li>• Select appropriate investigations, including tumor markers, imaging, and biopsy.</li> <li>• Outline management strategies, including surgical, chemotherapeutic, and palliative options.</li> <li>• Discuss prognosis, complications, and follow-up requirements.</li> </ul>
Gyn-049	Endometrial cancer	<ul style="list-style-type: none"> <li>• Describe endometrial hyperplasia and its types.</li> <li>• Describe the etiology and pathophysiology of endometrial cancer.</li> <li>• Identify risk factors and common clinical features.</li> <li>• Select appropriate investigations for diagnosis.</li> <li>• Explain the FIGO staging system and interpret staging criteria.</li> <li>• Outline management strategies for each stage, including surgical options and conservative approaches when indicated.</li> <li>• Describe adjuvant treatment modalities.</li> <li>• Discuss prognosis, potential complications, and follow-up care.</li> </ul>
Gyn-050	Premalignant disease of cervix	<ul style="list-style-type: none"> <li>• Define premalignant cervical lesions and classify them.</li> <li>• Describe risk factors and pathophysiology, including HPV infection and other contributing factors.</li> <li>• Identify clinical features.</li> <li>• Select appropriate investigations (PAP smear/ liquid based cytology, visual inspection with acetic acid, colposcopy).</li> <li>• Plan management based on lesion grade.</li> <li>• Discuss follow-up protocols, screening guidelines, and prevention strategies.</li> <li>• Describe potential progression to invasive cervical cancer and complications.</li> </ul>

Gyn-051	Malignant disease of cervix	<ul style="list-style-type: none"> <li>Describe risk factors and pathophysiology.</li> <li>Describe clinical presentation.</li> <li>Select appropriate investigations for diagnosis and staging.</li> <li>Explain staging and prognosis of cervical cancer (FIGO).</li> <li>Outline management strategies.</li> <li>Discuss prognosis, complications, and follow-up protocols.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-052	Clinical assessment for malignancies	<ul style="list-style-type: none"> <li><b>Take</b> a focused gynecological history, including symptoms such as abnormal bleeding, pelvic/abdominal pain, bloating, menstrual changes, infertility, and relevant risk factors or family history.</li> <li><b>Perform</b> abdominal, bimanual, and speculum examinations to assess for pelvic masses, uterine enlargement, cervical lesions, tenderness, or nodal involvement.</li> <li><b>Interpret</b> relevant investigations.</li> <li><b>Demonstrate</b> counseling skills regarding diagnosis, management options, follow-up care, prognosis, and fertility implications where relevant.</li> </ul>

## VULVOVAGINAL DISORDERS

### Theory

Code	Topic	Specific Learning Objectives
Gyn-053	Bartholin Gland Cyst / Abscess	<ul style="list-style-type: none"> <li>Describe the anatomy, etiology, and pathophysiology.</li> <li>Recognize clinical features and differentiate cyst from abscess.</li> <li>List diagnostic methods.</li> <li>Outline management options, including conservative care, incision and drainage, and marsupialization.</li> <li>Discuss patient counseling regarding recurrence prevention and</li> </ul>

		follow-up.
Gyn-054	Vulval intraepithelial neoplasia (VIN)	<ul style="list-style-type: none"> <li>Define VIN.</li> <li>Identify the risk factors and clinical features.</li> <li>Outline diagnostic methods.</li> <li>Discuss management principles and follow-up.</li> </ul>
Gyn-055	Vulvar squamous cell carcinoma	<ul style="list-style-type: none"> <li>Describe epidemiology, risk factors, and clinical presentation.</li> <li>Outline diagnostic workup and staging.</li> <li>Discuss treatment principles and follow-up.</li> </ul>

## Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-056	Clinical assessment of vulvovaginal disorders	<p><b>Take a focused history</b> from a female patient presenting with vulvovaginal complaints, including:</p> <ul style="list-style-type: none"> <li>Nature, duration, and severity of symptoms (pruritus, discharge, pain, bleeding).</li> <li>Menstrual, sexual, obstetric, and medical history relevant to vulvovaginal disorders.</li> <li>Medication use, hygiene practices, and prior infections.</li> </ul> <p><b>Perform</b> a systematic vulvar examination for:</p> <ul style="list-style-type: none"> <li>Skin changes such as erythema, lichenification, lesions, warts, ulcers.</li> <li>Swelling or masses.</li> <li>Signs of atrophy or inflammation</li> </ul> <p><b>Observe/assist</b> in a speculum examination to inspect the vagina and cervix safely.</p> <p><b>Assist</b> in collection of appropriate specimens (vaginal swabs, endocervical swabs) for laboratory investigation.</p> <p><b>Demonstrate</b> proper infection control and patient comfort measures, including:</p> <ul style="list-style-type: none"> <li>Hand hygiene and use of gloves.</li> <li>Ensuring patient privacy, consent, and comfort during examination.</li> </ul>

UROGYNAECOLOGY		
Theory		
Code	Topic	Specific Learning Objectives
Gyn-057	Urinary incontinence	<ul style="list-style-type: none"> <li>Define urinary incontinence and classify its types.</li> <li>Describe the pathophysiology and common causes.</li> <li>Describe typical symptoms and clinical features.</li> <li>List key investigations including urinalysis, urine culture, post-void residual.</li> <li>Describe basic management strategies.</li> <li>Discuss preventive measures.</li> </ul>
Gyn-058	Pelvic organ prolapse	<ul style="list-style-type: none"> <li>Define pelvic organ prolapse.</li> <li>Classify prolapse according to affected compartment.</li> <li>Describe pathophysiology and risk factors.</li> <li>Identify clinical features and symptoms.</li> <li>Outline steps of clinical evaluation.</li> <li>List relevant investigations.</li> <li>Describe grading systems for prolapse severity.</li> <li>Outline management strategies (conservative and surgical).</li> <li>Discuss preventive measures.</li> </ul>
Clinical Skills		
Code	Topic	Clinical Methods/Skills
Gyn-059	History and examination of urogynaecological disorders	<p><b>Take</b> a focused urogynaecological history, including urinary, prolapse, bowel, and sexual symptoms.</p> <p><b>Perform</b> a systematic pelvic examination to assess:</p> <ul style="list-style-type: none"> <li>Urethral support and bladder neck mobility</li> <li>Presence and compartment of prolapse (anterior, posterior, apical)</li> <li>Signs of urinary or fecal dysfunction</li> </ul> <p><b>Demonstrate</b> simple bedside evaluation of urinary incontinence</p>

		<p>(cough stress test, post-void residual assessment).</p> <p><b>Instruct</b> on pelvic floor muscle exercises for both UI and POP.</p> <p><b>Demonstrate</b> correct urine sample collection for urinalysis and culture.</p> <p><b>Observe/assist</b> in pessary fitting and provide patient counseling where indicated.</p> <p><b>Communicate</b> respectfully and non-judgmentally with patients regarding diagnosis, management options, and preventive measures.</p>
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## GYNAECOLOGICAL SURGERIES

### Theory

Code	Topic	Specific Learning Objectives
Gyn-060	Infection prevention techniques	<ul style="list-style-type: none"> <li>Explain the principles of asepsis and their importance in preventing surgical site infections.</li> <li>Describe the steps of hand washing, scrubbing sequence, and duration according to standard protocols.</li> <li>Differentiate between closed and open gloving techniques and identify common breaches and necessary precautions.</li> <li>Discuss the role of pre-operative area preparation, including sterilization procedures and use of prophylactic antibiotics.</li> <li>Outline the essential components of pre-operative, intra-operative, and post-operative care.</li> <li>Discuss the importance of maintaining sterility during wound handling and parenteral drug administration.</li> </ul>
Gyn-061	Pre and post op care of patient & dealing with specimen	<ul style="list-style-type: none"> <li>Describe WHO safety checklist relevant to pre, intra- and post-operative surgery.</li> <li>Explain the principles and importance of universal precautions for infection prevention and control.</li> <li>Interpret relevant postoperative investigations and analyze findings to recognize normal and abnormal postoperative courses.</li> </ul>
Gyn-062	Common surgical procedures as (endometrial	<ul style="list-style-type: none"> <li>Explain the fundamental principles of basic surgical skills relevant to obstetrics and gynecology.</li> </ul>

	sampling dilatation and curettage, laparoscopy, hysteroscopy, colposcopy and hysterectomy)	<ul style="list-style-type: none"> <li>Explain the regional anatomical structures and their clinical importance in performing common obstetric and gynecological procedures</li> <li>Outline the sequential steps of commonly performed procedures in obstetrics and gynecology.</li> <li>Discuss potential complications, their prevention, and management strategies</li> </ul>
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### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-063	Gynaecological surgeries	<p><b>Identify</b> relevant regional anatomical structures and their clinical significance for each procedure.</p> <p><b>Observe/assist</b> in proper patient positioning, preparation, and surgical procedure for endometrial sampling/D&amp;C, laparoscopy, hysteroscopy, colposcopy, hysterectomy in OT.</p> <p><b>Identify</b> potential intraoperative complications.</p> <p><b>Maintain</b> asepsis and infection control throughout all procedural steps.</p> <p><b>Document</b> procedural steps, findings, and patient outcomes accurately.</p> <p><b>Demonstrate</b> correct collection, labeling, and safe handling of biopsy specimens in the operating theatre, ensuring asepsis and accurate patient identification.</p>

### ETHICS AND GENDER-BASED VIOLENCE

#### Theory

Code	Topic	Specific Learning Objectives
Gyn-064	Medical ethics, patient safety and quality care	<ul style="list-style-type: none"> <li>Discuss the legal and ethical considerations of informed consent, confidentiality, and data protection.</li> <li>Identify the professional responsibilities and boundaries in the use of social media and the role of the doctor in maintaining professionalism</li> <li>Explain the importance of respecting patients' cultural and religious beliefs in providing equitable and compassionate care</li> </ul>

Gyn-065	Gender based violence (integrate with Forensic Medicine).	<ul style="list-style-type: none"> <li>Describe various forms and nature of gender-based violence and their impact on women's health and well-being.</li> <li>Diagnose case of domestic violence based on different injuries sustained by the victim,</li> <li>Relate injuries as per Qisas and Diyat act.</li> <li>Prepare medicolegal certificate according to situation.</li> <li>Explain the process of collection and preservation of samples to be sent for investigations.</li> </ul>
Gyn-066	Criminal Abortion & Infanticide (integrate with Forensic Medicine).	<ul style="list-style-type: none"> <li>Describe criminal abortion.</li> <li>Explain the method to assess the age and viability by examining the aborted material.</li> <li>Apply relevant section of Qisas and Diyat act.</li> <li>Define infanticide.</li> <li>Differentiate between still born and dead born infant based on autopsy findings.</li> <li>Assess the age and cause of death.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
Gyn-067	Managing the cases of gender based violence (integrate with Forensic Medicine)	<ul style="list-style-type: none"> <li><b>Identify</b> the signs of gender-based violence, sexual assault, and female genital mutilation (FGM) in patients.</li> <li><b>Conduct sensitive history-taking</b> and physical examination of survivors, ensuring patient comfort and safety.</li> <li><b>Observe/assist</b> in proper collection, labeling, and handling of forensic evidence (e.g., rape kit) in collaboration with forensic services (<i>if a relevant case is encountered; otherwise, understand the steps through video demonstration, lecture, or illustrative pictures</i>).</li> <li><b>Document</b> findings for medicolegal purposes in cases of rape or gender-based violence accurately and sensitively, including history, examination, and evidence.</li> <li><b>Provide</b> immediate supportive care and referrals while</li> </ul>

		<p>maintaining privacy and respect.</p> <ul style="list-style-type: none"><li>• <b>Counsel</b> patients regarding medical, psychological, and legal options available.</li></ul>
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**Modular Integrated Curriculum 2K23**  
Final Version

# OBSTETRICS



**MATERNAL PHYSIOLOGY**  
**FETAL GROWTH & DEVELOPMENT**

**Theory**

<b>Code</b>	<b>topic</b>	<b>specific learning objectives</b>
Obs-001	Physiological adaptations during pregnancy	<ul style="list-style-type: none"> <li>Describe the major physiological changes in pregnancy across the cardiovascular, respiratory, renal, hematologic, and endocrine systems.</li> <li>Explain the gastrointestinal, musculoskeletal, and dermatologic adaptations that occur during normal pregnancy.</li> <li>Describe the physiological changes in the uterus, cervix, and breasts during pregnancy.</li> <li>Explain how normal pregnancy changes affect maternal care and monitoring.</li> </ul>
Obs-002	Fetal growth, development, and abnormalities	<ul style="list-style-type: none"> <li>Describe normal fetal growth and development, including key milestones.</li> <li>Explain fetal growth restriction and its clinical implications.</li> <li>Identify determinants of fetal birth weight.</li> <li>Describe the development of major fetal systems: cardiovascular, respiratory, gastrointestinal, hepatobiliary, renal, and integumentary.</li> <li>Explain the formation and function of the fetal circulation and amniotic fluid.</li> <li>Identify common structural and functional fetal abnormalities.</li> </ul>
Obs-003	Twin and multiple gestations	<ul style="list-style-type: none"> <li>Define twins and higher multiple gestations.</li> <li>Classify twins based on zygosity and chorionicity.</li> <li>Identify the aetiology and risk factors for multiple gestations.</li> <li>Describe maternal and fetal complications associated with twin and higher-order pregnancies.</li> <li>Recognize antenatal complications specific to multiple gestations.</li> <li>Identify intrapartum complications and their clinical features.</li> <li>Outline principles of antenatal management for twin and</li> </ul>

		<p>higher-order pregnancies.</p> <ul style="list-style-type: none"> <li>• Describe intrapartum management strategies, including monitoring, delivery planning, and mode of delivery considerations.</li> <li>• List postpartum complications unique to multiple gestations and their management.</li> </ul>
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### Clinical Skills

Code	Topic	Clinical methods/skills
Obs-004	Obstetric history taking skills	<ul style="list-style-type: none"> <li>• <b>Obtain</b> informed consent and establish rapport with the pregnant patient.</li> <li>• <b>Record</b> <ul style="list-style-type: none"> <li>○ The chief complaint and reason for the visit accurately.</li> <li>○ The detailed menstrual history, including last menstrual period, cycle regularity, and flow.</li> <li>○ Previous obstetric history, including gravida, parity, previous pregnancies, outcomes, and complications.</li> <li>○ Relevant medical and surgical history, including chronic illnesses, medications, and allergies.</li> <li>○ Family history for genetic disorders and congenital anomalies.</li> <li>○ Social and lifestyle factors, including nutrition, substance use, occupation, and support systems.</li> <li>○ Current pregnancy status, including gestational age, fetal movements, symptoms, antenatal care, and supplementation.</li> <li>○ Medical and surgical history</li> <li>○ Obstetric risk factors and formulate appropriate questions to elicit them.</li> </ul> </li> <li>• <b>Calculate</b> expected date of delivery (EDD) from last menstrual period (LMP) and duration of pregnancy.</li> <li>• Adapt questioning techniques to respect cultural and</li> </ul>

		<p>psychosocial considerations.</p> <ul style="list-style-type: none"> <li>• <b>Document</b> findings systematically to guide diagnosis, risk assessment, and management planning.</li> </ul>
Obs-005	Obstetric examination	<ul style="list-style-type: none"> <li>• <b>Measure</b> maternal weight and height, blood pressure.</li> <li>• <b>Perform</b> a general physical examination and abdominal through inspection, palpation (symphysis-fundal height measurement, fetal lie, presentation, and engagement), fetal heart auscultation in pregnancy.</li> <li>• <b>Identify</b> the circumstances in which pelvic examination during pregnancy is necessary.</li> <li>• <b>Identify</b> the conditions in which digital examination is contraindicated.</li> <li>• <b>Conduct</b> leopold's maneuvers accurately to determine fetal lie, presentation, and position.</li> <li>• <b>Identify</b> normal versus abnormal abdominal examination findings and their implications.</li> <li>• <b>Interpret</b> routine antenatal laboratory investigations and gestational ultrasound findings to assess maternal and fetal wellbeing and identify abnormalities.</li> <li>• <b>Observe and narrate</b> the clinical techniques for cervical assessment and <b>calculate</b> the bishop score.</li> <li>• <b>Demonstrate</b> safe and effective use of instruments for obstetric examination.</li> </ul>

## EARLY PREGNANCY AND ANTENATAL CARE

### Theory

Code	Topic	Specific learning objectives
Obs-006	Confirmation and dating of pregnancy	<ul style="list-style-type: none"> <li>• Describe the methods used for confirmation of pregnancy.</li> <li>• Explain the physiological basis for confirming early pregnancy and identifying features suggestive of complications.</li> <li>• Describe the methods used to determine gestational age.</li> <li>• Interpret findings from early ultrasound to confirm gestational age and viability.</li> </ul>

		<ul style="list-style-type: none"> <li>• List the factors that may affect accurate gestational age.</li> </ul>
Obs-007	Antenatal care	<ul style="list-style-type: none"> <li>• Explain the significance, objectives, and components of antenatal care across all trimesters in promoting maternal and fetal health.</li> <li>• Identify antenatal risk factors and analyze their potential impact on pregnancy outcomes.</li> <li>• Discuss strategies to prevent, detect, and manage conditions that may affect maternal or fetal wellbeing.</li> <li>• Describe the schedule of antenatal visits and essential assessments at each visit.</li> <li>• Describe routine prenatal screening and diagnostic tests, and evaluate their indications, risks, and benefits.</li> <li>• Interpret the principles and importance of screening in pregnancy for early identification of complications.</li> <li>• Outline routine antenatal investigations and maternofetal monitoring.</li> <li>• Identify danger signs requiring urgent referral.</li> <li>• Discuss the points of nutritional advice, supplementation, lifestyle counselling, and recommended immunizations.</li> <li>• Describe strategies for birth preparedness and complication readiness.</li> </ul>
Obs-008	Obstetric ultrasound	<ul style="list-style-type: none"> <li>• Describe the main uses of obstetric ultrasound in pregnancy, including assessment of fetal growth, anatomy, and well-being.</li> <li>• Explain the recommended ultrasound scanning schedule during antenatal care.</li> <li>• Evaluate fetal well-being using ultrasound, including assessment of amniotic fluid volume and placental function.</li> <li>• Interpret cardiotocography (CTG) findings to assess fetal status.</li> <li>• Apply biophysical profile (BPP) scoring to monitor fetal health.</li> <li>• Describe the role of doppler investigations in evaluating fetal</li> </ul>

		circulation and placental perfusion.
Obs-009	Prenatal diagnosis	<ul style="list-style-type: none"> <li>Describe the purpose and indications of prenatal diagnostic tests.</li> <li>Classify and describe types of prenatal diagnostic tests with examples.</li> <li>Explain the timing and gestational age at which different prenatal diagnostic tests are performed.</li> <li>Describe essential points for effective prenatal counseling.</li> </ul>

### Clinical Skills

Code	Topic	Clinical methods/skills
Obs-010	Antenatal care	<ul style="list-style-type: none"> <li><b>Develop</b> an individualized antenatal care plan guided by gestational milestones and clinical assessment</li> <li><b>Perform</b> obstetric abdominal examination to identify fetal heart rate, lie, presentation, and measure fundal height accurately.</li> <li><b>Interpret</b> antenatal records and cards to assess maternal and fetal progress.</li> <li><b>Formulate</b> a differential diagnosis and outline an appropriate management plan based on clinical findings.</li> <li><b>Interpret</b> basic ultrasound findings and correlate them with clinical data.</li> <li><b>Demonstrate</b> effective and empathetic communication when providing information, advice, and reassurance to pregnant women.</li> <li><b>Recognize</b> the emotional, physical, and social impact of pregnancy on women and their families.</li> <li><b>Demonstrate</b> effective communication by providing education, reassurance, and support to pregnant women and their families in a respectful and culturally sensitive manner.</li> <li><b>Apply</b> standard protocols and professional conduct while observing, interpreting, and reporting obstetric ultrasound</li> </ul>

		findings.
<b>ANTENATAL OBSTETRIC PROBLEMS</b>		
<b>Theory</b>		
Code	Topic	Specific learning objectives
Obs-011	Hyperemesis gravidarum	<ul style="list-style-type: none"> <li>• Describe the etiology, risk factors, and pathophysiology of hyperemesis gravidarum.</li> <li>• Identify the clinical features and differentiate hyperemesis gravidarum from normal nausea, vomiting in pregnancy.</li> <li>• List important differential diagnoses.</li> <li>• List appropriate investigations.</li> <li>• Outline management plan.</li> <li>• Explain potential maternal and fetal complications.</li> </ul>
Obs-012	Musculoskeletal complaints in pregnancy	<ul style="list-style-type: none"> <li>• Identify common musculoskeletal complaints in pregnancy.</li> <li>• Explain the physiological and anatomical factors contributing to backache, pubic symphysis dysfunction, and carpal tunnel syndrome.</li> <li>• Outline management strategies to relieve symptoms of minor musculoskeletal complaints.</li> <li>• Identify the warning signs that require further evaluation or specialist referral.</li> </ul>
Obs-013	Urinary tract infections (UTI)	<ul style="list-style-type: none"> <li>• Describe the common causes and risk factors of urinary tract infections (UTI) in pregnancy.</li> <li>• Identify clinical features and complications of UTI in pregnant women.</li> <li>• Outline appropriate diagnostic approaches, including urine analysis and culture.</li> <li>• Explain the principles of management and treatment of UTI during pregnancy.</li> <li>• Apply preventive strategies to reduce the risk of UTI and associated complications</li> </ul>
Obs-014	Abdominal pain in pregnancy	<ul style="list-style-type: none"> <li>• Identify common obstetric and non-obstetric causes of abdominal pain in pregnancy.</li> </ul>

		<ul style="list-style-type: none"> <li>Apply appropriate assessment and diagnostic strategies to evaluate abdominal pain in pregnant women.</li> <li>Outline initial management approaches and indications for referral or urgent intervention.</li> </ul>
Obs-015	Oligohydramnios and polyhydramnios	<ul style="list-style-type: none"> <li>Define oligohydramnios and polyhydramnios based on amniotic fluid assessment criteria.</li> <li>Identify maternal, fetal, and placental causes of oligohydramnios and polyhydramnios.</li> <li>Describe the clinical features and ultrasound findings.</li> <li>List investigations to determine the underlying etiology.</li> <li>Outline management strategies according to severity and gestational age.</li> <li>Explain potential maternal and fetal complications and their impact on pregnancy outcomes.</li> </ul>
Obs-016	Rhesus iso-immunization	<ul style="list-style-type: none"> <li>Explain how rh iso-immunization occurs and its impact on the fetus.</li> <li>List the potential sensitizing events for rhesus disease.</li> <li>List the key screening tests.</li> <li>Explain the role of anti-d immunoglobulin in preventing rh iso-immunization and when it should be given.</li> <li>Outline the basic management of an affected pregnancy.</li> </ul>
Obs-017	Prolonged pregnancy & Post term pregnancy	<ul style="list-style-type: none"> <li>Differentiate prolonged pregnancy from post-term pregnancy and formulate appropriate management plans.</li> <li>Define post-term pregnancy and identify associated maternal and fetal risks.</li> <li>List the common causes and contributing factors leading to prolonged pregnancy.</li> <li>Describe the clinical features and complications.</li> <li>Outline recommended surveillance methods.</li> <li>List indications for immediate induction of labour or delivery post-dates.</li> </ul>
Obs-018	Infections in pregnancy	<ul style="list-style-type: none"> <li>Explain the pathophysiology and implications of common viral</li> </ul>

