Lesson Plan (Medicine)

Topic: Approach to Chest Pain

Introduction: Chest pain is a common presenting complaint with causes ranging from benign musculoskeletal conditions to life-threatening cardiovascular and respiratory emergencies. A systematic approach helps identify red flags, establish the likely diagnosis, select investigations and initiate timely management.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Chest Pain
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define chest pain and describe its major clinical patterns and differential diagnoses.
2. Identify red flags suggesting acute coronary syndrome and other life-threatening causes.
3. Take a focused history including site, onset, character, radiation, duration and associated symptoms.
4. Perform focused general, cardiovascular and respiratory examinations.
5. Select appropriate initial investigations and interpret basic ECG and laboratory findings.
6. Outline immediate management, risk stratification and referral priorities.

Content Outline & Time Allocation

Time	Content
0–5 min	Introduction: definition, importance, objectives and initial triage.
5–15 min	Red flags and immediate assessment: ABC, vital signs and clinical stability.
15–27 min	Focused history: characteristics, radiation, precipitating/relieving factors and associated symptoms.
27–37 min	Differential diagnosis: ACS, aortic dissection, PE, pneumothorax, pericarditis, pneumonia, GI and musculoskeletal causes.
37–47 min	Focused physical examination: cardiovascular, respiratory and general examination.
47–55 min	Investigations: ECG, cardiac biomarkers, chest X-ray and selected imaging.
55–60 min	Initial management, risk stratification, summary and questions.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results, case-based discussions	Interactive questioning, examination of short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Chest Pain**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Headache

Introduction: Headache is a frequent symptom with a broad differential diagnosis. A structured assessment distinguishes primary headache disorders from secondary causes requiring urgent investigation.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Headache
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Classify headache according to onset, duration, pattern and clinical characteristics.
2. Recognize red flags for secondary headache and neurological emergencies.
3. Take a focused headache history including associated neurological and systemic symptoms.
4. Perform an appropriate neurological and general examination.
5. Select investigations according to the suspected cause rather than routinely imaging all patients.
6. Outline initial management and indications for urgent referral.

Content Outline & Time Allocation

Time	Content
0–8 min	Definition, classification and approach to the presenting complaint.
8–18 min	History: onset, site, character, severity, duration, triggers and associated symptoms.
18–28 min	Red flags: thunderclap headache, fever, meningism, focal deficit, altered consciousness and papilloedema.
28–38 min	Differential diagnosis: migraine, tension-type headache, cluster headache and secondary causes.
38–50 min	Examination and investigations: neurological examination, fundoscopy and selected imaging/laboratory tests.
50–60 min	Management principles, safety-netting, referral and case discussion.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results and examination demonstrations	Interactive questioning, case-based discussion, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Headache**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Fever

Introduction: Fever is a common manifestation of infection and inflammatory disease. Clinical assessment should identify the source, severity and complications while considering non-infectious causes.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Fever
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define fever and describe common patterns and causes.
2. Identify features of sepsis and other clinically unstable presentations.
3. Take a focused history to identify a possible source and epidemiological risk factors.
4. Perform a systematic physical examination to localize infection.
5. Choose appropriate laboratory and microbiological investigations.
6. Outline principles of supportive treatment, antimicrobial use and follow-up.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition, physiology and clinical importance of fever.
7–17 min	History: duration, pattern, associated symptoms, exposures, travel, drugs and comorbidities.
17–27 min	Assessment of severity: vital signs, sepsis features and danger signs.
27–38 min	Focused examination for respiratory, urinary, gastrointestinal, neurological and skin sources.
38–50 min	Investigations: CBC, CRP, cultures, urinalysis, imaging and targeted tests.
50–60 min	Management, rational antimicrobial principles, monitoring and case discussion.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results and guidelines	Interactive questioning, case-based discussion, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Fever**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Cough and Hemoptysis