		<p>and bacterial infections in pregnancy on both the mother and fetus.</p> <ul style="list-style-type: none"> <li>• Discuss the maternal and fetal consequences of infections during pregnancy.</li> <li>• Formulate appropriate management plans for common infections encountered in pregnancy.</li> </ul>
Obs-019	Perinatal infections	<ul style="list-style-type: none"> <li>• Define perinatal infections and explain their timing, transmission routes, and relevance to maternal and neonatal health.</li> <li>• Identify common perinatal infections including torch infections, group B Streptococcus, Listeria, HIV, Hepatitis B and their epidemiology.</li> <li>• Describe maternal, fetal, and neonatal clinical manifestations of perinatal infections.</li> <li>• Explain diagnostic approaches, including serology, cultures, and PCR-based tests.</li> <li>• Discuss maternal and neonatal complications associated with untreated perinatal infections.</li> <li>• Outline preventive strategies, including maternal vaccination, screening, prophylaxis, hygienic practices, and peripartum management.</li> </ul>
Obs-020	Pregnancy induced hypertension	<ul style="list-style-type: none"> <li>• Define pregnancy-induced hypertension and differentiate it from other hypertensive disorders of pregnancy.</li> <li>• Identify risk factors and possible etiological factors associated with PIH.</li> <li>• Describe clinical features and diagnostic criteria for PIH.</li> <li>• Explain necessary investigations to assess maternal and fetal status.</li> <li>• Outline management strategies.</li> <li>• Discuss maternal and fetal complications associated with PIH.</li> <li>• Describe preventive measures and follow-up recommendations for high-risk women.</li> </ul>
Obs-021	Gestational	<ul style="list-style-type: none"> <li>• Define gestational diabetes.</li> </ul>

	diabetes	<ul style="list-style-type: none"> <li>Identify risk factors and predisposing conditions for GDM.</li> <li>Describe the pathophysiology and metabolic changes leading to glucose intolerance in pregnancy.</li> <li>Explain screening methods and diagnostic criteria used for GDM.</li> <li>Recognize clinical features and potential maternal and fetal implications.</li> <li>Outline management strategies.</li> <li>Discuss short-term and long-term complications for both mother and baby.</li> <li>Describe preventive measures and postpartum follow-up, including screening for type 2 diabetes.</li> </ul>
Obs-022	Anemia in pregnancy	<ul style="list-style-type: none"> <li>Identify risk factors and common causes of anemia in pregnancy.</li> <li>Identify clinical signs and symptoms.</li> <li>List diagnostic investigations.</li> <li>Describe management strategies.</li> <li>Discuss maternal and fetal complications, including preterm birth and low birth weight.</li> <li>Emphasize preventive measures.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	Clinical methods/skills
Obs-023	Clinical assessment of hyperemesis gravidarum	<ul style="list-style-type: none"> <li><b>Take a structured history</b> of nausea, vomiting, weight loss, and hydration status.</li> <li><b>Assess</b> dehydration status and vital signs.</li> <li><b>Interpret</b> laboratory results including serum electrolytes.</li> <li><b>Counsel</b> patient on dietary measures, hydration, warning signs, and follow-up care.</li> </ul>
Obs-024	Abdominal pain in pregnancy	<ul style="list-style-type: none"> <li><b>Conduct</b> systematic abdominal examination, including palpation and fetal assessment.</li> <li><b>Identify</b> signs suggestive of obstetric versus non-obstetric</li> </ul>

		causes.
Obs-025	Clinical assessment for pregnancy-induced hypertension, gestational diabetes, anemia in pregnancy	<ul style="list-style-type: none"> <li>• <b>Measure and interpret</b> blood pressure in pregnant women.</li> <li>• <b>Perform</b> capillary blood glucose testing or glucose tolerance tests.</li> <li>• <b>Monitor</b> maternal and fetal parameters related to gestational diabetes.</li> <li>• <b>Interpret</b> lab investigations for anemia</li> <li>• <b>Assess</b> for clinical signs of anemia and monitor response to treatment.</li> </ul>
<b>LABOUR</b>		
<b>Theory</b>		
Code	Topic	Specific learning objectives
Obs-026	Fetal and maternal anatomy relevant to labour	<ul style="list-style-type: none"> <li>• Differentiate the main types of female pelvis and their obstetric relevance.</li> <li>• Describe the main bones, sutures, fontanelles, and diameters of the fetal skull.</li> <li>• Explain how the relationship between pelvic and fetal skull diameters influences the process of spontaneous vaginal delivery.</li> </ul>
Obs-027	Process of labour	<ul style="list-style-type: none"> <li>• Explain the physiology and mechanisms of labour and delivery.</li> <li>• Describe the maternal and fetal anatomical adaptations relevant to the process of labour.</li> <li>• Discuss the stages and mechanisms of normal labor, and interpret the use of the partogram and WHO labor care guide (LCG) in monitoring progress.</li> <li>• Identify various methods for induction of labor and analyze their indications, contraindications, and potential complications.</li> <li>• Explain the principles, methods, indications, and side effects of different pain relief techniques used during labor.</li> </ul>

		<ul style="list-style-type: none"> <li>Describe the pharmacology, indications, and safe administration of oxytocin (syntocinon) in labor management.</li> </ul>
Obs-028	Cardiotocography	<ul style="list-style-type: none"> <li>Explain the principles and physiological basis of cardiotocography (CTG).</li> <li>Describe the components of CTG, including fetal heart rate tracing and uterine contractions.</li> <li>Define the parameters of a fetal heart trace and state the normal ranges for fetal heart rate and number of uterine contractions per 10 minutes.</li> <li>Correlate various fetal heart rate trace parameters with fetal well-being and labor progress.</li> <li>Differentiate between normal and abnormal CTG patterns.</li> <li>Classify CTG traces into relevant categories and interpret their clinical significance in labor management.</li> <li>Discuss the role of CTG in antenatal and intrapartum fetal surveillance.</li> <li>List the limitations of CTG in assessing fetal well-being</li> </ul>
Obs-029	Abnormal labour	<ul style="list-style-type: none"> <li>Explain the contributing factors leading to abnormal labor.</li> <li>Recognize prolonged and obstructed labor based on history, examination, and interpretation of the partogram.</li> <li>Identify various types of malpositions and malpresentations during labour.</li> <li>Describe the diagnosis and management principles of malpresentation and malposition.</li> <li>Outline the physiology and management of the third stage of labor, including prevention and management of perineal injuries</li> </ul>
Obs-030	Fetal malpresentation	<ul style="list-style-type: none"> <li>Define fetal malpresentation and identify the main types.</li> <li>Describe breech presentation, including its types and predisposing factors.</li> <li>Outline the antenatal assessment and management of breech presentation.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain the principle of external cephalic version (ECV), including indications, contraindications, and risks.</li> <li>• Discuss management options when ECV fails, including selection of mode of delivery.</li> <li>• Identify the prerequisites for safe vaginal breech delivery.</li> <li>• Describe the technique of vaginal breech delivery, including delivery of buttocks, shoulders, and head.</li> <li>• List common complications associated with breech delivery.</li> <li>• Describe transverse and oblique lie, their causes, and risks.</li> <li>• Outline appropriate management strategies for transverse, oblique, and unstable lie to ensure safe delivery.</li> </ul>
Obs-031	Preterm labour	<ul style="list-style-type: none"> <li>• Define preterm labour.</li> <li>• Identify its risk factors and causes.</li> <li>• Describe types of preterm labour.</li> <li>• Diagnose spontaneous preterm labour based on signs and symptoms and investigations..</li> <li>• Develop management plan of spontaneous preterm labour.</li> <li>• Define preterm pre-labour rupture of membranes (PPROM).</li> <li>• Identify the clinical features.</li> <li>• Outline basic principles of management of PPROM.</li> </ul>

### Clinical Skills

Code	Topic	Clinical methods/skills
Obs-032		<ul style="list-style-type: none"> <li>• <b>Perform and interpret</b> CTG.</li> <li>• <b>Observe/assist</b> in spontaneous vaginal delivery (svd), instrumental delivery, and episiotomy.</li> <li>• <b>Identify</b> malpresentation on abdominal examination.</li> <li>• <b>Observe and narrate</b> the management of malpresentation and malposition.</li> <li>• <b>Demonstrate</b> various malpresentations and malpositions using fetal skull and dummy pelvis.</li> <li>• <b>Observe and narrate</b> the steps of breech delivery.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Exhibit</b> empathy, support, and reassurance throughout the birthing process.</li> <li>• <b>Maintain</b> patient privacy, dignity, and comfort at all times.</li> <li>• <b>Communicate</b> clearly and effectively, providing instructions in simple, non-medical language.</li> <li>• <b>Observe/assist</b> in episiotomy.</li> <li>• <b>Demonstrate</b> teamwork with labor ward staff.</li> <li>• <b>Follow</b> strict infection prevention protocols, including hand washing, gowning, and gloving.</li> <li>• <b>Elicit</b> relevant history, <b>perform</b> examination, and <b>justify</b> investigations in cases of preterm labor, prolonged pregnancy, prom, and amniotic fluid abnormalities.</li> <li>• <b>Assist</b> in the management of preterm labor, prolonged pregnancy, prom, and amniotic fluid abnormalities under supervision.</li> <li>• <b>Observe and participate</b> in multidisciplinary teamwork, effective communication, and counseling regarding these conditions and their potential complications.</li> </ul>
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## PUERPERIUM

### Theory

Code	Topic	Specific Learning Objectives
Obs-033	Introduction to puerperium	<ul style="list-style-type: none"> <li>• Define puerperium and outline its duration.</li> <li>• Describe the normal physiological changes occurring in the mother during the puerperal period.</li> <li>• Explain the hormonal, hematologic, uterine, and breast changes after childbirth.</li> </ul>
Obs-034	Puerperal disorders	<p><b>Perineal complications</b></p> <ul style="list-style-type: none"> <li>• Identify common perineal complications (tears, episiotomy issues, hematoma, wound infection).</li> <li>• Recognize clinical features and risk factors.</li> <li>• Outline recommended management and preventive</li> </ul>

		<p>measures.</p> <p><b>Secondary postpartum hemorrhage</b></p> <ul style="list-style-type: none"> <li>• Define secondary PPH and list common causes.</li> <li>• Recognize warning signs and symptoms.</li> <li>• Describe diagnostic evaluation and management strategies.</li> </ul> <p><b>Obstetric palsy</b></p> <ul style="list-style-type: none"> <li>• Explain the mechanisms leading to obstetric palsy.</li> <li>• Recognize signs and symptoms of nerve injuries after childbirth.</li> <li>• Outline management and rehabilitation principles.</li> </ul> <p><b>Pubic symphysis diastasis</b></p> <ul style="list-style-type: none"> <li>• Define pubic symphysis diastasis and explain mechanisms and risk factors.</li> <li>• Recognize clinical presentation.</li> <li>• Describe diagnostic methods and outline conservative and supportive management.</li> </ul>
Obs-035	Puerperal pyrexia	<ul style="list-style-type: none"> <li>• Define puerperal pyrexia.</li> <li>• List common causes and risk factors.</li> <li>• Identify common sites of infection.</li> <li>• Diagnose based on clinical presentation.</li> <li>• Describe investigations for suspected puerperal infection.</li> <li>• Outline the management plan including antimicrobial and supportive management.</li> <li>• Discuss measures for prevention of puerperal sepsis.</li> </ul>
Obs-036	Breast disorders in the puerperium	<ul style="list-style-type: none"> <li>• Identify common breast problems (engorgement, cracked nipples, mastitis, abscess).</li> <li>• Describe signs and symptoms of each condition.</li> <li>• Outline management strategies and breastfeeding support techniques.</li> <li>• Explain preventive measures for breastfeeding-related complications.</li> </ul>
Obs-037	Mental health in the puerperium	<b>Postpartum blues</b>

	<p><i>(integrate with Psychiatry)</i></p>	<ul style="list-style-type: none"> <li>• Define postpartum blues and describe typical symptoms.</li> <li>• Identify risk factors.</li> <li>• Outline supportive management and expected course.</li> </ul> <p><b>Postpartum depression</b></p> <ul style="list-style-type: none"> <li>• Define postpartum depression and distinguish it from postpartum blues and postpartum psychosis.</li> <li>• Identify major risk factors, including psychosocial, biological, and obstetric contributors.</li> <li>• Describe the key clinical features and screening indicators of postpartum depression.</li> <li>• List appropriate screening tools and interpret their significance in clinical practice.</li> <li>• Outline management options, including psychological therapies, pharmacologic treatment, and referral pathways.</li> <li>• Explain the consequences of untreated postpartum depression for the mother, infant, and family, emphasizing the importance of early detection and support.</li> </ul> <p><b>Puerperal psychosis</b></p> <ul style="list-style-type: none"> <li>• Define puerperal psychosis and differentiate it from postpartum blues and depression.</li> <li>• Identify early warning signs and symptoms.</li> <li>• List major risk factors.</li> <li>• Describe emergency management and referral pathways.</li> </ul>
Obs-038	<p>Neonatal care</p> <p><i>(integrate with Paediatrics)</i></p>	<ul style="list-style-type: none"> <li>• Explain the principles of essential neonatal care and the management of common neonatal problems.</li> <li>• Describe the key steps, indications, and rationale of neonatal resuscitation.</li> <li>• Discuss the importance of breastfeeding, proper positioning, and attachment techniques.</li> <li>• Explain the concept, procedure, and benefits of kangaroo mother care (KMC).</li> <li>• Outline the management approach for newborns with</li> </ul>

		congenital anomalies.
<b>Clinical Skills</b>		
Code	Topic	Clinical Methods/Skills
Obs-039	Postpartum care	<ul style="list-style-type: none"> <li>• <b>Perform</b> comprehensive history taking and systematic examination of postpartum patients.</li> <li>• <b>Select and justify</b> appropriate investigations based on clinical findings.</li> <li>• <b>Formulate</b> an appropriate management plan for common puerperal conditions.</li> <li>• <b>Demonstrate</b> correct breastfeeding techniques and assist mothers in initiating and maintaining breastfeeding.</li> <li>• <b>Prescribe</b> suitable contraceptive methods for postpartum women based on individual needs and medical eligibility.</li> <li>• <b>Observe and participate</b> in measures aimed at preventing perinatal morbidity and mortality.</li> <li>• <b>Communicate</b> effectively and provide empathetic counseling to postpartum women and their families.</li> </ul>
<b>OBSTETRIC EMERGENCIES</b>		
<b>Theory</b>		
Code	Topic	Specific Learning Objectives
Obs-040	Preeclampsia and eclampsia	<ul style="list-style-type: none"> <li>• Define preeclampsia and describe its diagnostic criteria.</li> <li>• Identify risk factors and possible causes of preeclampsia.</li> <li>• Explain the pathophysiology and clinical features of preeclampsia.</li> <li>• Outline appropriate investigations for diagnosis.</li> <li>• Describe management strategies, including antihypertensives, seizure prophylaxis, and timing of delivery.</li> <li>• Discuss maternal and fetal complications.</li> <li>• Explain screening and preventive measures for high-risk pregnancies.</li> <li>• Define eclampsia and differentiate it from preeclampsia.</li> </ul>

		<ul style="list-style-type: none"> <li>Identify risk factors and triggers for eclampsia.</li> <li>Recognize clinical presentations, especially seizures.</li> <li>Explain immediate investigation priorities.</li> <li>Describe emergency management, including seizure control and maternal stabilization.</li> <li>Outline indications for urgent delivery.</li> <li>Discuss maternal and fetal complications associated with eclampsia.</li> </ul>
	Shoulder dystocia	<ul style="list-style-type: none"> <li>Define shoulder dystocia and describe it as an obstetric emergency.</li> <li>Identify risk factors and predisposing conditions.</li> <li>Describe the mechanism of shoulder dystocia during vaginal delivery.</li> <li>Identify clinical signs indicating shoulder dystocia.</li> <li>Explain preventive strategies during labor and delivery.</li> <li>Describe stepwise management maneuvers.</li> <li>Outline potential maternal and neonatal complications.</li> <li>Discuss documentation, medicolegal considerations, and team communication during management.</li> </ul>
Obs-041	Umbilical cord prolapse	<ul style="list-style-type: none"> <li>Define umbilical cord prolapse and differentiate between types.</li> <li>List risk factors and predisposing conditions.</li> <li>Diagnose based on clinical signs and symptoms.</li> <li>Explain immediate assessment and diagnosis.</li> <li>Describe emergency management steps to relieve cord compression and stabilize the fetus.</li> <li>Outline indications for urgent delivery.</li> <li>Discuss maternal and fetal complications associated with cord prolapse.</li> <li>Emphasize documentation, team communication, and medicolegal considerations in obstetric emergencies.</li> </ul>
Obs-042	Uterine rupture	<ul style="list-style-type: none"> <li>Define uterine rupture and differentiate it from uterine dehiscence.</li> </ul>

		<ul style="list-style-type: none"> <li>• List risk factors and predisposing conditions.</li> <li>• Describe the pathophysiology and mechanism of uterine rupture.</li> <li>• Diagnose based on clinical signs and symptoms.</li> <li>• Explain diagnostic methods and monitoring.</li> <li>• Describe emergency management, including maternal stabilization, surgical repair, or hysterectomy.</li> <li>• Discuss maternal and fetal complications.</li> <li>• Emphasize preventive strategies, labor monitoring, and timely decision-making.</li> </ul>
Obs-043	Venous thromboembolism	<ul style="list-style-type: none"> <li>• Describe the physiological changes in pregnancy that increase the risk of venous thromboembolism.</li> <li>• Identify risk factors for deep vein thrombosis (DVT) and pulmonary embolism (PE) in pregnancy and the postpartum period.</li> <li>• Identify the clinical features of DVT and PE in pregnant patients.</li> <li>• Select appropriate diagnostic investigations for suspected VTE in pregnancy.</li> <li>• Outline management strategies for VTE during pregnancy and postpartum.</li> <li>• Explain preventive measures in high-risk pregnant women.</li> </ul>
Obs-044	Amniotic fluid embolism	<ul style="list-style-type: none"> <li>• Define amniotic fluid embolism and describe its pathophysiology.</li> <li>• Identify risk factors and predisposing conditions.</li> <li>• Describe clinical presentation.</li> <li>• Explain diagnostic criteria and differential diagnoses.</li> <li>• Describe immediate emergency management.</li> <li>• Outline potential maternal and fetal complications.</li> <li>• Emphasize rapid recognition, team coordination, and documentation in managing obstetric emergencies.</li> </ul>
Obs-045	Antepartum hemorrhage	<ul style="list-style-type: none"> <li>• Define antepartum hemorrhage.</li> </ul>

		<ul style="list-style-type: none"> <li>Classify the major causes of APH.</li> <li>List important risk factors leading to APH.</li> <li>Describe the types of placenta previa and explain their clinical presentation and diagnostic criteria.</li> <li>Explain the placenta accreta spectrum, including its risk factors, ultrasound/MRI features, and obstetric significance.</li> <li>Describe placental abruption with its risk factors, clinical features, complications, and management.</li> <li>Describe vasa previa and identify features suggestive of fetal vessel rupture.</li> <li>Outline the essential steps in initial assessment and stabilization of a patient presenting with APH.</li> <li>Select appropriate investigations and justify their use in APH.</li> <li>Develop a management plan.</li> <li>Explain indications for expectant management versus urgent delivery.</li> <li>Identify major maternal and fetal complications of APH.</li> </ul>
Obs-046	Postpartum hemorrhage	<ul style="list-style-type: none"> <li>Define postpartum hemorrhage and classify it.</li> <li>Identify risk factors and causes</li> <li>Describe clinical signs and symptoms of PPH.</li> <li>Explain methods for early recognition and assessment.</li> <li>Outline preventive strategies.</li> <li>Describe emergency management, including pharmacologic treatment, non-surgical interventions, and surgical options.</li> <li>Discuss maternal complications and strategies for stabilization and transfusion.</li> <li>Explain follow-up care and counseling for women at risk of recurrence.</li> </ul>

### Clinical Skills

**Note:** if clinical cases are unavailable, learning can be achieved via video demonstrations, simulations, role-play, case discussions.