Introduction: Cough is a protective respiratory reflex, while hemoptysis may indicate disease ranging from airway infection to malignancy or pulmonary vascular pathology. Careful assessment is essential to determine severity and cause.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Cough and Hemoptysis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Classify cough by duration and recognize clinically important patterns.
2. Differentiate hemoptysis from hematemesis and upper airway bleeding.
3. Identify life-threatening hemoptysis and respiratory compromise.
4. Take a focused respiratory and exposure history.
5. Perform appropriate general and respiratory examination.
6. Select investigations and outline initial management.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition, classification and clinical significance.
7–18 min	History of cough: duration, sputum, triggers, dyspnoea, fever, weight loss and exposures.
18–27 min	Hemoptysis: amount, frequency, associated symptoms and distinction from other bleeding.
27–38 min	Differential diagnosis: infection, TB, bronchiectasis, malignancy, PE and cardiac causes.
38–50 min	Examination and investigations: chest examination, CXR, CBC, coagulation tests and selected CT/bronchoscopy.
50–60 min	Emergency management, definitive evaluation and summary.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results and examination videos	Interactive questioning, case-based discussions, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Cough and Hemoptysis**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Anorexia, Nausea, Vomiting

Introduction: Anorexia, nausea and vomiting are non-specific symptoms that may arise from gastrointestinal, metabolic, neurological, infectious, medication-related and systemic disorders. Assessment should identify the cause and complications.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Anorexia, Nausea, Vomiting
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define anorexia, nausea and vomiting and describe important causes.
2. Assess severity, duration and complications such as dehydration and electrolyte disturbance.
3. Take a structured gastrointestinal, medication and systemic history.
4. Identify red flags requiring urgent evaluation.
5. Perform focused general and abdominal examination.
6. Select investigations and formulate an initial management plan.

Content Outline & Time Allocation

Time	Content
0–7 min	Definitions, mechanisms and common causes.
7–18 min	History: onset, timing, contents, triggers, abdominal symptoms, bowel habit, drugs and systemic symptoms.
18–28 min	Red flags: persistent vomiting, GI bleeding, severe pain, obstruction, neurological signs and dehydration.
28–38 min	Differential diagnosis: GI, metabolic, endocrine, neurological, infectious and medication-related causes.
38–50 min	Examination and investigations: hydration, abdomen, electrolytes, renal function and targeted tests.
50–60 min	Management, fluid/electrolyte correction, antiemetic principles and follow-up.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results, case-based discussions	Interactive questioning, examination of short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Anorexia, Nausea, Vomiting**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Hematemesis

Introduction: Hematemesis represents upper gastrointestinal bleeding and can be life-threatening. The initial priority is stabilization followed by assessment of severity, likely source and need for urgent endoscopic intervention.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Hematemesis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define hematemesis and distinguish it from other sources of blood loss.
2. Recognize shock and severe upper GI bleeding requiring immediate resuscitation.
3. Take a focused history for source, precipitating factors and bleeding risk.
4. Perform focused examination including haemodynamic assessment.
5. Select appropriate laboratory and diagnostic investigations.
6. Outline resuscitation, pharmacologic treatment and endoscopic management principles.

Content Outline & Time Allocation

Time	Content
0–8 min	Definition, common causes and clinical importance.
8–18 min	History: quantity, colour, melena, pain, liver disease, NSAIDs, anticoagulants and previous bleeding.
18–28 min	Initial assessment: ABC, haemodynamic status, shock and risk stratification.
28–38 min	Examination and differential diagnosis including peptic ulcer disease, varices and mucosal lesions.
38–50 min	Investigations: CBC, coagulation profile, renal/liver function, grouping/crossmatch and endoscopy.
50–60 min	Resuscitation, medication principles, urgent endoscopy and prevention of recurrence.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results, case-based discussions	Interactive questioning, examination of short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Hematemesis**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Jaundice

Introduction: Jaundice results from elevated bilirubin and may arise from pre-hepatic, hepatic or post-hepatic disease. A structured history, examination and laboratory approach helps localize the underlying pathology.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Jaundice
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define jaundice and classify it into pre-hepatic, hepatic and post-hepatic patterns.
2. Identify symptoms and signs suggesting serious hepatic or biliary disease.
3. Take a focused history including drugs, alcohol, infection risks and exposure history.
4. Perform general and abdominal examination for hepatic and biliary signs.
5. Interpret basic liver biochemical patterns and select appropriate imaging.
6. Outline initial management and referral according to the cause.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition, bilirubin metabolism and classification.
7–18 min	History: onset, dark urine, pale stool, pruritus, pain, fever, drugs, alcohol and risk factors.
18–28 min	Examination: pallor, stigmata of chronic liver disease, hepatosplenomegaly and abdominal findings.
28–38 min	Differential diagnosis and interpretation of hepatocellular versus cholestatic patterns.
38–50 min	Investigations: LFT, CBC, viral testing when indicated, ultrasound and further imaging.
50–60 min	Management principles, complications and referral.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results and guidelines	Interactive questioning, case-based discussions, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Jaundice**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Anemia