Code	Topic	Clinical methods/skills
Obs-047	Managing	<ul style="list-style-type: none"> <li><b>Observe/assist/participate</b> in emergency drills according to</li> </ul>

	obstetric emergencies	<p>ward protocols.</p> <ul style="list-style-type: none"> <li>• <b>Perform</b> rapid maternal and fetal assessment during an obstetric emergency.</li> <li>• <b>Apply</b> emergency protocols for maternal stabilization (airway, breathing, circulation, seizure control, hemorrhage control).</li> <li>• <b>Observe/assist</b> in stepwise maneuvers for specific emergencies (shoulder dystocia, cord prolapse, PPH).</li> <li>• <b>Observe and document</b> the administration of emergency medications safely.</li> <li>• <b>Observe/assist</b> in emergency delivery procedures, including operative vaginal delivery and cesarean section.</li> <li>• <b>Document</b> interventions, clinical findings, and team communications accurately.</li> <li>• <b>Communicate</b> clearly, calmly, and effectively with the multidisciplinary team during emergencies.</li> <li>• <b>Demonstrate</b> empathy and provide appropriate counseling to patients and family members under emergency conditions.</li> <li>• <b>Exhibit</b> situational awareness, quick decision-making, and leadership in obstetric crises.</li> <li>• <b>Maintain</b> professional and ethical behavior while managing high-stress clinical situations.</li> </ul>
Obs-048	Managing preeclampsia & eclampsia	<ul style="list-style-type: none"> <li>• <b>Measure</b> and accurately record maternal blood pressure.</li> <li>• <b>Perform</b> focused assessment for edema, reflexes, and neurological status.</li> <li>• <b>Interpret</b> laboratory results of proteinuria, renal/liver function tests, platelet counts.</li> <li>• <b>Observe/assist</b> in administration of antihypertensives and seizure prophylaxis safely.</li> <li>• <b>Monitor and stabilize</b> a patient during a seizure episode.</li> <li>• <b>Prepare and assist</b> in emergency delivery when indicated.</li> <li>• <b>Apply</b> emergency protocols for maternal and fetal stabilization.</li> </ul>

Obs-049	Shoulder dystocia	<ul style="list-style-type: none"> <li>• <b>Identify</b> shoulder dystocia promptly during vaginal delivery.</li> <li>• <b>Observe/assist</b> in performing stepwise maneuvers safely.</li> <li>• <b>Document</b> events and communicate effectively with the obstetric team.</li> </ul>
Obs-050	Umbilical cord prolapse	<ul style="list-style-type: none"> <li>• <b>Identify</b> cord prolapse by physical examination and fetal heart rate monitoring.</li> <li>• <b>Observe/assist</b> in performing immediate maneuvers to relieve cord compression (manual elevation, maternal positioning).</li> <li>• <b>Prepare and assist</b> in emergency cesarean delivery.</li> <li>• <b>Apply</b> emergency protocols to stabilize maternal-fetal status.</li> </ul>

## OPERATIVE INTERVENTIONS

### Theory

Code	Topic	Specific learning objectives
Obs-051	Episiotomy	<ul style="list-style-type: none"> <li>• Define episiotomy and describe its purpose.</li> <li>• Identify indications and contraindications for performing an episiotomy.</li> <li>• Describe the types of Episiotomy.</li> <li>• Explain the steps and technique of performing a safe episiotomy.</li> <li>• Recognize maternal and fetal complications associated with episiotomy.</li> <li>• Outline proper repair techniques and post-procedure care.</li> <li>• Explain the pain management and infection prevention strategies following episiotomy.</li> </ul>
Obs-052	Perineal trauma and repair	<ul style="list-style-type: none"> <li>• Define perineal trauma and classify its types and degrees.</li> <li>• List risk factors and causes of perineal trauma during childbirth.</li> <li>• Describe clinical features of perineal tears.</li> <li>• Outline principles and techniques of perineal repair for different degrees of tears.</li> <li>• Explain pain management and infection prevention in perineal trauma.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain postpartum care, including wound care, follow-up, and counseling.</li> <li>• List potential complications of perineal trauma and repair and their management.</li> </ul>
Obs-053	Assisted vaginal delivery	<ul style="list-style-type: none"> <li>• Define assisted vaginal delivery and differentiate it from spontaneous vaginal delivery.</li> <li>• Identify indications and contraindications for assisted vaginal delivery.</li> <li>• Describe the types of instruments used, including forceps and ventouse (vacuum extractor), and their appropriate selection.</li> <li>• Explain the steps and correct technique for performing assisted vaginal delivery using forceps or ventouse.</li> <li>• List maternal and fetal complications associated with assisted vaginal delivery.</li> <li>• Discuss principles of patient preparation, monitoring, and obtaining consent for assisted vaginal delivery.</li> <li>• Outline post-delivery care and follow-up for mother and newborn</li> <li>• Describe the prerequisites for safe instrumental delivery</li> </ul>
Obs-054	Caesarean section	<ul style="list-style-type: none"> <li>• Identify indications and contraindications for caesarean section.</li> <li>• Describe types of caesarean section incisions and approaches.</li> <li>• Explain preoperative preparation, including maternal assessment, consent, and anesthesia considerations.</li> <li>• Outline the steps and surgical technique of caesarean section.</li> <li>• List intraoperative and postoperative maternal and fetal complications.</li> <li>• Discuss principles of postoperative care, including wound care, pain management, and monitoring.</li> <li>• Explain strategies to prevent complications and ensure maternal and neonatal safety.</li> </ul>

Clinical Skills		
Code	Topic	Clinical methods/skills
Obs-055	Operative procedures in obstetrics	<ul style="list-style-type: none"> <li>• <b>Demonstrate</b> correct preparation of the patient for operative obstetric procedures, including positioning, asepsis, and anesthesia considerations.</li> <li>• <b>Observe/assist</b> in safe and effective episiotomy.</li> <li>• <b>Observe/assist/narrate</b> the proper technique for assisted vaginal delivery using forceps or ventouse.</li> <li>• <b>Observe/assist</b> in manual removal of placenta and management of retained products of conception.</li> <li>• <b>Observe/assist/document</b> the steps of caesarean section including incision, delivery, and closure.</li> <li>• <b>Observe/assist</b> in safe handling, monitoring, and immediate care of the newborn during operative procedures.</li> </ul>
Obs-056	OT protocols	<ul style="list-style-type: none"> <li>• <b>Demonstrate</b> proper hand hygiene and surgical hand scrubbing techniques.</li> <li>• <b>Perform</b> correct donning and doffing of sterile gowns, gloves, and masks.</li> <li>• <b>Follow</b> aseptic techniques during handling of sterile instruments and materials.</li> <li>• <b>Dispose</b> of biomedical waste safely following infection control guidelines.</li> <li>• <b>Monitor and maintain</b> sterile field throughout a procedure.</li> </ul>

## OBSTETRICS & GYNECOLOGY SPECIFIC SURGICAL INSTRUMENTS

- Cord clamp
- Episiotomy scissors
- Artery forceps
- Sponge holding forceps
- Uterine sound
- SIMS vaginal speculum
- Cusco's self-retaining speculum
- Allis tissue forceps
- Ovum forceps
- Vulsellum forceps
- Vacuum cup + handle
- Ventouse machine
- Obstetric forceps
- D&C set instruments
- Dilators (hegar's)
- Tenaculum
- Sponge holder
- Uterine curette (sharp and blunt)
- Cervical dilators
- Endometrial biopsy pipelle
- Sims speculum
- Cusco speculum
- Needle holder
- Scissors (mayo, metzenbaum, episiotomy)
- Towel clips
- Doyen's retractor
- Deaver retractor
- Richardson retractor
- Langenbeck retractor

06

*Section*



## Modular Integrated Curriculum 2K23

Final Version

# MEDICINE CLERKSHIP



**YEAR-05**

**Curriculum 2k23**  
**Final Year MBBS Clerkship**

**MEDICINE CLERKSHIP**

**Learning Outcomes**

By the end of the Medicine clerkship, a student will be able to:

- Identify characteristic signs, symptoms, and clinical patterns, and formulate accurate differential diagnoses of common medical diseases.
- Take a comprehensive and focused medical history from adult patients and caregivers.
- Perform a system based and clinically relevant physical examination for major medical presentations.
- Interpret essential laboratory and imaging investigations to support diagnostic decision-making.
- Develop and outline management plans for acute and chronic medical conditions.
- Communicate effectively and empathetically with patients, families, and the healthcare team.
- Demonstrate professionalism, ethical conduct, and collaborative teamwork in medical care settings.



HISTORY TAKING AND GENERAL PHYSICAL EXAMINATION		
Clinical Skills		
Code	Topic	Clinical Methods/Skills
M1-001	History taking skills	<p><b>Demonstrate</b> history-taking skills covering:</p> <ul style="list-style-type: none"> <li>patient biodata, rapport building, identity confirmation, and consent.</li> <li>presenting complaint including onset, duration, severity, and associated factors.</li> <li>structured history of the present illness with relevant characteristics and contextual details.</li> <li>brief review of systems using focused screening questions</li> <li>past medical and surgical history including previous illnesses, hospitalizations, and procedures.</li> <li>drug history including prescribed medications, herbal supplements, allergies.</li> <li>family history.</li> <li>social history including occupation, lifestyle habits, exposure risks, socioeconomic history, and psychosocial factors.</li> </ul>
M1-002	General physical examination	<p><b>Perform</b> general physical examination:</p> <ul style="list-style-type: none"> <li>Preparation of the patient, maintaining privacy, comfort, proper exposure, and hand hygiene</li> <li>Assess for build, nourishment, level of consciousness, posture, distress, facies, body movements, and hygiene</li> <li>Measurement of vital signs</li> <li>Pulse for rate, rhythm, volume, character, radio-radial delay, and radio-femoral delay</li> <li>Head and face for pallor, icterus, cyanosis, xanthelasma, corneal arcus, rash, and facial symmetry</li> </ul>

		<ul style="list-style-type: none"> <li>• Eye for conjunctival pallor, scleral icterus, pupillary responses, and ocular movements</li> <li>• Oral cavity for mucosal color, hydration, tongue changes, and dental hygiene</li> <li>• Neck examination including thyroid inspection, tracheal position, and assessment of jugular venous pressure</li> <li>• Lymph node examination of cervical, axillary, epitrochlear, and inguinal regions for size, tenderness, mobility, consistency, and fixation</li> <li>• Skin for color changes, pallor, cyanosis, jaundice, pigmentation, rashes, scars, edema, and dehydration signs</li> <li>• Nails for clubbing, koilonychia, leukonychia, and capillary refill time</li> <li>• Hands for tremors, palmar erythema, asterixis, warmth, and peripheral perfusion</li> <li>• Assessment of the chest for shape, symmetry, deformities, tracheal alignment, respiratory rate, breathing pattern, and use of accessory muscles</li> <li>• Cardiovascular screening for peripheral pulses, peripheral perfusion, and peripheral edema.</li> <li>• Respiratory screening through observation of chest expansion and symmetry</li> <li>• Abdominal screening including inspection and light palpation for tenderness, organomegaly, or masses.</li> <li>• Basic neurological screening including mental status, orientation, gait, muscle bulk, and gross motor function.</li> <li>• Leg examination including edema.</li> <li>• Appropriate documentation and communication of findings while maintaining patient dignity and comfort throughout the examination</li> </ul>
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CENTRAL NERVOUS SYSTEM DISEASES		
Theory		
Code	Topic	Specific Learning Objective
M1-003	Headache	<ul style="list-style-type: none"> <li>Classify types of headache.</li> <li>Identify red-flag signs requiring urgent evaluation.</li> <li>Formulate an initial management plan, including acute treatment and preventive strategies.</li> </ul>
M1-004	Stroke and Transient Ischemic Attack (TIA)	<ul style="list-style-type: none"> <li>Explain the pathophysiology, risk factors, and mechanisms of ischemic and hemorrhagic stroke.</li> <li>Identify key clinical features.</li> <li>Enlist investigations, including imaging and laboratory workup.</li> <li>Outline acute management plan with secondary prevention strategies.</li> </ul>
M1-005	Epilepsy and Seizure Disorders	<ul style="list-style-type: none"> <li>Define seizure, Pseudo seizures, and epilepsy.</li> <li>Classify seizures based on clinical features.</li> <li>Identify causes and precipitating factors.</li> <li>Enlist investigation reports.</li> <li>Develop treatment plans including counseling on driving.</li> <li>Describe medico legal considerations regarding signing a driving license certificate for epileptic patient (<i>integrate with forensic medicine</i>).</li> </ul>
M1-006	Neuropathy and Myopathy	<ul style="list-style-type: none"> <li>Identify clinical patterns suggestive of peripheral neuropathies and myopathies.</li> <li>Enlist initial investigations.</li> <li>Plan workup and treatment options.</li> </ul>
M1-007	Meningitis and Encephalitis	<ul style="list-style-type: none"> <li>Describe common infectious and non-infectious etiologies.</li> <li>Diagnose based on clinical presentation and investigation findings.</li> <li>Outline management plan.</li> </ul>

		<ul style="list-style-type: none"> <li>Describe prognosis.</li> </ul>
M1-008	Parkinsonism and Movement Disorders	<ul style="list-style-type: none"> <li>Distinguish Parkinson's disease from other causes of Parkinsonism and movement disorders.</li> <li>Outline principles of management, including pharmacologic therapy and multidisciplinary care.</li> </ul>
M1-009	Demyelinating Disorders	<ul style="list-style-type: none"> <li>Explain common clinical presentations and patterns of demyelinating disease.</li> <li>Interpret fundamental investigations.</li> <li>Outline management principles for acute relapses, disease-modifying therapy, and symptom control.</li> </ul>
M1-010	Neurological Emergencies	<p><i>(Status epilepticus, raised intracranial pressure, Guillain–Barré syndrome, myasthenic crisis)</i></p> <ul style="list-style-type: none"> <li>Identify life-threatening neurological emergencies.</li> <li>Outline steps of immediate management and referral to critical care.</li> </ul>
M1-011	Localizing lesions in the central nervous system	<ul style="list-style-type: none"> <li>Explain the clinical features that differentiate upper motor neuron lesions from lower motor neuron lesions.</li> <li>Integrate clinical history and neurological examination to localize lesions.</li> <li>Suggest appropriate investigations based on suspected lesion site.</li> </ul>
M1-012	Neurodegenerative disorders	<ul style="list-style-type: none"> <li>Classify common neurodegenerative diseases.</li> <li>Describe the key clinical features of major neurodegenerative disorders.</li> <li>Enlist investigations used in the evaluation of neurodegenerative disorders.</li> <li>Outline the principles of management, including pharmacological and supportive care.</li> </ul>
M1-013	Cerebellar disorders	<ul style="list-style-type: none"> <li>Classify cerebellar diseases (e.g., degenerative, vascular, neoplastic, infective, toxic, congenital).</li> <li>Describe the key clinical features of cerebellar dysfunction.</li> <li>Enlist investigations used in the evaluation of cerebellar</li> </ul>

		<p>disorders.</p> <ul style="list-style-type: none"> <li>Outline the principles of management of cerebellar diseases, including cause-specific and supportive care.</li> </ul>
M1-014	Neuromuscular disorders	<ul style="list-style-type: none"> <li>Classify neuromuscular disorders.</li> <li>Describe the key clinical features of muscular dystrophy, myasthenia gravis, and Lambert–Eaton myasthenic syndrome.</li> <li>Differentiate between myasthenia gravis and Lambert–Eaton myasthenic syndrome based on clinical presentation.</li> <li>Enlist investigations used in the evaluation of these neuromuscular disorders.</li> <li>Outline management plan for muscular dystrophy, myasthenia gravis, and Lambert–Eaton myasthenic syndrome</li> </ul>
M1-015	Brain death	<ul style="list-style-type: none"> <li>Discuss diagnostic criteria of brain death.</li> <li>Discuss breaking bad news.</li> </ul>
M1-016	Spinal Cord Lesions	<ul style="list-style-type: none"> <li>Enlist types of spinal cord lesions.</li> <li>Describe clinical presentation.</li> <li>Enlist diagnostic modalities.</li> <li>Differentiate between spastic and flaccid paralysis.</li> <li>Discuss management plan.</li> </ul>
M1-017	Space Occupying Lesion (Brain Abscess & tumors)	<ul style="list-style-type: none"> <li>Enlist causes of brain abscess and SOL.</li> <li>Enlist causes of ring enhancing lesions on CT brain.</li> <li>Discuss investigations and management plan.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M1-018	History taking	<b>Take</b> a comprehensive neurological history, including onset, progression, associated symptoms, risk factors, and functional impact.
M1-019	Clinical examination	<b>Perform</b> clinical examination of I–XII cranial nerves, motor

		<p>and sensory systems, cerebellar tests, higher mental functions, meningeal irritation signs, and raised intracranial pressure.</p> <p><b>Demonstrate</b> approach to assessing and stabilizing an acute stroke patient.</p> <p><b>Interpret</b> common lab investigations (CBC, electrolytes, renal and liver function tests, coagulation profile, CSF analysis and CNS imaging (CT, MRI), correlating findings with clinical presentation to support diagnosis and management.</p>
M1-020	Counselling	<b>Counsel</b> patients and families with professionalism, empathy, and cultural sensitivity.

## CARDIOVASCULAR DISEASES

### Theory

Code	Topic	Specific Learning Objective
M1-021	Hypertension	<ul style="list-style-type: none"> <li>Classify hypertension.</li> <li>Identify clinical features.</li> <li>Enlist the risk factors.</li> <li>List appropriate investigations.</li> <li>Outline management plans.</li> <li>Assess prognosis, complications, and preventive measures.</li> </ul>
M1-022	Coronary Artery Disease (CAD)	<ul style="list-style-type: none"> <li>Describe clinical features of angina, myocardial infarction, and acute coronary syndromes.</li> <li>Enlist risk factors and preventive strategies.</li> <li>Formulate differential diagnoses for ischemic chest pain.</li> <li>Enlist important investigations for diagnosis and severity assessment</li> <li>Outline the management plans including medical therapy, PCI, and CABG</li> <li>Anticipate prognosis and long-term follow-up.</li> </ul>

M1-023	Heart Failure	<ul style="list-style-type: none"> <li>Classify types of heart failure.</li> <li>Identify clinical features of heart failure..</li> <li>Explain underlying etiology, predisposing factors, and pathophysiology.</li> <li>Formulate differential diagnoses for dyspnea, edema, and exercise intolerance.</li> <li>Enlist relevant investigations to confirm diagnosis.</li> <li>Outline management plan.</li> <li>Discuss prognosis, complications, and long-term monitoring.</li> </ul>
M1-024	Cardiac Arrhythmias	<ul style="list-style-type: none"> <li>Classify arrhythmias</li> <li>Explain pathophysiology and clinical features of tachy- and brady-arrhythmia.</li> <li>Formulate differential diagnoses.</li> <li>Enlist investigations for diagnosis and monitoring.</li> <li>Develop a management plan.</li> <li>Assess prognosis and potential complications.</li> </ul>
M1-025	Cardiac arrest	<ul style="list-style-type: none"> <li>Describe pathophysiology.</li> <li>Identify immediate assessment priorities.</li> <li>Enlist potential underlying causes.</li> <li>Assess prognosis and outcome determinants.</li> </ul>
M1-026	Diseases of Heart Valves	<ul style="list-style-type: none"> <li>Identify clinical features of mitral, aortic, tricuspid, and pulmonary valve diseases.</li> <li>Explain pathophysiology and potential complications.</li> <li>Outline management plan.</li> </ul>
M1-027	Infective endocarditis	<ul style="list-style-type: none"> <li>Describe clinical features.</li> <li>Describe diagnostic criteria.</li> <li>Outline investigations and management plan.</li> </ul>
M1-028	Rheumatic Fever and Rheumatic Heart Disease	<ul style="list-style-type: none"> <li>Identify clinical features of rheumatic fever and. heart disease.</li> <li>Explain the pathophysiology and progression</li> <li>Diagnostic criteria for RF</li> <li>Identify the complications.</li> </ul>

		<ul style="list-style-type: none"> <li>• Formulate differential diagnoses for suspected cases.</li> <li>• Enlist appropriate investigations to confirm diagnosis and assess severity.</li> <li>• Outline medical and surgical management strategies.</li> <li>• Discuss prognosis and long-term follow-up considerations</li> </ul>
M1-029	Diseases of Myocardium	<ul style="list-style-type: none"> <li>• Identify clinical features of myocarditis, cardiomyopathy, and cardiac tumors.</li> <li>• Differentiate dilated from hypertrophic cardiomyopathy.</li> <li>• Formulate differential diagnoses.</li> <li>• Enlist investigations to confirm diagnosis.</li> <li>• Outline management plans.</li> <li>• Assess prognosis and follow-up.</li> </ul>
M1-030	Diseases of Pericardium	<ul style="list-style-type: none"> <li>• Identify clinical features of acute pericarditis, constrictive pericarditis, and cardiac tamponade.</li> <li>• Explain etiology and pathophysiology.</li> <li>• Enlist investigations for diagnosis.</li> <li>• Outline management plans.</li> <li>• Assess complications and prognosis</li> </ul>
M1-031	Diseases of Aorta	<ul style="list-style-type: none"> <li>• Identify clinical features of aortic aneurysm, dissection, coarctation, and Marfan syndrome.</li> <li>• Explain risk factors and underlying etiology.</li> <li>• Formulate differential diagnoses.</li> <li>• Enlist investigations for diagnosis and risk stratification.</li> <li>• Develop management plans including medical, interventional, and surgical approaches.</li> <li>• Describe complications and prognosis</li> </ul>
M1-032	Congenital Heart Disease (CHD)	<ul style="list-style-type: none"> <li>• Identify clinical features of cyanotic and acyanotic CHD.</li> <li>• Explain pathophysiology.</li> <li>• List investigations.</li> <li>• Plan management strategies.</li> <li>• Assess long-term outcomes and prognosis</li> </ul>

M1-033	Peripheral Vascular Disease	<ul style="list-style-type: none"> <li>Describe clinical features of peripheral vascular disease.</li> <li>List risk factors.</li> <li>Formulate differential diagnoses for limb pain, swelling, or ulceration.</li> <li>Outline investigations and management plans with prognosis and follow-up.</li> </ul>
M1-034	Cardiogenic Shock	<ul style="list-style-type: none"> <li>Identify clinical features and hemodynamic changes.</li> <li>Describe the underlying pathophysiology.</li> <li>Formulate differential diagnoses for hypotension and shock state.</li> <li>Enlist important investigations.</li> <li>Plan emergency management.</li> <li>Assess prognosis and factors affecting outcomes</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M1-035	History taking	<p><b>Take</b> a focused history of chest pain, dyspnea, palpitations, syncope, edema, and functional limitations.</p> <p>Record past medical, surgical, drug, allergy, personal, and social history relevant to cardiovascular conditions.</p>
M1-036	Clinical examination	<p><b>Assess</b> general appearance, hands (color, temperature, clubbing, splinter hemorrhages, Janeway lesions, Osler's nodes, and tendon xanthomas).</p> <p><b>Measure and interpret</b> pulse, blood pressure, and JVP</p> <p><b>Inspect</b> the precordium for scars, pacemaker sites, and visible pulsations.</p> <p><b>Palpate</b> apex beat, parasternal heave, and thrills.</p> <p><b>Auscultate</b> heart sounds and murmurs, pericardial rub, lungs for fine crackles or pleural effusion at bases.</p> <p><b>Palpate</b> abdomen for hepatosplenomegaly or pulsatile liver and check for ascites, ankle, and sacral edema.</p> <p><b>Auscultate</b> for bruits over the abdomen and femoral arteries.</p>

		<p><b>Inspect</b> lower limbs for temperature, color, capillary refill, ulceration, varicosities, and scars.</p> <p><b>Perform</b> ECG with correct lead placement and <b>interpret</b> the findings.</p> <p><b>Observe and assist</b> in echocardiography and <b>interpret</b> the report.</p> <p><b>Interpret</b> laboratory investigations, including cardiac enzymes, lipid profile, coagulation profile, electrolytes, renal function tests, thyroid function tests, and inflammatory markers, in relation to common CVS conditions.</p>
M1-037	Counselling	<b>Counsel</b> patients and families with professionalism, empathy, and cultural sensitivity.

## RESPIRATORY DISEASES

### Theory

Code	Topic	Specific Learning Objective
M1-038	Common respiratory symptoms	<ul style="list-style-type: none"> <li>Explain the pathophysiological basis of cough, sputum, dyspnea, hemoptysis, and chest pain.</li> <li>Describe their clinical significance.</li> </ul>
M1-039	Pneumonia	<ul style="list-style-type: none"> <li>Describe etiology and risk factors of community- and hospital-acquired pneumonia.</li> <li>Diagnose based on characteristic clinical features.</li> <li>Enlist potential complications.</li> <li>Outline essential investigations and their diagnostic value.</li> <li>Plan management and indications for hospitalization.</li> <li>Discuss preventive measures.</li> </ul>
M1-040	Tuberculosis	<ul style="list-style-type: none"> <li>Identify typical and atypical clinical presentations.</li> <li>Explain diagnostic criteria.</li> <li>Outline standard treatment regimens and principles of drug-resistant TB management.</li> </ul>

		Discuss major preventive strategies.
M1-041	Bronchial Asthma	<ul style="list-style-type: none"> <li>Explain pathophysiology, triggers, and classification.</li> <li>Identify features of stable disease and acute exacerbation.</li> <li>Outline acute and chronic management plan using step-wise therapy.</li> <li>Discuss preventive approaches and patient education.</li> </ul>
M1-042	Chronic Obstructive Pulmonary Disease (COPD)	<ul style="list-style-type: none"> <li>Identify risk factors.</li> <li>Explain underlying pathophysiology.</li> <li>Describe common clinical features and complications.</li> <li>Outline diagnostic evaluation.</li> <li>Plan management of stable COPD and acute exacerbations including preventive care.</li> </ul>
M1-043	Pleural Effusion	<ul style="list-style-type: none"> <li>Enlist causes of transudative and exudative effusions.</li> <li>Describe characteristic clinical features and radiographic findings.</li> <li>Outline diagnostic work-up including thoracentesis.</li> <li>Plan management according to underlying cause.</li> </ul>
M1-044	Pneumothorax	<ul style="list-style-type: none"> <li>Describe types and mechanisms of pneumothorax.</li> <li>Identify hallmark clinical findings and life-threatening features.</li> <li>Outline emergency and definitive management, including indications for chest tube insertion.</li> </ul>
M1-045	Lung Cancer	<ul style="list-style-type: none"> <li>Identify major risk factors.</li> <li>Describe typical clinical presentations.</li> <li>Summarize the diagnostic approach.</li> <li>Outline general management principles for major tumor types.</li> <li>Discuss preventive strategies including screening.</li> </ul>
M1-046	Occupational Lung Diseases	<ul style="list-style-type: none"> <li>Identify common occupational exposures and associated lung disorders.</li> <li>Interstitial lung disease</li> </ul>

		<ul style="list-style-type: none"> <li>• Recognize early symptoms and diagnostic features.</li> <li>• Describe preventive strategies and workplace safety measures.</li> </ul>
M1-047	Pulmonary Embolism	<ul style="list-style-type: none"> <li>• Enlist major risk factors.</li> <li>• Describe clinical presentations.</li> <li>• Outline diagnostic evaluation.</li> <li>• Summarize initial stabilization, treatment principles, and prevention.</li> </ul>
M1-048	Respiratory failure and ARDS	<ul style="list-style-type: none"> <li>• Define respiratory failure and acute respiratory distress syndrome (ARDS).</li> <li>• Describe the key clinical features of respiratory failure and ARDS.</li> <li>• Enlist investigations used in the evaluation of respiratory failure and ARDS.</li> <li>• Outline the principles of management of respiratory failure and ARDS.</li> </ul>
M1-049	Bronchiectasis Lung abscess	<ul style="list-style-type: none"> <li>• Describe the key clinical features of bronchiectasis.</li> <li>• Enlist investigations used in the evaluation of bronchiectasis.</li> <li>• Outline the principles of management of bronchiectasis.</li> <li>• Identify potential complications.</li> <li>• Enlist the causes of lung abscess.</li> <li>• Diagnose based on clinical presentations and investigations.</li> <li>• Outline the management plan.</li> </ul>
M1-050	Pulmonary Hypertension And cor pulmonale	<ul style="list-style-type: none"> <li>• Define and differentiate pulmonary hypertension and cor pulmonale.</li> <li>• Explain the pathophysiological relationship between pulmonary hypertension and the development of cor pulmonale.</li> <li>• Describe the key clinical features of pulmonary</li> </ul>

		<p>hypertension and cor pulmonale.</p> <ul style="list-style-type: none"> <li>• Enlist investigations used in the evaluation of pulmonary hypertension and cor pulmonale.</li> <li>• Outline the principles of management of pulmonary hypertension and cor pulmonale.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	Clinical Methods/Skills
M1-051	History taking	<p><b>Obtain</b> focused respiratory history (symptom analysis: cough, sputum, dyspnea, chest pain, hemoptysis).</p>
M1-052	Clinical examination	<p><b>Perform</b> inspection, palpation, percussion, and auscultation of chest.</p> <p><b>Identify and interpret</b> abnormal breath sounds (rhonchi, crackles, bronchial breathing).</p> <p><b>Interpret</b> examination findings in pleural effusion, consolidation, pneumothorax, COPD, asthma.</p> <p><b>Demonstrate</b> correct use of a peak flow meter and incentive spirometer.</p> <p><b>Interpret</b> spirometry graphs (normal, obstructive, restrictive patterns).</p> <p><b>Interpret</b> basic chest X-rays (effusion, consolidation, collapse, pneumothorax).</p> <p><b>Demonstrate</b> steps of oxygen therapy administration and nebulization.</p> <p><b>Demonstrate</b> use of inhalers and spacers to patients.</p> <p><b>Observe/assist</b> in initial management of respiratory emergencies (asthma attack, pneumothorax).</p>
M1-053	Counselling	<b>Counsel</b> patients on smoking cessation and lifestyle modifications.

RHEUMATIC DISEASES		
Theory		
Code	Topic	Specific Learning Objective
M1-054	Introduction to autoimmune diseases	<ul style="list-style-type: none"> <li>Classify major rheumatologic disorders.</li> <li>Describe key immune mechanisms involved in autoimmune and inflammatory joint diseases.</li> </ul>
M1-055	Rheumatoid Arthritis	<ul style="list-style-type: none"> <li>Describe etiology and immunopathogenesis.</li> <li>Identify characteristic clinical features and extra-articular manifestations.</li> <li>Outline essential investigations and core management principles.</li> </ul>
M1-056	Systemic Lupus Erythematosus (SLE)	<ul style="list-style-type: none"> <li>Describe diagnostic criteria and major organ system involvement.</li> <li>Outline principles of management, including monitoring and prevention of flares.</li> </ul>
M1-057	Osteoarthritis	<ul style="list-style-type: none"> <li>Explain the pathophysiology of degenerative joint disease.</li> <li>Identify major risk factors and characteristic clinical presentation.</li> <li>Discuss treatment options for symptom relief and functional improvement.</li> </ul>
M1-058	Crystal arthropathies	<ul style="list-style-type: none"> <li>Discuss pathophysiology of hyperuricemia and crystal-induced inflammation.</li> <li>Describe diagnostic features of gout.</li> <li>Differentiate gout from pseudogout.</li> <li>Outline management of acute attacks and long-term urate-lowering therapy.</li> </ul>
M1-059	Progressive systemic sclerosis	<ul style="list-style-type: none"> <li>Identify key clinical manifestations.</li> <li>Enlist and interpret essential investigations.</li> <li>Outline management plan.</li> </ul>

M1-060	Polymyositis and Dermatomyositis	<ul style="list-style-type: none"> <li>Describe clinical features of inflammatory myopathies.</li> <li>Interpret diagnostic tests.</li> <li>Outline management plan.</li> </ul>
M1-061	Mixed connective tissue disorders	<ul style="list-style-type: none"> <li>Define and classify mixed connective tissue disorders.</li> <li>Describe the key clinical features.</li> <li>Enlist appropriate investigations.</li> <li>Outline the principles of management.</li> </ul>
M1-062	Seronegative Spondyloarthropathies	<ul style="list-style-type: none"> <li>Classify Seronegative Spondyloarthropathies</li> <li>Identify hallmark clinical features and characteristic radiologic findings of Ankylosing spondylitis.</li> <li>Outline management strategies.</li> </ul>
M1-063	Vasculitis Syndromes	<ul style="list-style-type: none"> <li>Classify vasculitides.</li> <li>Describe the diagnostic approach including clinical, laboratory, and imaging components.</li> <li>Summarize general management principles.</li> </ul>
M1-064	Juvenile Idiopathic Arthritis	<ul style="list-style-type: none"> <li>Describe major clinical variants and typical presentations in children.</li> <li>Outline management principles.</li> </ul>
M1-065	Drugs in Rheumatology	<ul style="list-style-type: none"> <li>Explain mechanisms of action of DMARDs, corticosteroids, and biologic agents.</li> <li>Describe their indications and major adverse effects.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M1-066	History Taking	<p><b>Take</b> a detailed history of joint pain, stiffness, swelling, and systemic symptoms</p>
M1-067	Clinical examination	<p><b>Perform</b> general examination with focus on musculoskeletal system.</p> <p><b>Conduct</b> systematic examination of small and large joints for tenderness, swelling, and deformity.</p> <p><b>Assess</b> range of motion and functional status of joints.</p> <p><b>Identify</b> clinical signs of rheumatoid arthritis, SLE, gout, and</p>

		<p>osteoarthritis.</p> <p><b>Interpret</b> basic rheumatologic investigations such as ESR, CRP, ANA, RF, anti-CCP.</p>
M1-068	Counselling	<p><b>Counsel</b> patients empathetically and professionally on following points:</p> <ul style="list-style-type: none"> <li>• chronic and relapsing nature of rheumatic diseases in layman language to patients.</li> <li>• importance of medication adherence, expected benefits, and potential side effects.</li> <li>• lifestyle modifications.</li> <li>• impact of disease on daily activities, work, and mental health, offering appropriate support and referrals.</li> <li>• need for periodic follow-up, laboratory monitoring, and screening for drug toxicity.</li> </ul>

## RENAL DISEASES

### Theory

Code	Topic	Specific Learning Objective
M1-069	Glomerular diseases	<ul style="list-style-type: none"> <li>• Discuss etiology and pathophysiology.</li> <li>• Identify clinical presentations.</li> <li>• Outline relevant investigations.</li> <li>• Summarize management plan.</li> </ul>
M1-070	Nephrotic Syndrome	<ul style="list-style-type: none"> <li>• Identify key clinical features.</li> <li>• Enlist complications.</li> <li>• Outline relevant investigations to confirm diagnosis.</li> <li>• Describe treatment strategies.</li> </ul>
M1-071	Acute Kidney Injury (AKI)	<ul style="list-style-type: none"> <li>• Define AKI and classify types.</li> <li>• Identify causes of AKI.</li> <li>• Enlist relevant investigations.</li> <li>• Outline management plan.</li> </ul>
M1-072	Chronic Kidney	<ul style="list-style-type: none"> <li>• Classify CKD.</li> </ul>

	Disease (CKD)	<ul style="list-style-type: none"> <li>Describe disease progression and complications.</li> <li>Outline relevant investigations.</li> <li>Explain management principles including indications for dialysis.</li> </ul>
M1-073	Renal Tubular Disorders	<ul style="list-style-type: none"> <li>Explain major tubular disorders such as renal tubular acidosis (RTA) and Fanconi syndrome.</li> <li>Diagnose based on key clinical features and laboratory findings.</li> <li>Outline relevant investigations.</li> </ul>
M1-074	Hypertension and Kidney	<ul style="list-style-type: none"> <li>Discuss secondary hypertension due to renal causes.</li> <li>Outline relevant investigations.</li> <li>Summarize plan of management.</li> </ul>
M1-075	Urinary Tract Infections (UTI)	<ul style="list-style-type: none"> <li>Describe clinical presentations of lower and upper UTIs.</li> <li>Outline relevant investigations.</li> <li>Describe management strategies.</li> </ul>
M1-076	Renal Replacement Therapy	<ul style="list-style-type: none"> <li>Outline principles of hemodialysis, peritoneal dialysis, and transplantation.</li> <li>Identify indications.</li> <li>Outline relevant investigations for initiation and monitoring.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M1-077	History Taking	<p><b>Take</b> a structured renal history, focusing on urinary output changes, hematuria, edema, flank pain, dysuria, and relevant systemic or constitutional symptoms.</p>
M1-078	Clinical examination	<p><b>Perform</b> a general physical examination with emphasis on assessing volume status, pallor, and edema.</p> <p><b>Examine</b> the abdomen for renal masses, tenderness, and bladder distension.</p> <p><b>Identify</b> clinical signs of chronic kidney disease such as</p>

		<p>pallor, scratch marks, and edema.</p> <p><b>Interpret</b> urinalysis results, renal function tests (RFTs), and electrolyte profiles, and renal imaging studies, including ultrasound of kidneys, ureters, and bladder (KUB).</p> <p><b>Observe/assist</b> in dialysis procedures and indications for initiation.</p>
M1-079	Counselling	<p><b>Counsel</b> patients and caregivers on following points:</p> <ul style="list-style-type: none"> <li>• chronic nature of renal diseases.</li> <li>• importance of medication adherence, diet, fluid management, and lifestyle modifications.</li> <li>• need for regular follow-up, laboratory monitoring, and timely reporting of warning signs.</li> <li>• understanding dialysis or transplantation options, including indications and expectations.</li> </ul>



## ENDOCRINE DISORDERS

### Theory

Code	Topic	Specific Learning Objective
M2-001	Diabetes Mellitus and Hypoglycemia	<ul style="list-style-type: none"> <li>Classify diabetes mellitus into Type 1 diabetes, Type 2 diabetes, MODY, and secondary diabetes.</li> <li>Explain the pathophysiology of insulin resistance.</li> <li>Describe the diagnostic criteria and approach for diagnosing a case of diabetes mellitus.</li> <li>Describe the acute and chronic complications of diabetes mellitus.</li> <li>Outline the management plan.</li> </ul>
M2-002	Thyroid Disorders	<ul style="list-style-type: none"> <li>Describe the clinical features of hypothyroidism and hyperthyroidism.</li> <li>Explain the different forms of thyroiditis and their clinical significance.</li> <li>Classify goiter with causes and clinical implications.</li> <li>Describe the types, clinical features, and prognosis of thyroid cancers.</li> <li>Outline the investigations for thyroid disorders.</li> <li>Discuss disease-specific management approaches, including medical, surgical, and radioactive iodine therapy.</li> </ul>
M2-003	Pituitary and Hypothalamic Disorders	<ul style="list-style-type: none"> <li>Describe the causes, clinical features, and consequences of hypopituitarism and pituitary adenomas.</li> <li>Explain the clinical features, causes, and complications of acromegaly, gigantism, and prolactinoma.</li> <li>Describe the types, causes, and clinical presentation of diabetes insipidus.</li> <li>Explain the pathophysiology, causes, and clinical</li> </ul>

		<p>features of SIADH.</p> <ul style="list-style-type: none"> <li>Discuss hypothalamic syndrome, including its causes, clinical manifestations, and implications.</li> </ul>
M2-004	Adrenal Disorders	<ul style="list-style-type: none"> <li>Describe the causes, clinical features, and investigations for Addison's disease and adrenal crisis.</li> <li>Describe the etiology, clinical features, and investigations for Cushing's syndrome and Cushing's disease.</li> <li>Explain the clinical features, diagnosis, and management of pheochromocytoma.</li> <li>Describe primary hyperaldosteronism (Conn's syndrome), including its causes and clinical manifestations.</li> </ul>
M2-005	Disorders of Calcium and Bone Metabolism	<ul style="list-style-type: none"> <li>Describe the causes and clinical features of hyperparathyroidism and hypoparathyroidism.</li> <li>Explain the causes, and clinical manifestations of vitamin D disorders, including osteomalacia and rickets.</li> <li>Describe osteoporosis, including its risk factors, diagnosis, prevention, and management.</li> <li>Explain the etiology, clinical features, and complications of Paget's disease of bone.</li> </ul>
M2-006	Reproductive Endocrinology	<ul style="list-style-type: none"> <li>Describe the causes and clinical features of precocious and delayed puberty.</li> <li>Explain the etiology, clinical features, and complications of polycystic ovary syndrome (PCOS).</li> <li>Describe hypogonadism in males and females, including its causes and clinical manifestations.</li> <li>Explain the causes and clinical features of gynecomastia.</li> <li>Discuss the endocrine causes of infertility and their role in reproductive dysfunction.</li> </ul>

M2-007	Multiple endocrine neoplasia	<ul style="list-style-type: none"> <li>Describe the types, clinical features, and genetic basis of multiple endocrine neoplasia (MEN 1 and MEN 2).</li> </ul>
M2-008	Paraneoplastic endocrine syndromes	<ul style="list-style-type: none"> <li>Describe paraneoplastic endocrine syndromes, including their causes and clinical manifestations.</li> </ul>
M2-009	Endocrine hypertension	<ul style="list-style-type: none"> <li>Explain the causes, pathophysiology, and clinical features of endocrine hypertension.</li> </ul>
M2-010	Endocrine emergencies	<ul style="list-style-type: none"> <li>Describe the clinical features, precipitating factors, and initial management of thyroid storm.</li> <li>Explain the presentation, causes, and management of myxedema coma.</li> <li>Describe adrenal crisis, including its causes, clinical features, and emergency management.</li> <li>Explain the acute management of diabetic emergencies, including Diabetic ketoacidosis and severe hypoglycemia.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M2-011	History Taking	<p><b>Take</b> a focused endocrine history for Diabetes mellitus, Hypothyroidism, Hyperthyroidism, Thyroid nodules, Pituitary adenomas, Cushing's syndrome, Adrenal insufficiency, and Hypogonadism.</p>
M2-012	Clinical examination	<p><b>Perform</b> general physical examination.</p> <p><b>Examine:</b></p> <ul style="list-style-type: none"> <li>Neck for goiter, nodules, or thyroid enlargement (Thyroid disorders).</li> <li>Skin for pigmentation changes, stretch marks, hirsutism, edema (Adrenal disorders, Cushing's syndrome, Polycystic Ovary Syndrome).</li> <li>Musculoskeletal system for bone deformities, muscle weakness, or skeletal abnormalities (Vitamin D disorders, Osteoporosis, Paget's disease of bone).</li> </ul>

		<ul style="list-style-type: none"> <li>Genitalia and secondary sexual characteristics (Hypogonadism, Disorders of puberty).</li> </ul> <p><b>Observe/assist</b> in management of acute endocrine emergencies including diabetic ketoacidosis and severe hypoglycemia.</p> <p><b>Interpret</b> thyroid function tests, thyroid antibodies, and relevant imaging, blood glucose, electrolytes, renal function, and ketones for acute diabetic complications, adrenal function tests, cortisol, and imaging studies, reproductive endocrine investigations, bone metabolism markers, calcium, phosphate, vitamin D, and imaging studies.</p>
M2-013	Counselling	<p><b>Demonstrate</b> effective patient counselling skills, including explaining the diagnosis, treatment options, lifestyle modifications, medication adherence, and follow-up plans for patients with endocrine disorders.</p>

## GASTROINTESTINAL DISEASES

### Theory

Code	Topic	Specific Learning Objective
M2-014	Diseases of Oral Cavity	<ul style="list-style-type: none"> <li>Describe the etiology of oral cavity diseases including infective, traumatic, autoimmune, neoplastic, and nutritional causes.</li> <li>Explain the pathophysiology of local tissue damage and immune response in oral diseases.</li> <li>Identify the clinical features of oral cavity disorders.</li> <li>Outline the investigations.</li> </ul>
M2-015	Acute Gastroenteritis	<ul style="list-style-type: none"> <li>Explain the pathophysiology acute gastroenteritis.</li> <li>Identify the clinical features and complications.</li> <li>Outline the investigations and management plan.</li> </ul>
M2-016	Chronic Diarrhea	<ul style="list-style-type: none"> <li>Describe the common causes of chronic diarrhea.</li> <li>Explain the pathophysiology.</li> <li>Identify the clinical features and complications.</li> </ul>

		Outline the investigations and management plan.
M2-017	Dysphagia	<ul style="list-style-type: none"> <li>Describe the etiology of dysphagia including structural and functional causes.</li> <li>Explain the pathophysiology of dysphagia.</li> <li>Identify the clinical features.</li> <li>Outline the investigations to reach the diagnosis.</li> </ul>
M2-018	Gastroesophageal Reflux Disease (GERD)	<ul style="list-style-type: none"> <li>Describe the etiology of GERD.</li> <li>Explain the pathophysiology.</li> <li>Identify the clinical features of GERD.</li> <li>Outline the investigations and management plan.</li> </ul>
M2-019	Peptic Ulcer Disease & Dyspepsia	<ul style="list-style-type: none"> <li>Describe the etiology of peptic ulcer disease.</li> <li>Explain the pathophysiology.</li> <li>Identify the clinical features and potential complications.</li> <li>Outline the management plan.</li> </ul>
M2-020	Irritable Bowel Syndrome (IBS)	<ul style="list-style-type: none"> <li>Describe the etiology of IBS.</li> <li>Explain the pathophysiology.</li> <li>Identify the clinical features.</li> <li>Outline the investigations and management plan.</li> </ul>
M2-021	Malabsorption Syndromes	<ul style="list-style-type: none"> <li>Describe the etiology of malabsorption syndromes.</li> <li>Explain the pathophysiology.</li> <li>Identify the clinical features and complications.</li> <li>Outline the investigations and management plan.</li> </ul>
M2-022	Inflammatory Bowel Disease (IBD)	<ul style="list-style-type: none"> <li>Define inflammatory bowel disease.</li> <li>Describe the etiology and pathophysiological mechanisms.</li> <li>Differentiate between ulcerative colitis and Crohn's disease.</li> <li>Identify clinical manifestations of IBD and complications.</li> <li>Formulate differential diagnosis.</li> <li>Interpret relevant investigations used in the diagnosis.</li> </ul>

		<ul style="list-style-type: none"> <li>Outline management plan.</li> </ul>
M2-023	Gastrointestinal Tuberculosis	<ul style="list-style-type: none"> <li>Explain the pathophysiology.</li> <li>Identify the clinical features and complications.</li> <li>Outline the investigations and management plan.</li> </ul>
M2-024	Gastrointestinal Malignancies	<ul style="list-style-type: none"> <li>Enlist common gastrointestinal cancers.</li> <li>Identify key risk factors and alarm symptoms.</li> <li>Outline the investigations, basic principles of management, and prognosis of gastrointestinal cancers.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	Clinical Methods/Skills
M2-025	History taking	<p><b>Take</b> focused gastrointestinal history, including pain, diarrhea, dyspepsia, reflux, dysphagia, bleeding, weight loss, chronic illness, and red-flag symptoms.</p>
M2-026	Clinical examination	<p><b>Examine</b> oral cavity.</p> <p><b>Assess</b> hydration status using capillary refill time, skin turgor, pulse, and blood pressure, particularly in acute gastroenteritis and chronic diarrhea.</p> <p><b>Perform</b> a complete abdominal examination (inspection, palpation, percussion, and auscultation).</p> <p><b>Demonstrate</b> per rectal examination where indicated, including assessment for bleeding, masses, and tenderness.</p> <p><b>Identify</b> clinical signs of anemia, malnutrition, and vitamin deficiencies during general and gastrointestinal examination.</p> <p><b>Interpret</b> diagnostic investigations relevant to gastrointestinal diseases, including CBC, stool examination, occult blood testing, and relevant biochemical tests, ultrasound abdomen, and X-ray abdomen.</p>
M2-027	Counselling	<p><b>Counsel</b> patients regarding disease nature, lifestyle modification, dietary advice, medication adherence, red-flag symptoms, and follow-up care.</p>