Introduction: Anemia is a common clinical problem and a manifestation of diverse nutritional, hematological, chronic systemic and bleeding disorders. A systematic approach determines severity, morphology and cause.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Anemia
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define anemia and classify it using haemoglobin level and red-cell indices.
2. Recognize symptoms and signs of severe or rapidly developing anemia.
3. Take a focused history for blood loss, nutritional deficiency, chronic disease and inherited disorders.
4. Perform a general and systemic examination for clues to etiology.
5. Interpret CBC and peripheral blood film findings and select further tests.
6. Outline cause-specific management and indications for urgent treatment.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition, clinical significance and classification.
7–18 min	History: fatigue, dyspnoea, bleeding, diet, menstrual history, chronic disease, drugs and family history.
18–28 min	Examination: pallor, jaundice, lymphadenopathy, splenomegaly and signs of systemic disease.
28–38 min	Morphological approach: microcytic, normocytic and macrocytic anemia.
38–50 min	Investigations: CBC, film, reticulocyte count, iron studies, B12/folate and targeted tests.
50–60 min	Management, transfusion principles, referral and case discussion.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results and guidelines	Interactive questioning, case-based discussion, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Anemia**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Bleeding

Introduction: Bleeding may result from vascular, platelet, coagulation or systemic disorders, or from medications. A structured approach identifies the bleeding pattern, severity and underlying mechanism.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Bleeding
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Classify bleeding according to clinical pattern and likely haemostatic defect.
2. Identify life-threatening bleeding and assess haemodynamic stability.
3. Take a focused history including medications, family history and previous bleeding.
4. Perform examination for petechiae, purpura, ecchymosis and systemic disease.
5. Interpret basic coagulation and platelet investigations.
6. Outline immediate management and appropriate specialist referral.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition and overview of haemostasis.
7–18 min	History: mucocutaneous versus deep tissue bleeding, onset, drugs and family history.
18–28 min	Severity assessment, haemodynamic instability and major bleeding.
28–38 min	Examination and differential diagnosis: platelet, coagulation and vascular disorders.
38–50 min	Investigations: CBC/platelets, PT/INR, aPTT, fibrinogen and targeted tests.
50–60 min	Initial management, reversal of anticoagulation when indicated and referral.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation examples and guidelines	Interactive questioning, case-based discussion, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Bleeding**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: General Concept of Pain

Introduction: Pain is a complex sensory and emotional experience and is one of the most common reasons for seeking medical care. Understanding its mechanisms and clinical assessment is essential for diagnosis and treatment.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	General Concept of Pain
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define pain and describe its physiological and clinical dimensions.
2. Differentiate nociceptive, neuropathic and nociplastic pain.
3. Assess pain systematically using appropriate clinical tools.
4. Recognize acute, chronic and cancer-related pain patterns.
5. Identify psychosocial factors and red flags associated with pain.
6. Outline principles of multimodal and rational pain management.

Content Outline & Time Allocation

Time	Content
0–8 min	Definition, physiology and classification of pain.
8–18 min	Pain assessment: site, character, severity, timing, radiation, triggers and impact on function.
18–28 min	Nociceptive versus neuropathic pain and common clinical examples.
28–38 min	Acute, chronic and cancer pain; red flags and psychosocial factors.
38–50 min	Clinical examination and targeted investigations.
50–60 min	Pharmacological and non-pharmacological management; monitoring and reassessment.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation examples and guidelines	Interactive questioning, case-based discussion, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **General Concept of Pain**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Nutrition and Vitamin Deficiency

Introduction: Good nutrition is essential for growth, immunity and normal organ function. Nutritional deficiency may result from inadequate intake, malabsorption, increased requirements or chronic disease and can present with diverse systemic manifestations.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Nutrition and Vitamin Deficiency
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Describe basic nutritional requirements and major nutrient groups.
2. Recognize common clinical manifestations of nutritional deficiency.
3. Identify risk factors for malnutrition and micronutrient deficiency.
4. Assess nutritional status using history, examination and appropriate measurements.
5. Select laboratory tests for suspected vitamin and nutrient deficiencies.
6. Outline prevention and treatment principles.