## HEPATOBILIARY DISEASES

### Theory

Code	Topic	Specific Learning Objective
M2-028	Approach to a Patient with Jaundice	<ul style="list-style-type: none"> <li>Classify jaundice based on pathophysiology.</li> <li>Identify key clinical features associated with jaundice.</li> <li>Formulate differential diagnosis.</li> <li>Interpret investigations of a patient with jaundice.</li> <li>Outline general principles of management.</li> </ul>
M2-029	Acute Liver Failure	<ul style="list-style-type: none"> <li>Identify common causes of acute liver failure.</li> <li>Explain the pathophysiological basis of acute liver failure.</li> <li>Identify clinical presentation and potential complications.</li> <li>Interpret laboratory investigations used in assessment.</li> <li>Outline initial and definitive management plan.</li> <li>Describe Paracetamol poisoning</li> </ul>
M2-030	Chronic Liver Disease	<ul style="list-style-type: none"> <li>Enlist etiology leading to chronic liver disease.</li> <li>Describe the progression from chronic liver injury to cirrhosis.</li> <li>Describe clinical features and complications of chronic liver disease.</li> <li>Interpret investigations used in diagnosis and staging.</li> <li>Plan strategies for management and complication prevention.</li> </ul>
M2-031	Hepatitis B and C	<ul style="list-style-type: none"> <li>Describe the clinical presentation of Hepatitis B and Hepatitis C.</li> <li>Enlist and interpret laboratory investigations for Hepatitis B and C.</li> <li>Outline the treatment plan for Hepatitis B and Hepatitis C.</li> </ul>

		<ul style="list-style-type: none"> <li>Enlist potential complications of Hepatitis B and Hepatitis C.</li> </ul>
M2-032	Portal Hypertension	<ul style="list-style-type: none"> <li>Explain the pathophysiology of portal hypertension.</li> <li>Identify causes and clinical manifestations of portal hypertension.</li> <li>Interpret relevant diagnostic investigations.</li> <li>Outline medical and interventional management plan.</li> </ul>
M2-033	Variceal Bleeding	<ul style="list-style-type: none"> <li>Describe clinical presentation of variceal bleeding.</li> <li>Explain the underlying mechanism leading to variceal rupture.</li> <li>Enlist the diagnostic procedures.</li> <li>Outline emergency and preventive management plan.</li> </ul>
M2-034	Ascites	<ul style="list-style-type: none"> <li>Identify common causes of ascites.</li> <li>Explain the pathophysiological mechanisms involved in ascites formation.</li> <li>Enlist investigations with interpretation.</li> <li>Plan the management.</li> </ul>
M2-035	Hepatic Encephalopathy	<ul style="list-style-type: none"> <li>Explain the pathophysiology of hepatic encephalopathy.</li> <li>Identify clinical features and grading of encephalopathy.</li> <li>Enlist the precipitating factors.</li> <li>Discuss the principles of management and prevention.</li> </ul>
M2-036	Hepatocellular Carcinoma	<ul style="list-style-type: none"> <li>Identify risk factors for hepatocellular carcinoma.</li> <li>Describe clinical features suggestive of HCC.</li> <li>Enlist and interpret screening and diagnostic investigations.</li> <li>Outline management options with prognosis.</li> </ul>
M2-037	Pancreatitis (Acute & Chronic)	<ul style="list-style-type: none"> <li>Identify etiological factors of pancreatitis.</li> <li>Explain the underlying pathophysiology.</li> <li>Describe characteristic clinical features and complications.</li> </ul>

		<ul style="list-style-type: none"> <li>• Interpret relevant laboratory and imaging investigations.</li> <li>• Outline management plan.</li> </ul>
M2-038	Obstructive and cholestatic jaundice	<ul style="list-style-type: none"> <li>• Identify risk factors.</li> <li>• Outline differential diagnosis of obstructive jaundice.</li> <li>• Describe signs and symptoms.</li> <li>• Enlist appropriate diagnostic investigations.</li> </ul>
M2-039	Metabolic Dysfunction–Associated Steatotic Liver Disease (MASLD)	<ul style="list-style-type: none"> <li>• Explain the pathophysiological basis and clinical features of MASLD .</li> <li>• Interpret investigations used for diagnosis and staging.</li> <li>• Plan the management.</li> </ul>
M2-040	Alcoholic Liver Disease	<ul style="list-style-type: none"> <li>• Describe the spectrum of alcoholic liver disease.</li> <li>• Identify clinical features.</li> <li>• Interpret relevant investigations.</li> <li>• Outline principles of management.</li> </ul>
M2-041	Autoimmune Hepatitis	<ul style="list-style-type: none"> <li>• Identify clinical features of autoimmune hepatitis.</li> <li>• Enlist diagnostic investigations with interpretation.</li> <li>• Outline principles of management.</li> </ul>
M2-042	Wilson's Disease	<ul style="list-style-type: none"> <li>• Describe the pathophysiology.</li> <li>• Describe clinical presentation.</li> <li>• Outline diagnostic tests with interpretation.</li> <li>• Plan management strategies.</li> </ul>
M2-043	Hemochromatosis	<ul style="list-style-type: none"> <li>• Explain the mechanism of iron overload.</li> <li>• Describe clinical presentation.</li> <li>• Interpret diagnostic investigations.</li> <li>• Outline management principles.</li> </ul>
M2-044	Alpha-1 Antitrypsin Deficiency	<ul style="list-style-type: none"> <li>• Explain the genetic basis of the disease.</li> <li>• Describe clinical presentation.</li> <li>• Describe diagnostic investigations with management plan.</li> </ul>
M2-045	Congenital	<ul style="list-style-type: none"> <li>• Explain the pathophysiology.</li> </ul>

	hyperbilirubinemia	<ul style="list-style-type: none"> <li>Describe characteristic clinical presentation.</li> <li>Interpret laboratory findings.</li> <li>Outline plan of patient management.</li> </ul>
M2-046	Liver Disease in Pregnancy	<ul style="list-style-type: none"> <li>Identify liver disorders specific to pregnancy.</li> <li>Describe clinical features requiring urgent evaluation.</li> <li>Enlist and interpret appropriate investigations.</li> <li>Outline management plan.</li> </ul>
M2-047	Parasitic Infections of the Liver	<ul style="list-style-type: none"> <li>Identify common parasitic liver diseases.</li> <li>Liver abscess</li> <li>Describe clinical presentation.</li> <li>Select relevant diagnostic investigations.</li> <li>Outline principles of treatment.</li> </ul>

### **Clinical Skills (Psychomotor + Affective)**

<b>Code</b>	<b>Topic</b>	<b>Clinical Methods/Skills</b>
M2-048	History taking	<b>Take</b> a focused hepatobiliary history, including jaundice, abdominal pain, pruritus, nausea, vomiting, dyspepsia, weight loss, bleeding tendencies, risk factors, chronic liver disease symptoms, and red-flag features.
M2-049	Clinical examination	<p><b>Perform</b> abdominal examination including inspection, palpation, percussion, auscultation and document the findings.</p> <p><b>Interpret</b> relevant tests including LFTs, INR/PT, viral markers, ceruloplasmin, serum ferritin, ultrasound abdomen, Doppler, CT/MRI, MRCP, and liver biopsy where indicated.</p> <p><b>Communicate</b> disease nature, treatment plan, lifestyle advice, and follow-up requirements to patients and caregivers.</p>

### **INFECTIOUS DISEASES**

#### **Theory**

<b>Code</b>	<b>Topic</b>	<b>Specific Learning Objective</b>
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M2-050	Approach to a Patient with Fever	<ul style="list-style-type: none"> <li>Define fever and describe its common patterns.</li> <li>Explain the pathophysiology of fever.</li> <li>Differentiate between acute, subacute, and chronic fever.</li> <li>Describe the concept and causes of pyrexia of unknown origin (PUO).</li> <li>Identify common infectious and non-infectious causes of fever.</li> <li>Outline diagnostic approach and management of a patient with fever.</li> </ul>
M2-051	Malaria	<ul style="list-style-type: none"> <li>Describe the epidemiology and modes of transmission of malaria.</li> <li>Differentiate between uncomplicated and severe malaria.</li> <li>Describe diagnostic methods for malaria.</li> <li>Outline principles of treatment and prevention of malaria.</li> <li>Identify complications of malaria.</li> </ul>
M2-052	Dengue Fever	<ul style="list-style-type: none"> <li>Describe the epidemiology and transmission of dengue fever.</li> <li>Differentiate between dengue fever, dengue hemorrhagic fever, and dengue shock syndrome.</li> <li>Identify warning signs and complications of dengue.</li> <li>Outline principles of management of dengue fever.</li> </ul>
M2-053	Enteric Fever (Typhoid Fever)	<ul style="list-style-type: none"> <li>Describe the etiology and transmission of enteric fever.</li> <li>Describe the clinical features and stages of enteric fever.</li> <li>Outline the diagnostic approach to enteric fever and principles of antibiotic therapy in enteric fever.</li> <li>Identify complications and preventive strategies.</li> </ul>
M2-054	Amebiasis	<ul style="list-style-type: none"> <li>Describe the etiology.</li> <li>Differentiate between intestinal and extra-intestinal</li> </ul>

		<p>manifestations.</p> <ul style="list-style-type: none"> <li>• Explain the pathogenesis and complications of amebiasis.</li> <li>• Describe diagnostic modalities and treatment of amebiasis.</li> </ul>
M2-055	Covid-19	<ul style="list-style-type: none"> <li>• Describe the modes of transmission of COVID-19.</li> <li>• Explain the pathophysiology and clinical spectrum of COVID-19.</li> <li>• Outline diagnostic investigations and management.</li> <li>• Describe infection prevention and control measures.</li> </ul>
M2-056	HIV / AIDS	<ul style="list-style-type: none"> <li>• Describe modes of transmission.</li> <li>• Identify common opportunistic infections associated with HIV.</li> <li>• Describe diagnostic tests for HIV infection.</li> <li>• Outline principles of antiretroviral therapy.</li> </ul>
M2-057	Rabies	<ul style="list-style-type: none"> <li>• Describe the modes of transmission of rabies.</li> <li>• Describe the clinical stages of rabies.</li> <li>• Outline principles of post-exposure prophylaxis and preventive strategies for rabies.</li> </ul>
M2-058	Tetanus	<ul style="list-style-type: none"> <li>• Describe the clinical presentation of tetanus.</li> <li>• Enlist and interpret laboratory and diagnostic investigations.</li> <li>• Outline the treatment plan.</li> <li>• Enlist potential complications.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M2-059	History taking	<b>Take</b> history in patients with suspected infectious diseases (fever, malaria, dengue fever, enteric fever, amebiasis, COVID-19, HIV/AIDS, rabies).
M2-060	Clinical Examination and Investigations	<b>Perform</b> a thorough general physical examination and system-focused examination relevant to infectious diseases,

	Counseling	<p>including assessment of vital signs, hydration status, respiratory distress, abdominal findings, neurological status, and identification of red-flag signs (severe malaria, dengue warning signs, septic features).</p> <p><b>Interpret</b> relevant laboratory and diagnostic investigations such as complete blood count, peripheral smear and rapid tests for malaria, platelet trends, liver function tests, blood cultures, stool examination, oxygen saturation, imaging, and HIV diagnostic tests, and monitor disease severity and response to treatment.</p> <p><b>Counsel</b> patients and attendants empathetically and professionally on the following points:</p> <ul style="list-style-type: none"> <li>• nature and expected course of infectious diseases in simple language.</li> <li>• importance of treatment adherence, completion of prescribed therapy, and potential adverse effects.</li> <li>• preventive measures including hygiene, sanitation, vector control, vaccination, and infection control practices.</li> <li>• indications for urgent review, follow-up planning, and referral when required.</li> </ul>
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## HEMATOLOGIC DISORDERS

### Theory

Code	Topic	Specific Learning Objective
M2-061	Iron Deficiency Anemia	<ul style="list-style-type: none"> <li>• Describe the etiology and risk factors of iron deficiency anemia</li> <li>• Identify the clinical features.</li> <li>• Outline the diagnostic criteria and principles of treatment including prevention of iron deficiency anemia.</li> </ul>

M2-062	Megaloblastic Anemia	<ul style="list-style-type: none"> <li>Enlist the causes of megaloblastic anemia.</li> <li>Identify the clinical features of megaloblastic anemia.</li> <li>Outline the diagnostic approach to megaloblastic anemia</li> <li>Describe principles of management of megaloblastic anemia</li> </ul>
M2-063	Hemolytic Anemia	<ul style="list-style-type: none"> <li>Classify hemolytic anemias</li> <li>Explain the pathophysiology of hemolytic anemia.</li> <li>Identify the clinical features.</li> <li>Outline diagnostic investigations and principles of management of hemolytic anemia.</li> </ul>
M2-064	Aplastic Anemia	<ul style="list-style-type: none"> <li>Describe the etiology and pathogenesis of aplastic anemia</li> <li>Identify the clinical features and diagnostic criteria for aplastic anemia.</li> <li>Outline management plan of aplastic anemia.</li> </ul>
M2-065	Leukemias	<ul style="list-style-type: none"> <li>Classify leukemias</li> <li>Identify the clinical features.</li> <li>Outline the diagnostic approach to leukemias</li> <li>Discuss principles of management of leukemias.</li> </ul>
M2-066	Hodgkin Lymphoma	<ul style="list-style-type: none"> <li>Identify the clinical features of Hodgkin lymphoma.</li> <li>Describe staging of Hodgkin lymphoma.</li> <li>Outline the diagnostic approach to Hodgkin lymphoma.</li> <li>Describe principles of management of Hodgkin lymphoma.</li> </ul>
M2-067	Non-Hodgkin Lymphoma	<ul style="list-style-type: none"> <li>Identify the clinical features of non-Hodgkin lymphoma.</li> <li>Outline the diagnostic evaluation of non-Hodgkin lymphoma.</li> <li>Describe principles of management of non-Hodgkin</li> </ul>

		lymphoma.
M2-068	Bleeding Disorders	<ul style="list-style-type: none"> <li>• Classify bleeding disorders</li> <li>• Identify the clinical features.</li> <li>• Outline the diagnostic approach to bleeding disorders.</li> <li>• Describe principles of management of bleeding disorders.</li> </ul>
M2-069	Platelet Disorders	<ul style="list-style-type: none"> <li>• Describe causes of thrombocytopenia</li> <li>• Explain the pathophysiology of platelet disorders</li> <li>• Identify clinical manifestations of platelet disorders.</li> <li>• Outline the diagnostic approach and management of platelet disorders.</li> </ul>
M2-070	Plasma Cell Disorders	<ul style="list-style-type: none"> <li>• Classify plasma cell disorders.</li> <li>• Identify the clinical features of plasma cell disorders</li> <li>• Outline diagnostic criteria and management plan of plasma cell disorders.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M2-071	History taking	<p><b>Take</b> history of patients with suspected hematological disorders (iron deficiency anemia, megaloblastic anemia, hemolytic anemia, aplastic anemia, leukemias, Hodgkin lymphoma, non-Hodgkin lymphoma, bleeding disorders, platelet disorders, plasma cell disorders).</p>
M2-072	Clinical examination and Investigations Counselling	<p><b>Perform</b> general physical and system-focused examination, including assessment of pallor, jaundice, lymphadenopathy, hepatosplenomegaly, bone tenderness, petechiae, purpura, and signs of infection or bleeding.</p> <p><b>Interpret</b> hematological investigations such as complete blood count, peripheral blood smear, reticulocyte count, iron studies, vitamin B12 and folate levels, hemolysis profile,</p>

		<p>coagulation tests, bone marrow examination, and relevant imaging, to assess disease severity and guide management.</p> <p><b>Counsel</b> patients empathetically and professionally on the following points:</p> <ul style="list-style-type: none"> <li>• nature, chronicity, and prognosis of hematological disorders in simple, lay language.</li> <li>• importance of medication adherence, transfusion safety, and monitoring for treatment-related adverse effects.</li> <li>• dietary advice, infection prevention, bleeding precautions, and lifestyle modifications where relevant.</li> <li>• need for regular follow-up, laboratory monitoring, and timely referral to hematology services when indicated.</li> </ul>
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## POISONING

### Theory

Code	Topic	Specific Learning Objective
M2-073	General Principles of Poisoning Management	<ul style="list-style-type: none"> <li>• Define poisoning and classify its common types.</li> <li>• Describe routes of exposure and mechanisms of toxicity</li> <li>• Outline a clinical approach to a poisoned patient.</li> <li>• Explain risk assessment and triage in poisoning.</li> <li>• Describe decontamination methods and their indications.</li> <li>• Explain the role and limitations of antidotes.</li> <li>• Describe principles of supportive and symptomatic management</li> <li>• Outline medico-legal aspects related to poisoning.</li> </ul>
M2-074	Wheat Pills (Aluminum	<ul style="list-style-type: none"> <li>• Describe the sources of aluminum phosphide</li> <li>• Explain the mechanism of toxicity.</li> </ul>

	Phosphide) Poisoning	<ul style="list-style-type: none"> <li>Identify clinical features and progression.</li> <li>Outline diagnostic considerations and principles of management.</li> <li>Describe prognosis and preventive strategies.</li> </ul>
M2-075	Organophosphate Poisoning	<ul style="list-style-type: none"> <li>Explain the mechanism of action and cholinergic toxidrome.</li> <li>Identify clinical features and complications.</li> <li>Outline diagnostic criteria and principles of antidotal therapy.</li> <li>Describe preventive measures for organophosphate exposure.</li> </ul>
M2-076	Opioid Poisoning	<ul style="list-style-type: none"> <li>Identify routes of exposure.</li> <li>Explain the mechanism of toxicity of opioids.</li> <li>Identify clinical features and complications of opioid poisoning</li> <li>Outline the diagnostic approach and principles of management and use of reversal agents.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
M2-077	History taking	<b>Take</b> history in patients with suspected poisoning (general poisoning, aluminum phosphide, organophosphate, opioid poisoning).

M2-078	Clinical examination Counselling	<p><b>Perform</b> a rapid survey and physical examination, including assessment of airway, breathing, circulation, level of consciousness, pupil size, secretions, vital signs, and identification of characteristic toxicodromes.</p> <p><b>Interpret</b> relevant investigations such as arterial blood gases, serum electrolytes, ECG, cholinesterase levels, toxicology screens, and other baseline tests to assess severity, guide antidotal therapy, and monitor response to treatment.</p> <p><b>Counsel</b> patients and attendants empathetically and professionally.</p>
M2-079	Medico legal aspect of poisoning ( <i>integrate with Forensic Medicine</i> )	<p><b>Identify</b> routes of poison administration.</p> <p><b>Examine</b> teeth for the effects of poisoning.</p> <p><b>Examine</b> body orifices for sample collection for traces of poison.</p> <p><b>Apply</b> law relevant to poisoning.</p>

07

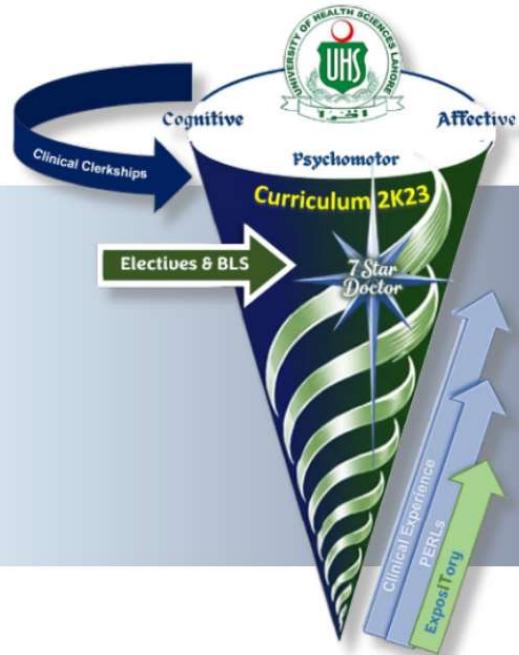
Section



## Modular Integrated Curriculum 2K23

Final Version

# PEDIATRICS CLERKSHIP



**YEAR-05**

**Curriculum 2k23**  
**Final Year MBBS Clerkship**  
**PAEDIATRICS CLERKSHIP**

**Learning Outcomes:**

By the end of the pediatric clerkship, a student will be able to:

- Identify common pediatric illnesses and formulate the differential diagnoses.
- Obtain a comprehensive history from children and their caregivers.
- Perform a focused and systematic physical examination in infants, children, and adolescents.
- Develop and outline evidence-based management plans for common pediatric conditions.
- Communicate effectively and empathetically with patients and their families.
- Demonstrate professionalism, ethical conduct, and effective teamwork in pediatric healthcare settings.

## FUNDAMENTALS OF PEDIATRICS

### Theory

Code	Topics	Specific Learning Objectives
Pe-001	Growth	<ul style="list-style-type: none"> <li>• List key anthropometric measurements used to assess growth.</li> <li>• Interpret growth charts and percentiles.</li> <li>• Identify red flags of abnormal growth.</li> <li>• Discuss common factors influencing growth.</li> <li>• Discuss Tanner staging of female and male puberty</li> </ul>
Pe-002	Development	<ul style="list-style-type: none"> <li>• Describe major developmental milestones in gross motor, fine motor, vision, hearing and speech, and social behavior from neonate, 3, 6, 9, 12, 18 months, and 2–5 years.</li> <li>• Identify delays or abnormalities in development.</li> <li>• Describe key factors affecting development.</li> <li>• Discuss counseling points for caregivers on activities that promote age-appropriate cognitive, motor, language, and social development.</li> </ul>
Pe-003	Immunization	<ul style="list-style-type: none"> <li>• Differentiate between active and passive immunity.</li> <li>• Explain the concept of herd immunity and its importance in preventing disease outbreaks.</li> <li>• Enlist vaccines available for children other than EPI schedule.</li> <li>• Describe the major types of vaccines live attenuated, killed/inactivated, toxoid, and conjugated and give common examples of each.</li> <li>• Describe the EPI schedule, including vaccines given at birth and at each age-specific visit.</li> <li>• Explain the purpose, target diseases, and key components of the EPI.</li> <li>• Identify indications, contraindications, Adverse effect</li> </ul>

		<p>and precautions for EPI vaccines.</p> <ul style="list-style-type: none"> <li>• Demonstrate correct storage, handling, and administration of EPI vaccines.</li> <li>• Explain counselling points of caregivers on the importance of completing the EPI schedule, vaccine safety, and management of minor post-vaccination reactions.</li> </ul>
<b>NUTRITION AND NUTRITIONAL DISORDERS</b>		
Pe-004	Breastfeeding and weaning	<ul style="list-style-type: none"> <li>• Describe the benefits of breastfeeding mother.</li> <li>• Identify indications, contraindications, and techniques for effective breastfeeding.</li> <li>• Discuss factors causing lactation failure</li> <li>• Explain appropriate timing, methods, and types of complementary feeding (weaning).</li> <li>• List age-appropriate weaning foods and feeding practices.</li> <li>• Discuss nutritional requirements during weaning and growth monitoring.</li> <li>• Outline counseling points for caregivers on breastfeeding, weaning, and hygiene.</li> <li>• Explain potential complications of improper breastfeeding or weaning and strategies for prevention</li> </ul>
Pe-005	Integrated management of Childhood and Neonatal Illness (IMNCI)	<ul style="list-style-type: none"> <li>• Define IMNCI</li> <li>• Discuss importance and key components of IMNCI</li> <li>• Discuss IMNCI protocol under 2 months age regarding very severe disease, Jaundice, Diarrhea, HIV infection, Feeding problems and Low birth weight</li> <li>• Discuss IMNCI protocol in 2 months age to five-year age regarding Pneumonia, Diarrhea, Fever, Ear problems, acute malnutrition, anemia and HIV infection</li> </ul>

Pe-006	Obesity	<ul style="list-style-type: none"> <li>Define and classify obesity.</li> <li>Identify clinical features and complication.</li> <li>Enlist the investigations.</li> <li>Calculate BMI and describe its role.</li> <li>Outline management plan (Dietary, pharmacological, prevention).</li> </ul>
Pe-007	Rickets	<ul style="list-style-type: none"> <li>Define and classify rickets.</li> <li>Describe the etiology and pathogenesis of rickets.</li> <li>List key clinical features and skeletal deformities.</li> <li>Identify relevant laboratory and radiological investigations.</li> <li>Formulate a differential diagnosis for bone deformities and growth disturbances.</li> <li>Outline management principles, including vitamin D and calcium supplementation and dietary.</li> <li>Explain potential complications, prognosis, and preventive strategies.</li> </ul>
Pe-008	Marasmus/Severe wasting	<ul style="list-style-type: none"> <li>Define marasmus and distinguish it from other forms of malnutrition.</li> <li>Identify key clinical features such as severe wasting and muscle loss.</li> <li>Select appropriate anthropometric and laboratory investigations.</li> <li>Outline management strategies, including nutritional rehabilitation and supportive care.</li> <li>Explain potential complications, prognosis, and follow-up care.</li> </ul>
Pe-009	Kwashiorkor/Edematous malnutrition	<ul style="list-style-type: none"> <li>Define kwashiorkor and distinguish it from marasmus.</li> <li>Identify key clinical features such as edema, hepatomegaly, and skin changes.</li> <li>Select relevant laboratory investigations.</li> <li>Outline management strategies, including therapeutic</li> </ul>

		<p>feeding, micronutrient supplementation, and monitoring.</p> <ul style="list-style-type: none"> <li>• Explain potential complications, prognosis, and follow-up care</li> </ul>
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## Clinical Skills

Code	Topic	Clinical Methods/Skills
Pe-010	History taking	<ul style="list-style-type: none"> <li>• Take a detailed pediatric history covering following points:</li> <li>• presenting illness (time of onset, site, duration, frequency, severity, progression, relieving and exacerbating factors, and any diurnal or seasonal variation).</li> <li>• general symptoms (weight loss, appetite changes, fever, and activity level).</li> <li>• systemic review covering cardiovascular, respiratory, gastrointestinal, central nervous system, genitourinary, hematological, dermatological, and locomotor symptoms.</li> <li>• relevant past medical history, including previous illnesses, hospitalizations, surgeries, allergies, and transfusions.</li> <li>• complete birth history, including antenatal, natal, and postnatal events.</li> <li>• feeding history, including breastfeeding, weaning, and current dietary practices.</li> <li>• vaccination status according to the national EPI schedule.</li> <li>• developmental history across major domains (gross motor, fine motor, language, social).</li> <li>• schooling history, including performance, attendance, and behavioral concerns.</li> <li>• family and social history, including chronic illnesses,</li> </ul>

		<p>consanguinity, living environment, and caregiver details.</p> <ul style="list-style-type: none"> <li>• drug history (current medications, supplements, and any previous reactions).</li> </ul>
Pe-011	Physical examination	<p><b>Perform</b></p> <ul style="list-style-type: none"> <li>• general physical examination in children, assessing appearance, consciousness, hydration, nutrition, vitals, and growth parameters (weight, height/length, head and mid-arm circumference), SMR, BCG Scar mark</li> <li>• systematic head-to-toe examination, including:</li> <li>• Head, eyes, ears, nose, throat (HEENT)</li> <li>• Cardiovascular system (inspection, palpation, auscultation)</li> <li>• Respiratory system (inspection, palpation, percussion, auscultation)</li> <li>• Abdomen (inspection, palpation, percussion, auscultation)</li> <li>• Central nervous system (higher mental function, motor and sensory system, cerebellum, cranial nerves,</li> <li>• Musculoskeletal system</li> <li>• Skin (rashes, lesions, hydration, capillary refill)</li> <li>• Interpret growth measurements using age-appropriate growth charts.</li> <li>• Identify abnormal findings and red flags requiring urgent evaluation.</li> <li>• Perform the examination in a child-friendly, developmentally appropriate, and safe manner while maintaining infection control.</li> </ul>

## NEUROLOGIC DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-012	Pyogenic meningitis	<ul style="list-style-type: none"> <li>• Describe the etiology of pyogenic meningitis in different</li> </ul>

		<p>pediatric age groups.</p> <ul style="list-style-type: none"> <li>• Explain the pathogenesis, including routes of infection and inflammatory changes in the meninges.</li> <li>• Identify key clinical features in infants, children, and adolescents, including age-specific red flags and differential diagnosis.</li> <li>• Outline the essential investigations, including CSF analysis, indications and contraindications of lumbar puncture, blood tests, cultures, and neuroimaging indications.</li> <li>• Discuss the management, including antibiotic therapy, supportive care, and monitoring along with prevention strategies.</li> <li>• List the potential complications.</li> <li>• Describe factors influencing prognosis in pediatric meningitis.</li> </ul>
Pe-013	Tuberculous meningitis	<ul style="list-style-type: none"> <li>• Describe the pathogenesis of tuberculous meningitis.</li> <li>• Identify key clinical features and early warning signs, and outline the three clinical stages of disease progression.</li> <li>• Discuss the diagnostic approach, including characteristic findings and criteria supporting the diagnosis.</li> <li>• List essential investigations with interpretation.</li> <li>• Outline the management plan.</li> <li>• List major complications</li> <li>• Describe prognostic factors.</li> </ul>
Pe-014	Encephalitis	<ul style="list-style-type: none"> <li>• Describe the etiology of encephalitis</li> <li>• Explain the pathogenesis with neurological consequences.</li> <li>• Diagnose based on signs and symptoms and interpretation of lab investigations.</li> </ul>

		<ul style="list-style-type: none"> <li>• Discuss the management</li> <li>• List major complications and prognosis.</li> </ul>
Pe-015	Cerebral malaria	<ul style="list-style-type: none"> <li>• Describe the etiology and pathogenesis of cerebral malaria.</li> <li>• Diagnose based on key clinical features.</li> <li>• Outline the important diagnostic tests.</li> <li>• Identify the diagnostic criteria for cerebral malaria diagnosis.</li> <li>• Outline the management plan.</li> <li>• Identify major complications and factors affecting prognosis.</li> <li>• Explain preventive strategies.</li> </ul>
Pe-016	Febrile seizures	<ul style="list-style-type: none"> <li>• Define and classify febrile seizures.</li> <li>• Describe the diagnostic criteria and exclusion conditions for febrile seizures.</li> <li>• Explain the etiology and common triggers in children.</li> <li>• Identify key signs and symptoms.</li> <li>• Outline the necessary investigations, including when evaluation is required.</li> <li>• Discuss the treatment approach, including immediate seizure control and supportive care.</li> <li>• Explain risk factors for recurrence, long-term outlook, and overall prognosis for affected children.</li> </ul>
Pe-017	Epilepsy	<ul style="list-style-type: none"> <li>• List the etiology and major risk factors associated with epilepsy in children.</li> <li>• Classify seizures.</li> <li>• Differentiate between generalized seizures, grand mal (tonic-clonic), petit mal (absence), myoclonic, and partial (focal) seizures using a clear tabulated comparison.</li> <li>• Outline the clinical features and diagnostic approach for seizure.</li> </ul>

		<ul style="list-style-type: none"> <li>Discuss the management of epilepsy, including acute seizure control, long-term therapy, and monitoring.</li> <li>List the commonly used antiepileptic drugs, their indications, and side-effects.</li> </ul>
Pe-018	Status epilepticus	<ul style="list-style-type: none"> <li>Classify the types of status epilepticus.</li> <li>List the etiology and common precipitating factors in children.</li> <li>Discuss the pathophysiology, including mechanisms leading to prolonged seizures and neuronal injury.</li> <li>Outline the emergency management, including airway–breathing–circulation stabilization and stepwise pharmacologic treatment.</li> <li>Describe post-ictal management.</li> <li>List factors influencing the prognosis of pediatric status epilepticus.</li> </ul>
Pe-019	Cerebral palsy	<ul style="list-style-type: none"> <li>Define cerebral palsy</li> <li>Describe the etiology and pathogenesis of cerebral palsy, including prenatal, perinatal, and postnatal causes.</li> <li>Classify the types of cerebral palsy and patterns of motor involvement.</li> <li>Identify key signs and symptoms.</li> <li>Formulate a differential diagnosis, distinguishing cerebral palsy from progressive neuromuscular disorders, metabolic or genetic conditions.</li> <li>Outline the management plan.</li> <li>Explain the prevention strategies.</li> <li>Describe factors affecting prognosis.</li> </ul>
Pe-020	Hydrocephalus	<ul style="list-style-type: none"> <li>Describe the etiology and pathogenesis of hydrocephalus.</li> <li>Classify the types of hydrocephalus.</li> <li>Identify the clinical features.</li> </ul>

		<ul style="list-style-type: none"> <li>Formulate a differential diagnosis.</li> <li>Outline the diagnostic evaluation.</li> <li>Explain the management, including medical therapy, surgical interventions, and follow-up.</li> <li>Recognize potential complications and factors affecting long-term prognosis.</li> </ul>
Pe-021	Brain abscess	<ul style="list-style-type: none"> <li>Describe the etiology and pathogenesis of brain abscess, including routes of infection.</li> <li>Diagnose based on the clinical features and diagnostic evaluation.</li> <li>Formulate a differential diagnosis.</li> <li>Discuss the management, including antibiotic therapy, surgical drainage, and supportive care.</li> <li>List potential complications and factors influencing prognosis.</li> </ul>
Pe-022	Microcephaly	<ul style="list-style-type: none"> <li>Describe the etiology, and pathogenesis of microcephaly.</li> <li>Identify clinical features.</li> <li>Formulate a differential diagnosis.</li> <li>Outline the diagnostic evaluation.</li> <li>Discuss the management plan and factors affecting prognosis.</li> </ul>
Pe-023	Coma in children	<ul style="list-style-type: none"> <li>Identify the common causes of coma in children.</li> <li>Discuss the points of clinical evaluation.</li> <li>List the laboratory and radiological investigations to determine the underlying cause.</li> <li>Outline the management, including stabilization, treatment of underlying cause, and supportive care.</li> <li>Describe the factors affecting prognosis.</li> </ul>
Pe-024	Cerebellar ataxia	<ul style="list-style-type: none"> <li>Describe the etiology and pathogenesis of ataxia in children, distinguishing between cerebellar and non-cerebellar causes.</li> </ul>

		<ul style="list-style-type: none"> <li>Identify the clinical features of cerebellar ataxia.</li> <li>Formulate a differential diagnosis.</li> <li>Outline the diagnostic evaluation and outline the management plan.</li> <li>Describe factors affecting prognosis.</li> </ul>
<b>Clinical Skills</b>		
Code	Topic	Clinical Methods/Skills
Pe-025	History Taking	<ul style="list-style-type: none"> <li>Take a routine pediatric history focusing on CNS-specific points such as fits/seizures, syncope, dizziness, headaches, visual problems, numbness, unpleasant sensations, weakness, frequent falls, and incontinence.</li> </ul>
Pe-026	CNS clinical examination	<ul style="list-style-type: none"> <li>Examine and assess shape of skull, head circumference.</li> <li>speech and higher mental functions in children.</li> <li>all cranial nerves, identifying abnormalities.</li> <li>motor system, including bulk tone, power, reflexes, and involuntary movements.</li> <li>sensory system, including pain, temperature, touch, vibration, and proprioception.</li> <li>cerebellar function, including coordination, gait, and balance.</li> <li>signs of meningeal irritation, including neck stiffness, Kernig and Brudzinski signs.</li> <li>Identify and grade coma.</li> <li>Interpret the reports of baseline labs, CSF analysis, cranial CT, and MRI.</li> <li>Counsel patients/attendants with empathy and respect.</li> <li>Maintain confidentiality and privacy of the patients</li> <li>Observe/assist in managing the outdoor, indoor, and emergency cases of neurologic disorders and document in logbook.</li> </ul>

NEUROMUSCULAR DISORDERS		
Theory		
Code	Topics	Specific Learning Objectives
Pe-027	Duchenne muscular dystrophy	<ul style="list-style-type: none"> <li>Describe the pathogenesis of Duchenne muscular dystrophy.</li> <li>Identify important signs and symptoms.</li> <li>Outline diagnostic tests and their interpretation.</li> <li>Discuss management strategies.</li> </ul>
Pe-028	Myasthenia gravis	<ul style="list-style-type: none"> <li>Describe the pathophysiology of myasthenia gravis.</li> <li>Identify key signs and symptoms.</li> <li>Outline the diagnostic approach and the management plan.</li> <li>Explain factors affecting prognosis and long-term outcomes in pediatric patients.</li> </ul>
Pe-029	Floppy infants	<ul style="list-style-type: none"> <li>Describe the causes of hypotonia in infants, differentiating paralytic and non-paralytic types.</li> <li>Identify key signs and symptoms.</li> <li>Outline the diagnostic evaluation.</li> </ul>
Pe-030	Guillain - Barré Syndrome	<ul style="list-style-type: none"> <li>Describe the etiology and pathophysiology of GBS.</li> <li>Describe the clinical features and its stages.</li> <li>List and differentiate the major variants of GBS</li> <li>Formulate a differential diagnosis according to Acute Flaccid Paralysis.</li> <li>Outline diagnostic evaluation.</li> <li>Discuss management and factors affecting prognosis.</li> </ul>
Clinical Skills		
Code	Topic	Clinical Methods/Skills
Pe-031	Neuromuscular examination	<ul style="list-style-type: none"> <li><b>Perform</b> a systematic neuromuscular examination in children, assessing muscle tone, strength, bulk, and reflexes.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Identify</b> abnormal motor patterns, including hypotonia, hypertonia, weakness, fasciculations, and contractures.</li> <li>• <b>Identify</b> specific clinical signs, such as Gower sign in Duchenne muscular dystrophy or fatigability in myasthenia gravis.</li> <li>• <b>Assess</b> functional abilities, including gait, posture, fine motor skills, and coordination.</li> <li>• <b>Document</b> findings accurately to guide diagnosis, monitoring, and management of neuromuscular disorders.</li> <li>• <b>Counsel</b> patients/attendants with empathy and respect.</li> <li>• <b>Maintain</b> confidentiality and privacy of the patients</li> <li>• <b>Observe/assist</b> in managing the outdoor, indoor, and emergency cases of neuromuscular disorders and document in logbook.</li> </ul>
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## CARDIOVASCULAR DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-032	Cyanotic heart disease	<p>Classify cyanotic congenital heart diseases based on anatomical features.</p> <p><b>Tetralogy of Fallot (TOF)</b></p> <ul style="list-style-type: none"> <li>• Describe the components and pathophysiology.</li> <li>• Identify clinical features and outline the diagnostic evaluation.</li> <li>• Discuss management, including surgical repair, medical stabilization, and management of hypoxic (tet) spells.</li> <li>• List potential complications and describe the natural course and prognosis.</li> </ul> <p><b>Transposition of Great Arteries (TGA)</b></p> <ul style="list-style-type: none"> <li>• Explain the pathophysiology, including parallel</li> </ul>

		<p>circulation and dependence on shunts.</p> <ul style="list-style-type: none"> <li>• Describe signs and symptoms.</li> <li>• Outline the diagnostic evaluation and management plan.</li> <li>• Describe factors affecting prognosis and long-term outcomes.</li> </ul>
Pe-033	Acyanotic congenital heart disease	<p><b>Ventricular Septal Defect (VSD)</b></p> <ul style="list-style-type: none"> <li>• Describe the pathophysiology and hemodynamic consequences based on the size of the defect.</li> <li>• Identify clinical features according to defect size.</li> <li>• Outline the diagnostic evaluation.</li> <li>• List surgical indications.</li> </ul> <p><b>Patent Ductus Arteriosus (PDA)</b></p> <ul style="list-style-type: none"> <li>• Describe the pathophysiology and its impact on circulation.</li> <li>• Identify clinical features.</li> <li>• Outline diagnostic evaluation and management plan.</li> <li>• List potential complications and describe the prognosis.</li> </ul> <p><b>Atrial Septal Defect (ASD)</b></p> <ul style="list-style-type: none"> <li>• Classify types of ASD.</li> <li>• Explain pathophysiology and associated hemodynamic changes.</li> <li>• Identify clinical features and relevant diagnostic evaluation.</li> <li>• Discuss management, including indications for surgical or device closure and long-term outcomes.</li> </ul>
Pe-034	Congestive cardiac failure (CCF)	<ul style="list-style-type: none"> <li>• Diagnose CCF based on the clinical signs and symptoms in children.</li> <li>• Formulate the differential diagnosis of CCF.</li> <li>• List common causes of CCF in the pediatric age group.</li> <li>• Outline the diagnostic approach and necessary investigations for suspected CCF.</li> </ul>

		<ul style="list-style-type: none"> <li>• Plan medical and supportive management of CCF in children.</li> <li>• Identify the complications and indicators of poor prognosis in pediatric CCF.</li> <li>• Explain the preventive strategies and long-term follow-up care for children with CCF.</li> </ul>
Pe-035	Rheumatic fever (RF)	<ul style="list-style-type: none"> <li>• Identify the clinical features and major manifestations of rheumatic fever in children.</li> <li>• Explain the pathophysiology and immunological basis of rheumatic fever.</li> <li>• Apply the modified Jones criteria for the diagnosis of rheumatic fever.</li> <li>• Identify common complications of RF.</li> <li>• Outline the management plan, including secondary prophylaxis.</li> <li>• Discuss preventive strategies to reduce the incidence of RF in pediatric populations.</li> </ul>
Pe-036	Infective endocarditis (IE)	<ul style="list-style-type: none"> <li>• Diagnose infective endocarditis in children based on the clinical features and common presentations.</li> <li>• Explain the pathophysiology and risk factors predisposing to infective endocarditis.</li> <li>• Apply Modified Duke Criteria to identify suspected cases.</li> <li>• Outline the investigations for diagnosis, including blood cultures and echocardiography.</li> <li>• Plan the medical and surgical management of patient diagnosed with IE.</li> <li>• Discuss potential complications and strategies for prevention in at-risk pediatric patients.</li> </ul>
Pe-037	Myocarditis	<ul style="list-style-type: none"> <li>• Identify clinical features of myocarditis in children.</li> <li>• List its common causes.</li> <li>• Interpret relevant investigations for myocarditis.</li> </ul>

		<ul style="list-style-type: none"> <li>• Formulate a management plan.</li> <li>• Describe the complications and long-term follow-up considerations.</li> </ul>
Pe-038	Supraventricular Tachycardia	<ul style="list-style-type: none"> <li>• Identify clinical features and presentations of pediatric supraventricular tachycardia.</li> <li>• List the causes and explain its pathophysiology.</li> <li>• Outline diagnostic approach, including investigations, ECG interpretation, and recent advances.</li> <li>• Describe pacemaker use and formulate management plan.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
Pe-039	CVS clinical examination	<p><b>Perform</b> a cardiovascular examination in children, including:</p> <ul style="list-style-type: none"> <li>• Inspection: cyanosis, clubbing, chest wall deformities, visible pulsations, precordial bulge, and signs of heart failure.</li> <li>• Palpation: apex beat location and character, thrills, heaves, peripheral pulses, pulse volume, and symmetry.</li> <li>• Percussion: cardiac size and borders when applicable.</li> <li>• Auscultation: heart sounds (S1, S2), additional sounds (S3, S4), murmurs (systolic, diastolic, continuous), rubs, and clicks.</li> <li>• Vital signs assessment: heart rate, blood pressure, respiratory rate, and pulse pressure.</li> </ul> <p><b>Demonstrate</b> correct technique for recording a pediatric ECG, including electrode placement, skin preparation, and appropriate lead selection for different age groups.</p> <p><b>Identify</b> normal pediatric ECG patterns and <b>interpret</b> common ECG abnormalities.</p>

## RESPIRATORY DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-040	Pneumonia	<ul style="list-style-type: none"> <li>• Classify pneumonia based on anatomical involvement and etiology.</li> <li>• Classify according to IMNCI</li> <li>• Describe the etiology of bacterial pneumonia in different age groups.</li> <li>• Identify the clinical features</li> <li>• Outline investigations and management plan.</li> <li>• Identify and describe the management of complications.</li> <li>• Explain the prognosis and factors affecting recovery in pediatric bacterial pneumonia.</li> </ul>
Pe-041	Asthma	<ul style="list-style-type: none"> <li>• Identify common triggers and risk factors.</li> <li>• Explain the pathophysiology.</li> <li>• Describe key clinical features.</li> <li>• Outline the diagnostic approach.</li> <li>• List important differential diagnoses.</li> <li>• List complications</li> <li>• Outline the steps of the management of an acute asthma attack.</li> <li>• Outline the management of status asthmaticus as a medical emergency.</li> <li>• Discuss long-term management of chronic asthma.</li> <li>• Explain the prognosis and factors associated with good or poor outcomes.</li> <li>• Describe key preventive strategies.</li> </ul>
Pe-042	Croup	<ul style="list-style-type: none"> <li>• Identify the common etiological agents of croup.</li> <li>• Explain the pathophysiology.</li> <li>• Diagnose based on key clinical features.</li> <li>• Select appropriate investigations.</li> </ul>

		<ul style="list-style-type: none"> <li>• List differential diagnosis.</li> <li>• Outline management plan.</li> <li>• List possible complications.</li> <li>• Identify warning signs, recurrence, and indications for urgent medical attention.</li> </ul>
Pe-043	Acute epiglottitis	<ul style="list-style-type: none"> <li>• Explain the epidemiology and pathogenesis of acute epiglottitis.</li> <li>• List common causative organisms.</li> <li>• Identify clinical features suggestive of bacterial croup.</li> <li>• List investigations with interpretations.</li> <li>• Differentiate bacterial croup from other causes of upper airway obstruction.</li> <li>• Develop a management plan for bacterial croup.</li> <li>• Identify indications for airway intervention and intensive monitoring.</li> <li>• Describe potential complications of bacterial croup.</li> </ul>
Pe-044	Acute pharyngitis and tonsillitis	<ul style="list-style-type: none"> <li>• Identify common etiological agents of acute pharyngitis and tonsillitis.</li> <li>• Describe the clinical features that help differentiate viral from bacterial causes.</li> <li>• Select appropriate investigations when indicated.</li> <li>• Formulate a management plan for viral and bacterial pharyngitis/tonsillitis.</li> <li>• List complications associated with untreated streptococcal infection.</li> </ul>
Pe-045	Bronchiolitis	<ul style="list-style-type: none"> <li>• Describe the common etiological agents and predisposing risk factors for bronchiolitis in infants and young children.</li> <li>• Explain the pathophysiological changes.</li> <li>• Identify key clinical features, including respiratory distress signs and indicators of severe disease.</li> <li>• List investigations to confirm diagnosis.</li> </ul>