Content Outline & Time Allocation

Time	Content
0–8 min	Nutrition overview: macronutrients, micronutrients and energy requirements.
8–18 min	Dietary history, risk factors and assessment of nutritional status.
18–30 min	Vitamin deficiencies: A, D, E, K, B-group vitamins and C.
30–40 min	Mineral deficiencies: iron, calcium, iodine, zinc and others.
40–50 min	Clinical assessment and relevant laboratory investigations.
50–60 min	Dietary correction, supplementation, prevention and case discussion.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results and guidelines	Interactive questioning, case-based discussions, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Nutrition and Vitamin Deficiency**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Constipation

Introduction: Constipation is a common symptom characterized by infrequent or difficult defecation and may be functional or secondary to systemic disease, medication or structural pathology.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Constipation
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Define constipation and identify major clinical patterns.
2. Recognize alarm features suggesting an underlying organic cause.
3. Take a structured bowel, dietary, medication and systemic history.
4. Perform appropriate abdominal and rectal examination when indicated.
5. Select investigations based on clinical findings.
6. Outline lifestyle, pharmacological and cause-specific management.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition, bowel physiology and clinical patterns.
7–18 min	History: stool frequency/consistency, straining, pain, diet, fluid intake and medications.
18–28 min	Alarm symptoms: bleeding, weight loss, anemia, vomiting, severe pain and altered bowel habit.
28–38 min	Examination and differential diagnosis including functional and secondary causes.
38–50 min	Investigations when indicated: CBC, metabolic tests, thyroid testing and selected endoscopy/imaging.
50–60 min	Dietary/lifestyle measures, laxative classes, monitoring and referral.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation examples and guidelines	Interactive questioning, case-based discussion, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Constipation**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Approach to Abdominal Pain

Introduction: Abdominal pain has a broad differential diagnosis involving gastrointestinal, hepatobiliary, urinary, vascular, gynecological and extra-abdominal disorders. A systematic assessment identifies surgical emergencies and medical causes.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to Abdominal Pain
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Characterize abdominal pain by site, onset, character, radiation and associated symptoms.
2. Identify features suggesting acute abdomen and other emergencies.
3. Perform focused general and abdominal examination.
4. Develop a differential diagnosis based on anatomical location and clinical pattern.
5. Select appropriate laboratory and imaging investigations.
6. Outline initial management, resuscitation and referral.

Content Outline & Time Allocation

Time	Content
0–7 min	Definition and importance of systematic assessment.
7–18 min	History: site, onset, character, radiation, severity, bowel/urinary symptoms and associated features.
18–28 min	Red flags: shock, peritonism, GI bleeding, obstruction, severe sudden pain and vascular features.
28–38 min	Examination: general, abdominal, hernia, rectal and relevant systemic examination.
38–50 min	Investigations: CBC, renal/liver tests, amylase/lipase when indicated, urinalysis and imaging.
50–60 min	Initial management, analgesia, fluids, monitoring and urgent referral.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results, case-based discussions	Interactive questioning, examination of short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Approach to Abdominal Pain**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Communication Skill

Introduction: Effective communication is a core clinical skill that supports accurate diagnosis, shared decision-making, adherence and patient safety. The session focuses on structured, empathetic and patient-centred communication.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Communication Skill
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Explain the importance of effective communication in clinical practice.
2. Establish rapport and demonstrate appropriate verbal and non-verbal communication.
3. Use open and closed questions appropriately during history taking.
4. Listen actively and clarify patient concerns, expectations and ideas.
5. Explain information clearly and check patient understanding.
6. Demonstrate skills for difficult conversations and shared decision-making.

Content Outline & Time Allocation

Time	Content
0–8 min	Importance of communication, rapport and professional behaviour.
8–18 min	Opening a consultation, introductions, consent and agenda setting.
18–30 min	Questioning, active listening, empathy, non-verbal communication and clarification.
30–40 min	Explaining diagnosis/investigations and checking understanding.
40–50 min	Shared decision-making, informed consent and managing difficult conversations.
50–60 min	Role-play, feedback, summary and assessment.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results, case-based discussions	Interactive questioning, examination of, short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Communication Skill**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Doctor-Patient Relationship

Introduction: The doctor-patient relationship is central to safe and effective medical care. Trust, respect, confidentiality, empathy and professional boundaries support therapeutic relationships and improve clinical outcomes.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Doctor-Patient Relationship
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Describe the principles of a therapeutic doctor-patient relationship.
2. Demonstrate respect, empathy, confidentiality and appropriate professional boundaries.
3. Recognize factors that influence trust and patient satisfaction.
4. Apply patient-centred communication during clinical encounters.
5. Explain the role of shared decision-making and informed consent.
6. Identify communication challenges and strategies to manage them professionally.

Content Outline & Time Allocation

Time	Content
0–8 min	Definition, importance and models of the doctor-patient relationship.
8–18 min	Trust, respect, empathy, dignity, confidentiality and professional boundaries.
18–30 min	Patient-centred care, active listening and understanding patient expectations.
30–40 min	Informed consent, shared decision-making and autonomy.
40–50 min	Managing conflict, complaints, difficult patients and cultural/language barriers.
50–60 min	Case scenarios, role-play, feedback and summary.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation results, case-based discussions	Interactive questioning, examination of short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Doctor-Patient Relationship**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Medical Ethics and Patient Safety

Introduction: Medical ethics provides a framework for professional decision-making, while patient safety focuses on preventing avoidable harm. Doctors must integrate ethical principles with safe systems of care and effective communication.

Course Information

Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Medical Ethics and Patient Safety
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of relevant clinical systems
Date & Time	
Teacher	

Learning Objectives

1. Describe the core principles of medical ethics in clinical practice.
2. Explain autonomy, beneficence, non-maleficence and justice with clinical examples.
3. Discuss confidentiality, informed consent and decision-making capacity.
4. Recognize common patient-safety hazards and preventable errors.
5. Apply safe prescribing, identification, documentation and handover principles.
6. Describe incident reporting, teamwork and strategies for improving patient safety.

Content Outline & Time Allocation

Time	Content
0–8 min	Introduction to medical ethics and patient safety.
8–20 min	Autonomy, beneficence, non-maleficence and justice.
20–30 min	Consent, capacity, confidentiality and privacy.
30–40 min	Patient safety: identification, communication, medication safety, infection prevention and handover.
40–50 min	Clinical errors, incident reporting, disclosure and systems-based prevention.
50–60 min	Case discussion, ethical reasoning, safety checklist and summary.

Resources & Evaluation

Teaching Resources	Evaluation Methods
Lecture slides, whiteboard, relevant clinical cases, diagrams, investigation request forms, case-based discussions	Interactive questioning, examination of short oral assessment and rev

Assignment

Prepare a structured clinical approach to **Medical Ethics and Patient Safety**, including relevant history, examination, important differential diagnoses, appropriate investigations and key management principles.

Lesson Plan (Medicine)

Topic: Acute and Chronic Effects of Alcohol

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on the acute and chronic effects of alcohol.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Acute and Chronic Effects of Alcohol
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic physiology, pharmacology and hepatology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Describe alcohol pharmacology and metabolism.
2. Recognize acute alcohol intoxication and complications.
3. Explain chronic organ damage due to alcohol use.
4. Identify alcohol withdrawal syndrome.
5. Outline emergency and long-term management.
6. Discuss prevention and counseling strategies.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Epidemiology and metabolism	PPT
10–20	Acute Effects	Intoxication and poisoning	Lecture
20–30	Chronic Effects	Liver, CNS, GI and cardiovascular effects	Interactive
30–40	Diagnosis	Clinical assessment and investigations	Discussion
40–50	Management	Supportive care, withdrawal treatment, counseling	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, standard textbooks, clinical guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the acute and chronic effects of alcohol and outline management principles.

Lesson Plan (Medicine)

Topic: Acute Kidney Injury (AKI)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Acute Kidney Injury.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Acute Kidney Injury (AKI)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, physiology and renal function tests.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define AKI using KDIGO criteria.
2. Describe prerenal, intrinsic and postrenal causes.
3. Recognize clinical features and complications.
4. Interpret serum creatinine, urine analysis and imaging.
5. Outline evidence-based management.
6. Discuss indications for renal replacement therapy.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of oliguria	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	Prerenal, intrinsic, postrenal AKI	Diagrams
20–30	Clinical Features	Symptoms, signs and complications	Interactive discussion
30–40	Diagnosis	Creatinine, urine microscopy, ultrasound	Investigation review
40–50	Management	Fluids, electrolyte correction, dialysis indications	Treatment algorithm
50–60	Summary	Prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, AKI algorithms, laboratory reports and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare AKI and CKD and outline the initial management of AKI.