		<ul style="list-style-type: none"> <li>Formulate management plans, including criteria for hospitalization.</li> <li>Identify complications.</li> </ul>
Pe-046	Pleural Effusion	<ul style="list-style-type: none"> <li>Classify pleural effusions according to type and underlying pathology.</li> <li>Differentiate between the types of pleural effusion.</li> <li>Identify common causes of pleural effusion in children.</li> <li>Explain the impact of pleural effusion on lung function and respiratory physiology.</li> <li>Discuss the role and interpretation of radiological imaging in the diagnosis of pleural effusion.</li> <li>Plan the management, including medical and procedural interventions.</li> </ul>
Pe-047	Cystic fibrosis	<ul style="list-style-type: none"> <li>Describe the genetic basis, inheritance pattern, and pathophysiology of cystic fibrosis.</li> <li>Describe common clinical manifestations.</li> <li>Describe diagnostic criteria.</li> <li>Outline principles of multidisciplinary management.</li> <li>List differential diagnosis.</li> <li>List complications.</li> <li>Describe long-term care needs, prognosis, and preventive strategies.</li> </ul>
Pe-048	Pneumothorax	<ul style="list-style-type: none"> <li>Classify pneumothorax.</li> <li>List two important causes of spontaneous pneumothorax.</li> <li>Explain the pathophysiology.</li> <li>Identify key clinical features.</li> <li>Interpret chest X-ray findings.</li> <li>Outline definitive management.</li> <li>List potential complications and indicators for referral or ICU care.</li> </ul>

Clinical Skills		
Code	Topic	Clinical Methods/Skills
Pe-049	Clinical examination of respiratory system	<p><b>Perform</b> clinical examination of respiratory system including</p> <ul style="list-style-type: none"> <li>• <b>Observe</b> and narrate child's general appearance, respiratory rate, pattern, and use of accessory muscles and signs of respiratory distress (nasal flaring, chest indrawing, grunting, cyanosis).</li> <li>• <b>Inspect</b> chest for symmetry, shape, scars, deformities, or tracheal deviation.</li> <li>• <b>Palpate</b> chest for tracheal position, chest expansion bilaterally, tactile vocal fremitus.</li> <li>• <b>Percuss</b> the chest to identify normal, dull, or hyperresonant areas.</li> <li>• <b>Auscultate</b> all lung fields for breath sounds, added sounds, and asymmetry.</li> <li>• <b>Monitor</b> oxygen saturation using pulse oximetry.</li> <li>• <b>Assess</b> upper airway for nasal blockage, throat congestion, stridor, or oral abnormalities, and extrapulmonary signs (clubbing, edema, cyanosis, lymphadenopathy).</li> <li>• <b>Interpret</b> chest X-rays including steeple sign (croup), thumb sign (epiglottitis), silhouette sign (loss of normal cardiac or diaphragm border due to adjacent consolidation), honeycombing (cystic air spaces in interstitial lung disease), ground-glass opacity (ARDS or viral pneumonia), air-fluid level (lung abscess), hyperinflation (asthma, bronchiolitis), pneumothorax signs, tram-track appearance (bronchiectasis), cystic lesions (cystic fibrosis).</li> <li>• <b>Document</b> the indoor, outdoor, and emergency cases in the clinical log book.</li> </ul>

ENDOCRINE SYSTEM		
Theory		
Code	Topic	Specific Learning Objectives
Pe-050	Congenital Hypothyroidism / Cretinism	<ul style="list-style-type: none"> <li>• List common etiological factors.</li> <li>• Describe clinical features and early signs of severe congenital hypothyroidism.</li> <li>• Interpret diagnostic tests, including serum TSH, T4, and confirmatory thyroid imaging.</li> <li>• Formulate treatment plan with follow-up strategies to monitor growth, neurodevelopment, and thyroid function.</li> <li>• Describe prognosis with early versus delayed treatment.</li> <li>• Explain the principles of newborn screening programs for early detection.</li> </ul>
Pe-051	Juvenile / Acquired Hypothyroidism	<ul style="list-style-type: none"> <li>• Identify common etiological factors.</li> <li>• Diagnose based on clinical features and interpretation of laboratory investigations.</li> <li>• Outline a management plan and discuss long-term prognosis and potential complications if untreated.</li> </ul>
Pe-052	Hyperthyroidism	<ul style="list-style-type: none"> <li>• Identify common etiological factors of hyperthyroidism in children.</li> <li>• Diagnose based on key signs and symptoms and interpretation of diagnostic investigations.</li> <li>• Formulate management plan.</li> <li>• Explain prognosis and follow-up strategies for pediatric hyperthyroidism.</li> </ul>
Pe-053	Diabetes Mellitus	<ul style="list-style-type: none"> <li>• Identify the etiological factors and classify types of diabetes mellitus in pediatric age group.</li> <li>• Explain the pathophysiology of insulin deficiency and/or resistance.</li> </ul>

		<ul style="list-style-type: none"> <li>Diagnose based on key clinical features and interpretation of appropriate diagnostic tests.</li> <li>Develop a management plan, including insulin replacement strategies, diet planning, and individualized monitoring schedules.</li> <li>Describe insulin regimens, sliding scale protocols, and adjustments based on glucose monitoring.</li> <li>Outline follow-up care plan, including growth monitoring, glycemic control, and patient/caregiver education.</li> <li>List acute and chronic complications.</li> <li>Explain prognosis and long-term outcomes with optimal management.</li> </ul>
Pe-054	Diabetic Ketoacidosis (DKA)	<ul style="list-style-type: none"> <li>Identify common precipitating factors for DKA in children.</li> <li>Describe clinical features of DKA.</li> <li>Interpret relevant laboratory investigations.</li> <li>Formulate treatment plan.</li> <li>List complications.</li> </ul>
Pe-055	Short stature	<ul style="list-style-type: none"> <li>Classify short stature based on causes.</li> <li>Describe the signs and symptoms.</li> <li>Interpret appropriate investigations.</li> <li>Formulate a management and follow-up plan.</li> </ul>
Pe-056	Cushing's disease/ Cushing Syndrome	<ul style="list-style-type: none"> <li>Identify the common etiological factors leading to Cushing's disease in children.</li> <li>Explain the pathophysiology of cortisol excess and its systemic effects.</li> <li>Describe characteristic clinical features.</li> <li>Interpret relevant investigations.</li> <li>Formulate a management plan depending on etiology.</li> <li>List complications.</li> <li>Plan follow-up strategies for growth, pubertal</li> </ul>

		development, and recurrence monitoring.
Pe-057	Congenital Adrenal Hyperplasia (CAH)	<ul style="list-style-type: none"> <li>Identify key clinical signs and symptoms of CAH.</li> <li>Interpret investigations to confirm diagnosis.</li> <li>Explain principles and indications of prenatal diagnosis for CAH.</li> <li>Formulate a management plan.</li> <li>Describe prognosis based on subtype, severity, and timeliness of treatment.</li> </ul>

### Clinical Skills

Code	Topic	Clinical Methods/Skills
Pe-058	Clinical examination of endocrine system	<ul style="list-style-type: none"> <li><b>Measure and record</b> anthropometric parameters: height, weight, BMI, head circumference (neonates/infants).</li> <li><b>Plot growth parameters</b> on age- and sex-specific growth charts.</li> <li><b>Perform</b> general inspection for endocrine-related features: skin, hair, fat distribution, and posture.</li> <li><b>Palpate</b> thyroid gland for size, nodules, or tenderness.</li> <li><b>Assess</b> vital signs relevant to endocrine health: blood pressure, pulse.</li> <li><b>Document</b> normal findings in clinical logbooks.</li> </ul>
Pe-059	Diabetes Mellitus	<ul style="list-style-type: none"> <li><b>Measure and interpret</b> capillary blood glucose levels.</li> <li><b>Observe/assist</b> in administering and adjusting insulin doses as per sliding scale.</li> <li><b>Demonstrate</b> proper technique for insulin injection and blood glucose monitoring.</li> <li><b>Monitor</b> for hypoglycemia and hyperglycemia, and <b>interpret</b> trends.</li> <li><b>Counsel</b> patient/caregiver on diet, insulin</li> </ul>

		administration, and management.
Pe-060	Hypothyroidism	<ul style="list-style-type: none"> <li>• <b>Examine</b> for the clinical signs of hypothyroidism: macroglossia, dry skin, hypotonia, growth retardation.</li> <li>• <b>Palpate</b> thyroid gland.</li> </ul>
Pe-061	Cushing's Disease	<ul style="list-style-type: none"> <li>• <b>Assess</b> for cushingoid features: moon face, buffalo hump, truncal obesity, striae.</li> <li>• <b>Measure</b> blood pressure and growth parameters.</li> <li>• <b>Document</b> subtle signs such as skin thinning, bruising, and muscle weakness.</li> </ul>

## GASTROINTESTINAL & LIVER DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-062	Acute Diarrhea	<ul style="list-style-type: none"> <li>• Define acute diarrhea.</li> <li>• Enumerate the common causes and etiologies of acute diarrhea in children.</li> <li>• State common pathogens</li> <li>• Classify severity of dehydration based on clinical assessment and guidelines.</li> <li>• Describe the preventive strategies and outline the management plan of acute diarrhea.</li> </ul>
Pe-063	Chronic Diarrhea	<ul style="list-style-type: none"> <li>• Define chronic diarrhea.</li> <li>• Enumerate the common causes and etiologies of chronic diarrhea in children.</li> <li>• List common pathogens.</li> <li>• Classify dehydration based on clinical assessment and guidelines.</li> <li>• State management plan to treat chronic diarrhea.</li> </ul>
Pe-064	Celiac disease	<ul style="list-style-type: none"> <li>• Identify common etiological and predisposing factors, including genetic and environmental triggers.</li> <li>• Diagnose based on characteristic clinical features</li> </ul>

		<p>and interpretation of diagnostic tests.</p> <ul style="list-style-type: none"> <li>• Formulate a management plan.</li> <li>• Explain long-term prognosis, potential complications, and strategies for follow-up care.</li> </ul>
Pe-065	Inflammatory bowel disease Crohn's disease and ulcerative colitis)	<ul style="list-style-type: none"> <li>• Identify the types of IBD in children and their etiological factors.</li> <li>• Describe key clinical features of Crohn's disease and ulcerative colitis.</li> <li>• List and interpret appropriate investigations.</li> <li>• Formulate a management plan.</li> <li>• Explain long-term prognosis, monitoring strategies, and potential complications.</li> </ul>
Pe-066	Approach to vomiting in children	<ul style="list-style-type: none"> <li>• List common etiologies of vomiting in children.</li> <li>• Identify associated red-flag features requiring urgent attention.</li> <li>• Select and interpret relevant investigations, including basic labs, imaging, and targeted tests based on suspected etiology.</li> <li>• Formulate a systematic differential diagnosis for pediatric vomiting.</li> <li>• Develop a management plan.</li> <li>• Explain strategies for monitoring response to treatment, preventing complications, and follow-up care.</li> </ul>
Pe-067	Approach to the child with Hepatosplenomegaly	<ul style="list-style-type: none"> <li>• List common causes of hepatomegaly, splenomegaly and hepatosplenomegaly according to age group (neonates, infancy, early childhood).</li> <li>• Recognize key clinical features associated with hepatomegaly, splenomegaly and hepatosplenomegaly.</li> <li>• Enlist and interpret appropriate investigations.</li> <li>• Formulate a differential diagnosis for hepatomegaly /</li> </ul>

		<p>Visceromegaly based on age, clinical features, and investigation findings.</p> <ul style="list-style-type: none"> <li>Develop a management and follow-up plan depending on underlying etiology and indication to refer to specialized care.</li> </ul>
Pe-068	Acute hepatitis	<ul style="list-style-type: none"> <li>Identify common etiological factors of acute hepatitis in children.</li> <li>Describe the key clinical features and interpretation of appropriate laboratory investigations.</li> <li>Formulate a systematic differential diagnosis for pediatric acute hepatitis.</li> <li>Develop management plan, including indications for hospitalization or referral.</li> <li>Explain prognosis, potential complications, and strategies for follow-up and preventive measures, including vaccination and hygiene.</li> </ul>
Pe-069	Hepatic encephalopathy in children	<ul style="list-style-type: none"> <li>Identify common etiological factors leading to hepatic encephalopathy in children.</li> <li>Recognize key clinical features.</li> <li>Select and interpret relevant laboratory and imaging investigations.</li> <li>Formulate a differential diagnosis for altered mental status in pediatric patients.</li> <li>Develop management plan.</li> </ul>
Pe-070	Pediatric Constipation	<ul style="list-style-type: none"> <li>Identify common etiological factors.</li> <li>Describe key clinical features.</li> <li>Select and interpret appropriate investigations.</li> <li>Formulate a systematic differential diagnosis for chronic or severe constipation.</li> <li>Develop a management plan, including dietary modifications, behavioral strategies, laxatives or stool softeners, and treatment of underlying conditions.</li> </ul>

		<ul style="list-style-type: none"> <li>Explain prognosis, prevention strategies, and follow-up monitoring for recurrent or chronic constipation</li> </ul>
Pe-071	Wilson Disease	<ul style="list-style-type: none"> <li>Describe the etiology and genetic basis of Wilson disease.</li> <li>List the typical hepatic, neurological, and psychiatric manifestations.</li> <li>List key diagnostic investigations with interpretation for Wilson disease.</li> <li>Outline the principles of management, including medical and surgical options.</li> <li>Explain prognosis and long-term follow-up considerations</li> </ul>

### Clinical Skills

Code	System	Clinical Methods/Skills
Pe-072	Clinical examination of GIT system	<ul style="list-style-type: none"> <li><b>Inspect</b> abdomen for shape, distension, scars, visible peristalsis, and skin changes.</li> <li><b>Palpate</b> the abdomen to assess liver and spleen size, tenderness, masses, and organomegaly.</li> <li><b>Percuss</b> to determine liver span, spleen size, and presence of fluid.</li> <li><b>Auscultate</b> bowel sounds to assess frequency, character, and presence of abnormal sounds (hyperactive, absent, bruits).</li> <li><b>Examine</b> the perianal area for fissures, hemorrhoids, or signs of malformations.</li> <li><b>Assess</b> for signs of malnutrition and micronutrient deficiencies (skin, hair, nails).</li> <li><b>Interpret</b> key laboratory values in context of pediatric GIT disorders: <ul style="list-style-type: none"> <li>Liver function (AST, ALT, ALP, bilirubin, albumin, PT/INR)</li> <li>Pancreatic enzymes (amylase, lipase)</li> <li>Nutritional markers (CBC, iron studies,</li> </ul> </li> </ul>

		<p>vitamins)</p> <ul style="list-style-type: none"> <li>○ Inflammatory markers (CRP, ESR)</li> <li>○ Disease-specific tests (anti-TTG, ceruloplasmin, viral serology, fecal calprotectin)</li> <li>● <b>Document and interpret</b> findings in clinical logbooks.</li> </ul>
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## HEMATOLOGIC DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-073	Anemia	<ul style="list-style-type: none"> <li>● Define anemia and classify it based on red blood cell morphology and etiology.</li> <li>● Identify common clinical features of anemia in children.</li> <li>● Outline the investigations.</li> </ul>
Pe-074	Congenital Hypoplastic Anemia	<ul style="list-style-type: none"> <li>● Define congenital hypoplastic anemia including Diamond-Blackfan anemia.</li> <li>● Explain the pathophysiology leading to reduced red cell production.</li> <li>● Identify characteristic clinical features.</li> <li>● Outline diagnostic evaluation, including bone marrow examination and genetic testing.</li> <li>● Discuss management strategies.</li> </ul>
Pe-075	Microcytic Anemias	<p><b>Iron Deficiency Anemia</b></p> <ul style="list-style-type: none"> <li>● Describe the etiology.</li> <li>● Explain the pathophysiology of iron deficiency leading to microcytosis.</li> <li>● Diagnose iron deficiency anemia based on clinical features.</li> <li>● Outline diagnostic tests.</li> <li>● Formulate management plan.</li> </ul> <p><b>Beta-Thalassemia</b></p>

		<ul style="list-style-type: none"> <li>• Define beta-thalassemia and differentiate between major and minor forms.</li> <li>• Explain pathophysiology, including defective hemoglobin synthesis and ineffective erythropoiesis.</li> <li>• Identify clinical features.</li> <li>• Outline diagnostic tests and plan the management strategies.</li> </ul> <p><b>Hereditary Spherocytosis</b></p> <ul style="list-style-type: none"> <li>• Define hereditary spherocytosis and its genetic basis.</li> <li>• Explain pathophysiology leading to spherocytes and hemolysis.</li> <li>• Recognize clinical features.</li> <li>• Outline diagnostic tests and describe management.</li> </ul> <p><b>Sickle Cell Anemia</b></p> <ul style="list-style-type: none"> <li>• Define sickle cell anemia and its genetic inheritance pattern.</li> <li>• Explain pathophysiology, including sickling of red cells and vaso-occlusion.</li> <li>• Identify clinical features</li> <li>• Outline investigations and discuss management.</li> </ul>
Pe-076	Megaloblastic Anemia	<ul style="list-style-type: none"> <li>• Define megaloblastic anemia and differentiate between vitamin B12 and folate deficiency.</li> <li>• Explain pathophysiology of impaired DNA synthesis leading to macrocytosis.</li> <li>• Identify clinical features.</li> <li>• Outline diagnostic evaluation and formulate management.</li> </ul>
Pe-077	Aplastic Anemia	<ul style="list-style-type: none"> <li>• Define aplastic anemia and its classification.</li> <li>• Identify clinical features.</li> <li>• Outline diagnostic tests.</li> <li>• Discuss management strategies.</li> </ul>

Pe-078	Enzymatic Defects (Red Cell Enzyme Deficiencies)	<ul style="list-style-type: none"> <li>Define common enzymopathies causing hemolytic anemia.</li> <li>Explain pathophysiology of hemolysis due to enzymatic defects.</li> <li>Identify clinical features.</li> <li>Outline diagnostic tests.</li> <li>Discuss the management plan.</li> </ul>
Pe-079	Hemophilia A & B	<ul style="list-style-type: none"> <li>Define Hemophilia A and B and describe their inheritance (X-linked recessive).</li> <li>Identify the clinical features.</li> <li>Outline diagnostic tests.</li> <li>Formulate management strategies.</li> <li>Discuss genetic counseling and preventive measures.</li> </ul>
Pe-080	Vitamin K Deficiency	<ul style="list-style-type: none"> <li>Define vitamin K deficiency and its role in coagulation.</li> <li>Identify the clinical features in neonates.</li> <li>Outline diagnostic evaluation.</li> <li>Formulate management, including vitamin K supplementation and treatment of bleeding.</li> </ul>
Pe-081	Approach to a child with Pancytopenia	<ul style="list-style-type: none"> <li>Enlist the Causes and recall the pathophysiology of pancytopenia.</li> <li>Explain the etiological viruses and their role.</li> <li>Discuss the associated systemic disorders.</li> <li>Formulate management and identify complications of pancytopenia.</li> <li>State the role of prophylactic vaccinations.</li> </ul>
Pe-082	Leukemia and lymphoma	<ul style="list-style-type: none"> <li>Describe pathogenesis of malignancy, and tabulate its types.</li> <li>Enlist risk factors and pathophysiology.</li> <li>State complications.</li> <li>Describe signs and symptoms.</li> </ul>

		<ul style="list-style-type: none"> <li>Describe relevant investigations.</li> <li>Formulate management plan.</li> </ul>
Pe-083	Idiopathic thrombocytopenic purpura (ITP)	<p>Classify ITP according to duration (acute, persistent, chronic).</p> <ul style="list-style-type: none"> <li>Describe the pathophysiology.</li> <li>List key clinical features and presenting symptoms.</li> <li>Identify relevant laboratory investigations.</li> <li>Formulate a differential diagnosis for thrombocytopenia.</li> <li>Outline management strategies.</li> <li>Explain prognosis and follow-up considerations.</li> </ul>

### Clinical Skills

Code	System	Clinical Methods/Skill
Pe-084	Clinical examination for blood disorders	<ul style="list-style-type: none"> <li><b>Perform</b> general physical examination, focusing on pallor, jaundice, petechiae, purpura, and lymphadenopathy.</li> <li><b>Examine</b> for hepatosplenomegaly and signs of bleeding (mucosal, skin).</li> <li><b>Observe/assist</b> in collection of blood samples for CBC, peripheral smear, and other relevant investigations.</li> <li><b>Interpret</b> report of peripheral blood smears and other hematology tests.</li> <li><b>Monitor</b> vital signs and clinical status for acute complications like anemia, infection, or bleeding.</li> <li><b>Interpret</b> lab results of Complete Blood Count, red cell indices, white cell differential, platelet count, peripheral blood smear, reticulocyte count, iron studies, vitamin B12, folate levels, hemoglobin electrophoresis, PT, aPTT, INR, fibrinogen level, D-dimer, bone marrow aspiration, bone marrow biopsy, blood grouping, crossmatch, and antibody</li> </ul>

		<p>screening.</p> <ul style="list-style-type: none"> <li>• <b>Counsel</b> caregivers regarding warning signs, medication administration, and follow-up monitoring.</li> <li>• <b>Verify</b> patient identity, blood product, and compatibility before transfusion.</li> <li>• <b>Observe or assist</b> in pediatric blood transfusion procedures.</li> <li>• <b>Monitor</b> the patient during transfusion for any adverse reactions.</li> </ul>
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## RENAL DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-085	Nephrotic syndrome	<ul style="list-style-type: none"> <li>• Classify nephrotic syndrome into primary and secondary types.</li> <li>• Describe the pathogenesis and underlying pathology.</li> <li>• List key clinical features and presenting signs and symptoms.</li> <li>• Identify common complications.</li> <li>• Select relevant laboratory and imaging investigations.</li> <li>• Outline principles of management, including pharmacologic and supportive care.</li> </ul>
Pe-086	Acute renal failure	<ul style="list-style-type: none"> <li>• Define acute renal failure and classify its types (prerenal, intrinsic, postrenal).</li> <li>• Describe the pathophysiology and underlying causes in children.</li> <li>• List key clinical features and presenting symptoms.</li> <li>• Identify common complications.</li> <li>• Enlist relevant laboratory and imaging investigations.</li> <li>• Outline principles of management.</li> <li>• Explain prognosis and follow-up considerations.</li> </ul>

Pe-087	Chronic renal failure	<ul style="list-style-type: none"> <li>• Define chronic renal failure with its stages.</li> <li>• Describe the pathophysiology and common causes in children.</li> <li>• List key clinical features and presenting symptoms.</li> <li>• Identify common complications.</li> <li>• List relevant laboratory and imaging investigations.</li> <li>• Outline principles of management.</li> <li>• Explain prognosis, long-term outcomes, and follow-up monitoring.</li> </ul>
Pe-088	Urinary tract infection	<ul style="list-style-type: none"> <li>• Describe common etiological agents of UTI in different age groups.</li> <li>• List key clinical features and presenting symptoms.</li> <li>• Identify risk factors and predisposing conditions.</li> <li>• List appropriate laboratory and imaging investigations.</li> <li>• Formulate a differential diagnosis for pediatric urinary symptoms.</li> <li>• Outline principles of management, including antimicrobial therapy and supportive care.</li> <li>• Explain potential complications, prognosis, and strategies for prevention and follow-up</li> </ul>
Pe-089	Approach to a child with Hematuria	<ul style="list-style-type: none"> <li>• List the common causes of hematuria in children.</li> <li>• Identify key clinical features and presenting symptoms.</li> <li>• Select appropriate laboratory and imaging investigations.</li> <li>• Outline principles of management.</li> </ul>