Lesson Plan (Medicine)

Topic: Acute Pancreatitis

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Acute Pancreatitis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Acute Pancreatitis
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of pancreatic anatomy, physiology and hepatobiliary system
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define acute pancreatitis and describe its epidemiology.
2. Explain etiology and pathophysiology including gallstones and alcohol.
3. Recognize clinical features and severity assessment.
4. Interpret serum amylase/lipase and imaging findings.
5. Outline evidence-based management and complications.
6. Discuss prevention and indications for intervention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of severe epigastric pain	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	Gallstones, alcohol, enzyme activation	Diagrams
20–30	Clinical Features	Symptoms, signs, severity scores	Interactive discussion
30–40	Diagnosis	Amylase, lipase, CT abdomen, USG	Investigation review
40–50	Management	Fluids, analgesia, nutrition, ERCP indications	Treatment algorithm
50–60	Summary	Complications, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, CT images, ultrasound images, guideline flowcharts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare mild and severe acute pancreatitis and summarize initial management.

Lesson Plan (Medicine)

Topic: Adrenal Disorders

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Adrenal Disorders.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Adrenal Disorders
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of adrenal anatomy, physiology and endocrine regulation.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Describe the anatomy, physiology and hormones of the adrenal gland.
2. Classify common adrenal disorders including adrenal insufficiency, Cushing syndrome, primary hyperaldosteronism and pheochromocytoma.
3. Recognize the clinical manifestations and complications of adrenal diseases.
4. Interpret hormonal assays and adrenal imaging.
5. Outline evidence-based medical and surgical management.
6. Discuss adrenal crisis, long-term follow-up and patient education.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of adrenal insufficiency	Case discussion
5–10	Introduction	Adrenal anatomy and physiology	PPT
10–20	Pathophysiology	Addison disease, Cushing syndrome, hyperaldosteronism, pheochromocytoma	Diagrams
20–30	Clinical Features	Symptoms, signs and endocrine emergencies	Interactive discussion
30–40	Diagnosis	Hormonal tests, dexamethasone suppression test, CT/MRI	Investigation review
40–50	Management	Steroid replacement, surgery, medical therapy	Treatment algorithm
50–60	Summary	Adrenal crisis, follow-up and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, endocrine algorithms, adrenal imaging, Endocrine Society guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of adrenal insufficiency and Cushing syndrome.

Lesson Plan (Medicine)

Topic: Anaphylactic Shock

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Anaphylactic Shock.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Anaphylactic Shock
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology, emergency medicine and pharmacology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define anaphylaxis and anaphylactic shock.
2. Explain the immunopathogenesis.
3. Recognize clinical features and diagnostic criteria.
4. Differentiate anaphylaxis from other causes of shock.
5. Outline emergency management including intramuscular adrenaline.
6. Discuss prevention and long-term patient education.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Emergency case scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Pathophysiology	IgE-mediated hypersensitivity	Lecture
20–30	Clinical Features	Respiratory, cardiovascular and skin findings	Interactive
30–40	Diagnosis	Clinical criteria and differential diagnosis	Discussion
40–50	Management	Adrenaline, airway, fluids and observation	Algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, anaphylaxis guidelines, emergency algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Describe the diagnosis and emergency management of anaphylactic shock.

Lesson Plan (Medicine)

Topic: Anemias

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Anemias.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Anemias
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic hematology, RBC physiology and interpretation of CBC.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define anemia and classify it morphologically and etiologically.
2. Describe the pathophysiology of common anemias.
3. Recognize clinical manifestations and complications.
4. Interpret CBC, peripheral blood smear, reticulocyte count and iron studies.
5. Outline evidence-based management of common anemias.
6. Discuss prevention, follow-up and patient education.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of fatigue and pallor	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Iron deficiency, megaloblastic, hemolytic and anemia of chronic disease	Diagram
20–30	Clinical Features	History, examination and complications	Interactive discussion
30–40	Diagnosis	CBC, smear, iron studies, vitamin B12 and folate	Investigation review
40–50	Management	Treat underlying cause, iron, B12, folate and transfusion indications	Treatment algorithm
50–60	Summary	Prevention, follow-up and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, peripheral blood smear images, CBC examples, treatment guidelines and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the classification, diagnosis and management of common anemias.

Lesson Plan (Medicine)

Topic: Approach to a Patient with Breathlessness

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on the systematic approach to a patient with breathlessness.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Approach to a Patient with Breathlessness
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic respiratory and cardiovascular physiology.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define breathlessness and its mechanisms.
2. Classify acute and chronic causes.
3. Perform focused history and physical examination.
4. Interpret initial investigations including CXR, ECG and ABG.
5. Develop differential diagnoses and management priorities.
6. Recognize life-threatening causes requiring urgent intervention.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and causes	PPT
10–20	Assessment	History and examination	Lecture
20–30	Investigations	Pulse oximetry, ABG, CXR, ECG, labs	Interactive
30–40	Differential Diagnosis	Respiratory, cardiac and other causes	Discussion
40–50	Management	Emergency stabilization and cause-specific treatment	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, medicine textbooks, clinical guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Outline the systematic assessment and initial management of a patient presenting with breathlessness.

Lesson Plan (Medicine)

Topic: Autoimmunity

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Autoimmunity.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Autoimmunity
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology and pathology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define autoimmunity and self-tolerance.
2. Explain mechanisms leading to autoimmune disease.
3. Classify organ-specific and systemic autoimmune disorders.
4. Recognize clinical features and diagnostic tests.
5. Outline principles of management including immunosuppression.
6. Discuss prevention, monitoring and prognosis.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Mechanisms	Loss of tolerance, genetics	Lecture
20–30	Clinical	Major autoimmune diseases	Interactive
30–40	Diagnosis	Autoantibodies and investigations	Discussion
40–50	Management	Immunosuppressive therapy	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, immunology textbooks, clinical guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the mechanisms, diagnosis and management principles of autoimmune diseases.

Lesson Plan (Medicine)

Topic: Bronchial Asthma

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Bronchial Asthma.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Bronchial Asthma
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of respiratory anatomy, physiology and immunology.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define bronchial asthma and classify its types.
2. Describe pathophysiology and common triggers.
3. Recognize clinical features and severity assessment.
4. Interpret spirometry and other investigations.
5. Outline acute and long-term management according to GINA guidelines.
6. Discuss complications and preventive measures.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of wheeze and dyspnea	Case discussion
5–10	Introduction	Definition, epidemiology, risk factors	PPT
10–20	Pathophysiology	Airway inflammation, hyperresponsiveness, remodeling	Animated diagrams
20–30	Clinical Features	Symptoms, examination, severity	Interactive discussion
30–40	Diagnosis	Spirometry, PEFR, allergy tests	Investigation review
40–50	Management	Reliever, controller therapy, acute exacerbation	Treatment algorithm
50–60	Summary	Complications, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, spirometry graphs, inhaler devices, GINA guideline flowcharts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare asthma and COPD; summarize GINA stepwise management.

Lesson Plan (Medicine)

Topic: Bronchiectasis

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Bronchiectasis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Bronchiectasis
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of respiratory anatomy, physiology and pulmonary infections
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define bronchiectasis and classify its types.
2. Describe etiology, pathophysiology and risk factors.
3. Recognize clinical features and complications.
4. Interpret HRCT chest, sputum culture and pulmonary function tests.
5. Outline medical, physiotherapy and surgical management.
6. Discuss prevention and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of chronic productive cough	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	Airway destruction and mucus retention	Diagrams
20–30	Clinical Features	Symptoms, signs and complications	Interactive discussion
30–40	Diagnosis	HRCT, sputum culture, spirometry	Investigation review
40–50	Management	Antibiotics, airway clearance, bronchodilators, surgery	Treatment algorithm
50–60	Summary	Complications, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, HRCT images, sputum culture reports, BTS/ERS guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the causes of bronchiectasis and outline long-term management.

Lesson Plan (Medicine)

Topic: Brucellosis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Brucellosis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Brucellosis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic microbiology, infectious diseases and zoonoses.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define brucellosis and identify the causative organisms.
2. Explain modes of transmission and risk factors.
3. Recognize clinical manifestations and complications.
4. Interpret serological and microbiological investigations.
5. Outline evidence-based antimicrobial treatment.
6. Discuss prevention and public health measures.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Etiology	Transmission and pathogenesis	Lecture
20–30	Clinical Features	Acute and chronic disease	Interactive
30–40	Diagnosis	Blood culture and serology	Discussion
40–50	Management	Antibiotics and follow-up	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, infectious disease guidelines, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis, treatment and prevention of brucellosis.