Pe-090	Acute post-streptococcal glomerulonephritis	<ul style="list-style-type: none"> <li>Describe the etiology and pathogenesis of APSGN.</li> <li>List key clinical features and presenting symptoms.</li> <li>Identify relevant laboratory and imaging investigations.</li> <li>Formulate a differential diagnosis for glomerulonephritis.</li> <li>Outline principles of management, including supportive care and pharmacologic therapy.</li> <li>Explain potential complications, prognosis, and follow-up considerations</li> </ul>
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### Clinical Skills

Code	System	Clinical Methods/Skills
Pe-091	Clinical examination of renal system	<ul style="list-style-type: none"> <li><b>Perform</b> general physical examination, including assessment of edema, blood pressure, growth parameters, and hydration status.</li> <li><b>Examine</b> the abdomen and flanks for renal enlargement or tenderness.</li> <li><b>Measure and interpret</b> vital signs, fluid balance, and weight changes.</li> <li><b>Demonstrate</b> proper technique for urine dipstick testing and bedside urinalysis.</li> <li><b>Interpret</b> lab investigations (renal function tests, serum creatinine, BUN, electrolytes, serum albumin, total protein, urinalysis).</li> <li><b>Assist or observe</b> procedures such as catheterization, dialysis access, or renal biopsy.</li> <li><b>Educate/counsel</b> caregivers on monitoring urine output, adherence to treatment, and follow-up requirements.</li> </ul>

NEONATOLOGY		
Theory		
Code	Topics	Specific Learning Objectives
Pe-092	Neonatal Sepsis	<ul style="list-style-type: none"> <li>• Define neonatal sepsis</li> <li>• Enumerate different etiologies of neonatal sepsis</li> <li>• Identify common pathogens &amp; prenatal risk factors</li> <li>• Discuss the complication of neonatal sepsis</li> <li>• Formulate Management</li> </ul>
Pe-093	Neonatal jaundice	<ul style="list-style-type: none"> <li>• Define and classify jaundice</li> <li>• List different etiologies of neonatal jaundice</li> <li>• Discuss the common interaction between different blood groups</li> <li>• Tabulate the complication of neonatal jaundice</li> <li>• Plan management.</li> </ul>
Pe-094	Newborn examination and essential care	<ul style="list-style-type: none"> <li>• Identify common signs on newborn examination</li> <li>• Essential newborn care including Vit K administration, cord care, vaccination, breast feeding, kangaroo care.</li> </ul>
Pe-095	Common neonatal problems	<ul style="list-style-type: none"> <li>• Define Hypoglycemia, enumerate risk factors and formulate management.</li> <li>• Identify common skin rashes and formulate management</li> <li>• Define prematurity and complications</li> <li>• Birth asphyxia, RDS, IDM, hypocalcemia, Low birth weight, SGA, LGA, and IUGR.</li> <li>• Describe TORCHS infection and effects on newborn.</li> </ul>
Pe-096	Newborn resuscitation	<ul style="list-style-type: none"> <li>• Recall transition period at birth</li> <li>• Define essential care and golden minute</li> <li>• Enumerate the steps in newborn resuscitation</li> <li>• Identify theoretical basis for the steps in resuscitation</li> <li>• Enumerate post-resuscitation care</li> </ul>

Clinical Skills		
Code	System	Clinical Methods/Skills
Pe-097	Clinical examination of neonate	<ul style="list-style-type: none"> <li>• <b>Perform</b> general inspection: posture, color, activity, and distress signs.</li> <li>• <b>Assess anthropometry &amp; vital signs:</b> heart rate, respiratory rate, temperature, and oxygen saturation.</li> <li>• <b>Examine</b> head, eyes, ears, nose, mouth, and neck for congenital anomalies.</li> <li>• <b>Assess</b> skin: jaundice, cyanosis, pallor, birthmarks, lanugo, mottling, and petechiae.</li> <li>• <b>Examine</b> chest and cardiovascular system, including heart sounds and peripheral pulses.</li> <li>• <b>Palpate</b> liver, spleen, kidneys, and hernias.</li> <li>• <b>Examine</b> genitalia and anus for abnormalities.</li> <li>• <b>Assess</b> musculoskeletal system: limb deformities, joint contractures, hip dysplasia, and clavicle fractures.</li> <li>• <b>Perform</b> neurological assessment, including primitive and postural reflexes: <ul style="list-style-type: none"> <li>○ Grasp reflex (palmar and plantar)</li> <li>○ Moro reflex</li> <li>○ Rooting reflex</li> <li>○ Stepping/Walking reflex</li> <li>○ Galant reflex</li> <li>○ Tonic neck reflex</li> <li>○ Glabellar reflex</li> <li>○ Landau reflex</li> <li>○ Parachute reflex</li> </ul> </li> <li>• <b>Examine</b> for spontaneous movements, muscle tone, and alertness.</li> </ul>

INFECTIOUS DISEASES		
Theory		
Code	Topics	Specific Learning Objectives
Pe-098	Fever of Unknown Origin (PUO)	<ul style="list-style-type: none"> <li>Define PUO and criteria for pediatric age groups.</li> <li>Describe clinical features.</li> <li>Interpret results to narrow differential diagnosis.</li> <li>Outline management plan and indications for specialist referral.</li> </ul>
Pe-099	Cholera	<ul style="list-style-type: none"> <li>Identify the causative organism and epidemiology.</li> <li>Describe pathophysiology and mechanism of severe dehydration.</li> <li>Describe key clinical features.</li> <li>Interpret laboratory findings.</li> <li>Outline management plan for dehydration due to cholera.</li> <li>Discuss preventive measures and vaccination</li> </ul>
Pe-100	Bacillary dysentery	<ul style="list-style-type: none"> <li>Identify the causative organism.</li> <li>Diagnose based on signs and symptoms and interpretation of stool microscopy and culture results</li> <li>Outline management plan.</li> <li>Explain transmission and preventive strategies</li> </ul>
Pe-101	Giardiasis	<ul style="list-style-type: none"> <li>Identify causative protozoan.</li> <li>Describe signs and symptoms.</li> <li>Interpret diagnostic investigations including stool examination for cysts/trophozoites</li> <li>Plan the treatment with preventive measures</li> </ul>

Pe-102	Amebiasis	<ul style="list-style-type: none"> <li>Identify causative organism.</li> <li>Describe signs and symptoms.</li> <li>List the investigations and interpretation to confirm diagnosis.</li> <li>Interpret imaging for liver abscess</li> <li>Outline treatment plan.</li> </ul>
Pe-103	Worm Infestation	<p><b>Roundworm</b></p> <ul style="list-style-type: none"> <li>Describe clinical features due to roundworm infestation.</li> <li>Diagnose based on signs and symptoms and diagnostic test.</li> <li>Outline treatment plan.</li> </ul> <p><b>Hookworm</b></p> <ul style="list-style-type: none"> <li>Describe clinical features due to hookworm infestation.</li> <li>Diagnose based on signs and symptoms and diagnostic test.</li> <li>Outline treatment plan.</li> </ul> <p><b>Pinworm</b></p> <ul style="list-style-type: none"> <li>Describe clinical features due to pinworm infestation.</li> <li>Diagnose based on signs and symptoms and diagnostic test.</li> <li>Outline treatment plan.</li> </ul>
Pe-104	Poliomyelitis	<ul style="list-style-type: none"> <li>Describe transmission routes of polio virus</li> <li>Diagnose based on clinical features.</li> <li>Describe vaccine types and immunization schedule.</li> <li>Outline supportive management for acute flaccid paralysis surveillance.</li> <li>List long-term complications and rehabilitation needs.</li> </ul>
Pe-105	Diphtheria	<ul style="list-style-type: none"> <li>Identify causative organism and modes of transmission</li> <li>Diagnose based on clinical features.</li> <li>Outline the management plan.</li> <li>Explain vaccination and preventive strategies.</li> </ul>
Pe-106	Tetanus	<ul style="list-style-type: none"> <li>Identify causative organism and explain</li> </ul>

		<p>pathophysiology.</p> <ul style="list-style-type: none"> <li>• Recognize clinical features.</li> <li>• Describe wound care, immunization, and antitoxin therapy.</li> <li>• Discuss the management plan.</li> </ul>
Pe-107	MMR	<ul style="list-style-type: none"> <li>• Recognize characteristic clinical features.</li> <li>• Identify complications.</li> <li>• List the laboratory investigation to confirm diagnosis.</li> <li>• Describe treatment plan.</li> <li>• Explain immunization schedule and outbreak control</li> </ul>
Pe-108	Pertussis	<ul style="list-style-type: none"> <li>• Identify causative organism.</li> <li>• Identify the stages of pertussis.</li> <li>• List the diagnostic methods.</li> <li>• Plan the management including immunization schedules and prophylaxis.</li> </ul>
Pe-109	Chickenpox	<ul style="list-style-type: none"> <li>• Identify clinical features.</li> <li>• List complications.</li> <li>• List the laboratory investigations.</li> <li>• Describe management plan with vaccination and prevention.</li> </ul>
Pe-110	Malaria	<ul style="list-style-type: none"> <li>• Describe transmission of malaria.</li> <li>• Identify clinical features.</li> <li>• Interpret blood smears or rapid diagnostic tests</li> <li>• Discuss treatment plan with preventive measures.</li> </ul>
Pe-111	Typhoid	<ul style="list-style-type: none"> <li>• Identify causative organism and transmission routes.</li> <li>• Recognize clinical features.</li> <li>• Describe treatment plan.</li> <li>• Explain preventive strategies.</li> </ul>
Pe-112	Tuberculosis	<ul style="list-style-type: none"> <li>• Identify causative organism and routes of transmission.</li> <li>• Describe pulmonary and extrapulmonary features.</li> <li>• Interpret investigations to confirm diagnosis.</li> <li>• Describe anti-tubercular therapy.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain preventive measures.</li> </ul>
Pe-113	Dengue Fever	<ul style="list-style-type: none"> <li>• Recognize clinical features with warning signs.</li> <li>• Interpret laboratory tests.</li> <li>• Describe supportive management plan with preventive measures.</li> </ul>

### Clinical Skills

Code	System	Clinical Methods/Skills
Pe-114	Clinical assessment for infectious diseases	<ul style="list-style-type: none"> <li>• <b>Perform</b> a focused clinical examination relevant to fever and infectious diseases.</li> <li>• <b>Assess</b> hydration status using clinical markers (skin turgor, pulse, capillary refill, mucous membranes).</li> <li>• <b>Measure and record</b> vital signs.</li> <li>• <b>Prepare and administer</b> oral rehydration therapy (ORS) correctly.</li> <li>• <b>Observe/assist</b> in set up and administer IV fluids according to pediatric protocols for dehydration or shock.</li> <li>• <b>Observe/assist</b> in administering medications safely (antibiotics, antiparasitic, antimalarial, antivirals).</li> <li>• <b>Follow</b> infection prevention and control measures.</li> <li>• <b>Identify and document</b> clinical warning signs.</li> <li>• <b>Provide</b> basic supportive care: tepid sponging, nutritional support, monitoring intake/output.</li> <li>• <b>Assist</b> in administering vaccines according to EPI schedule.</li> <li>• Interpret report of peripheral smear for malaria.</li> <li>• <b>Observe/assist</b> in collection of throat swab or nasal swab correctly (diphtheria, pertussis).</li> <li>• <b>Educate</b> caregivers on home care, hydration, hygiene, and warning signs requiring urgent care.</li> <li>• <b>Maintain</b> proper documentation of clinical findings, management steps, and follow-up plans.</li> </ul>

## METABOLIC DISORDERS

### Theory

Code	Topics	Specific Learning Objectives
Pe-115	Galactosemia	<ul style="list-style-type: none"> <li>• Define galactosemia and its genetic basis.</li> <li>• Identify key clinical features in newborns.</li> <li>• Recognize complications related to liver, CNS, and eyes.</li> <li>• Interpret screening tests and confirmatory investigations.</li> <li>• Outline dietary management and lactose/galactose restriction.</li> <li>• Identify emergency management needs in acute presentation</li> <li>• Explain long-term monitoring and follow-up requirements</li> <li>• Describe the importance of newborn screening and family counseling</li> </ul>
Pe-116	Glycogen storage diseases	<ul style="list-style-type: none"> <li>• Define glycogen storage diseases and classify major types</li> <li>• Identify key clinical features such as hypoglycemia, hepatomegaly, and muscle involvement</li> <li>• Recognize type-specific patterns.</li> <li>• Interpret basic investigations suggestive of GSD</li> <li>• Outline principles of dietary and medical management</li> <li>• Identify acute complications requiring urgent intervention</li> <li>• Describe long-term monitoring and follow-up needs</li> <li>• Explain the role of genetic counseling for affected families.</li> </ul>

Clinical Skills		
Code	System	Clinical Methods/Skills
Pe-117	Clinical examination for metabolic disorders	<ul style="list-style-type: none"> <li>• <b>Perform</b> a focused clinical examination for dysmorphic features, developmental delay, and organomegaly.</li> <li>• <b>Assess</b> nutritional status, growth parameters, and developmental milestones.</li> <li>• <b>Examine</b> the liver and spleen for enlargement using proper pediatric techniques.</li> <li>• <b>Evaluate</b> muscle tone, strength, and motor function in metabolic/myopathic presentations.</li> <li>• <b>Perform and document</b> a thorough neurologic examination in infants and children.</li> <li>• <b>Assess</b> hydration status and vital signs in acutely ill metabolic patients.</li> <li>• <b>Provide</b> caregiver instructions on feeding techniques, dietary restrictions, and monitoring needs.</li> </ul>

## BONE AND JOINT DISORDER

### Theory

Code	Topics	Specific Learning Objectives
Pe-118	Septic arthritis and Osteomyelitis	<ul style="list-style-type: none"> <li>• Define and discuss etiology of septic arthritis and osteomyelitis</li> <li>• Identify key clinical features of septic arthritis and osteomyelitis</li> <li>• Discuss differential diagnosis</li> <li>• Interpret investigations suggestive of Septic arthritis and osteomyelitis</li> <li>• Outline principles of management and monitoring.</li> </ul>

		<ul style="list-style-type: none"> <li>• Describe Prognosis</li> </ul>
Pe-119	Juvenile Idiopathic Arthritis	<ul style="list-style-type: none"> <li>• Define diagnostic criteria and classify JIA.</li> <li>• Describe etiology and trigger of the disease.</li> <li>• Discuss its pathophysiology.</li> <li>• Discuss differential diagnosis</li> <li>• Interpret base line and confirmatory investigations.</li> <li>• Outline management plan</li> <li>• Explain long-term monitoring and follow-up requirements</li> <li>• Discuss prognosis and counseling of patient and parents</li> </ul>
Pe-120	Systemic Lupus Erythematosus	<ul style="list-style-type: none"> <li>• Define diagnostic criteria of SLE.</li> <li>• Describe etiology and trigger of the disease.</li> <li>• Discuss pathophysiology.</li> <li>• Discuss differential diagnosis</li> <li>• Interpret baseline and confirmatory investigations.</li> <li>• Outline management plan</li> <li>• Explain long-term monitoring and follow-up requirements</li> <li>• Discuss prognosis and counseling of patient and parents</li> </ul>
Pe-121	Henoch-Schonlein Purpura (HSP)	<ul style="list-style-type: none"> <li>• Define HSP</li> <li>• Discuss Pathogenesis and clinical findings.</li> <li>• Interpret basic investigations for differential diagnosis</li> <li>• Outline management plan and prognosis</li> <li>• Identify acute complications requiring urgent intervention</li> <li>• Discuss prognosis of the disease.</li> </ul>

Clinical Skills		
Code	Topic	Clinical method /Skill
Pe-122	Clinical examination for Joints and bone	<ul style="list-style-type: none"> <li><b>Perform</b> a focused joint and bone clinical examination.</li> <li><b>Look</b> sign of discomfort, trauma, bruising, rash</li> <li><b>Feel</b> for warmth, swelling and rash</li> <li><b>Check</b> active and passive movements</li> <li><b>Check</b> for joint function.</li> <li><b>Evaluate</b> gait and balance.</li> <li><b>Perform and document</b> the findings and counsel the patient and parents</li> </ul>
GENETIC DISORDER		
Theory		
Code	Topics	Specific Learning Objectives
Pe-123	Chromosomal Abnormalities	<ul style="list-style-type: none"> <li>Discuss chromosomal abnormalities in number and structure</li> <li>Identify autosomal and sex chromosome abnormalities</li> <li>List the Single gene defect</li> <li>Discuss the characteristics of autosomal and X-linked dominant and recessive disorders</li> <li>Interpret karyotyping of trisomy 21 and turner syndrome.</li> </ul>
Pe-124	Down Syndrome	<ul style="list-style-type: none"> <li>Discuss types of defect regarding translocation, nondisjunction and mosaicism</li> <li>Describe its epidemiology and clinical features</li> <li>Interpret diagnostic and screening investigations</li> <li>Outline management plan</li> <li>Explain long-term monitoring and follow-up requirements</li> </ul>

		<ul style="list-style-type: none"> <li>Discuss prognosis and counseling of the parents</li> </ul>
Pe-125	Turner Syndrome	<ul style="list-style-type: none"> <li>Discuss epidemiology and type of defect</li> <li>Describe its clinical features and associated diseases</li> <li>Interpret diagnostic investigations</li> <li>Explain long-term monitoring and follow-up requirements</li> <li>Discuss prognosis and counseling of the parents</li> </ul>

### Clinical Skills

Code	System	Clinical method /Skill
Pe-126	Clinical examination	<ul style="list-style-type: none"> <li><b>Perform</b> examination regarding clinical features of Down and Turner syndrome.</li> <li><b>Look</b> for simian crease, cubitus valgus, lymphedema of hand and feet, epicanthic fold, brushfield spots, flat occiput short broad hands, and clinodactyly</li> <li><b>Check</b> for hypotonia, thyroid, blood pressure, murmur for aortic stenosis or coarctation of aorta</li> <li><b>Evaluate</b> gait and balance.</li> <li>Document all findings</li> </ul>

### CHILD ABUSE AND PEDIATRIC TRAUMA

Pe-127	Medico legal aspects (integrate with Forensic Medicine)	<ul style="list-style-type: none"> <li>Estimate the age of child for consent.</li> <li>Diagnose a case of suspected child abuse and pediatric trauma presenting in the ER or OPD.</li> <li>Identify the form of abuse (physical, sexual, toxic, chemical/electrical, psychological).</li> <li>Enlist appropriate investigations to confirm above suspicion.</li> <li>Interpret lab/radiological findings.</li> </ul>
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		<ul style="list-style-type: none"><li>• Refer the case to medical officer for medicolegal certification.</li><li>• Refer the case to appropriate agency for treatment and rehabilitation.</li></ul>
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## SPECIALTY SPECIFIC INSTRUMENTS LIST

- Pediatric/infant stethoscope
- Sphygmomanometer (child/infant cuffs)
- Thermometer (digital, tympanic, rectal)
- Otoscope
- Ophthalmoscope
- Tongue depressor
- Pulse oximeter (pediatric probe)
- Infant weighing scale
- Infantometer / length measuring board
- Head circumference tape
- Newborn resuscitation bag and mask (Ambu bag)
- Neonatal stethoscope
- Suction devices (manual or bulb syringe)
- IV cannula (small gauge)
- Butterfly needles
- Pediatric catheters
- Syringes (1–5 mL)
- Nebulizer
- Laryngoscope with pediatric blades
- Endotracheal tubes (infant and child sizes)
- Suction catheters
- Oxygen masks (pediatric sizes)
- Pediatric ear speculum
- Nasal aspirator
- Eye chart for children (Snellen / LEA symbols)
- Pediatric ophthalmic tonometer
- Pediatric scalpel and scissors
- Pediatric forceps
- Needle holders
- Pediatric retractors
- Umbilical clamp

- Suture materials (small sizes)
- Reflex hammer (small)
- Tuning fork (for older children)
- Otolaryngology suction tips (small)
- Glucometer

08

*Section*



**FINAL YEAR MBBS**

MEDICINE CLERKSHIP							
Theory			Clinical skills			Total Marks	
Paper 1 MCQs	100 Marks	200 Marks	OSCE	10 stations x 5 marks= 50 marks	200 Marks	400 Marks	
			OSVE	02 Stations x 10 marks= 20 marks			
Paper 2 MCQs	100 Marks		Short case	02 Short case x 30 marks = 60 marks	200 Marks		
			Long case	01 Long case x 70 marks = 70 marks			
Internal assessment (10%) Theory	50 marks	Internal assessment (10%) Practical			50 marks	100 Marks	

**Total=500 Marks**

SURGERY CLERKSHIP							
Theory			Clinical skills			Total Marks	
Paper 1 MCQs	100 Marks	200 Marks	OSCE	10 stations x 5 marks= 50 marks	200 Marks	400 Marks	
			OSVE	02 Stations x 10 marks= 20 marks			
Paper 2 MCQs	100 Marks		Short case	02 Short case x 30 marks = 60 marks	200 Marks		
			Long case	1 Long case x 70 marks = 70 marks			
Internal assessment (10%) Theory	50 marks	Internal assessment (10%) Practical			50 marks	100 Marks	

**Total=500 Marks**

OBSTETRIC & GYNAECOLOGY CLERKSHIP						
Theory			Clinical skills			Total Marks
Obstetri cs MCQs	60 Marks	120	OSCE	08 stations x 5 marks= 40 marks	120 Marks	240 Marks
			OSVE	02 Stations x 10 marks= 20 marks		

Gynaecology MCQs	60 Marks	Marks	Short case	2 Short case x 15 marks = 30 marks		
			Long case	1 Long case x 30 marks = 30 marks		
Internal assessment (10%) Theory	30 marks	Internal assessment (10%) Practical		30 marks	<b>60 Marks</b>	

**Total=300 Marks**

### PAEDIATRICS CLERKSHIP

Theory		Clinical skills			Total Marks		
MCQs (80)	80 Marks	OSCE	08 stations x 5 marks= 40 marks	80 Marks	<b>160 Marks</b>		
		OSVE	02 Stations x 5 marks= 10 marks				
		Short case	1 Short case x 10 marks = 10 marks				
		Long case	1 Long case x 20 marks = 20 marks				
Internal assessment (10%) Theory	20 Marks	Internal assessment (10%) Practical		20 Marks	<b>40 Marks</b>		
<b>Total=200 Marks</b>							
<b>GRAND TOTAL=1500 Marks</b>							

## INTERNAL ASSESSMENT

It shall constitute 20% of the total assessment at the end of the academic year.

	Scoring Parameter	Weightage (percentage)
<b>Theory 10 %</b>	Attendance	75% attendance -1 % >85% attendance -2 %
	Block Exam	5 %
	Continuous assessment	3 %
<b>Practical 10 %</b>	Attendance	75% attendance -1 % >85% attendance -2 %
	Block Exam	5 %
	Clinical logbooks	3 %

### **\*Remedial / Re-sit Exam Policy**