Lesson Plan (Medicine)

Topic: Cardiac Arrest

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Cardiac Arrest.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Cardiac Arrest
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic cardiovascular physiology, ECG interpretation and emergency medici
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define cardiac arrest and identify arrest rhythms.
2. Explain the chain of survival.
3. Recognize reversible causes (Hs and Ts).
4. Interpret the ACLS algorithm.
5. Outline high-quality CPR, defibrillation and post-resuscitation care.
6. Discuss prognosis and prevention.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Emergency scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Pathophysiology	Arrest rhythms and Hs & Ts	Lecture
20–30	Recognition	BLS and ACLS principles	Interactive
30–40	Diagnosis	Rhythm recognition and monitoring	Discussion
40–50	Management	CPR, defibrillation, drugs, post-ROSC care	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, ACLS guidelines, resuscitation algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the current approach to cardiac arrest management following ACLS principles.

Lesson Plan (Medicine)

Topic: Chromosomal Disorders

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Chromosomal Disorders.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Chromosomal Disorders
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic genetics, embryology and pathology.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define chromosomal disorders and their classification.
2. Explain mechanisms of chromosomal abnormalities.
3. Recognize common numerical and structural disorders.
4. Interpret karyotyping and genetic investigations.
5. Outline principles of management and genetic counseling.
6. Discuss prevention and prenatal screening.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Genetics	Numerical and structural abnormalities	Lecture
20–30	Clinical Features	Common syndromes	Interactive
30–40	Diagnosis	Karyotyping and molecular tests	Discussion
40–50	Management	Supportive care and counseling	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, genetics textbooks, clinical guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the classification, diagnosis and management of chromosomal disorders.

Lesson Plan (Medicine)

Topic: Chronic Kidney Disease (CKD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Chronic Kidney Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Chronic Kidney Disease (CKD)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, physiology and renal function tests.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define CKD and classify according to KDIGO stages.
2. Describe causes and pathophysiology.
3. Recognize clinical manifestations and complications.
4. Interpret eGFR, albuminuria and relevant investigations.
5. Outline evidence-based medical management.
6. Discuss indications for dialysis and kidney transplantation.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of progressive renal impairment	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	Diabetes, hypertension, glomerular disease	Diagrams
20–30	Clinical Features	Uremia and CKD complications	Interactive discussion
30–40	Diagnosis	eGFR, urine ACR, imaging	Investigation review
40–50	Management	BP, RAAS blockade, SGLT2 inhibitors, dialysis planning	Treatment algorithm
50–60	Summary	Renal replacement therapy, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, CKD staging charts, KDIGO guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize CKD staging and outline comprehensive management of stage 4 CKD.

Lesson Plan (Medicine)

Topic: Chronic Liver Disease (CLD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Chronic Liver Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Chronic Liver Disease (CLD)
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of liver anatomy, physiology and liver function tests.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define chronic liver disease and describe its epidemiology.
2. Explain the etiology and pathophysiology of hepatic fibrosis and cirrhosis.
3. Recognize clinical features and complications of CLD.
4. Interpret liver function tests, viral markers and imaging.
5. Outline evidence-based management including complications of cirrhosis.
6. Discuss prevention, surveillance and liver transplantation indications.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of jaundice with ascites	Case discussion
5–10	Introduction	Definition, epidemiology	PPT
10–20	Etiology & Pathophysiology	Viral hepatitis, alcohol, NAFLD, fibrosis	Diagrams
20–30	Clinical Features	Portal hypertension, hepatic failure, complications	Interactive discussion
30–40	Diagnosis	LFT, ultrasound, FibroScan, endoscopy	Investigation review
40–50	Management	Etiology-specific therapy, ascites, varices, encephalopathy	Treatment algorithm
50–60	Summary	HCC surveillance, transplantation, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, ultrasound images, FibroScan reports, guideline flowcharts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize causes of cirrhosis and prepare a management plan for decompensated CLD.

Lesson Plan (Medicine)

Topic: Chronic Obstructive Pulmonary Disease (COPD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on COPD.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Chronic Obstructive Pulmonary Disease (COPD)
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of respiratory anatomy, physiology and smoking-related lung
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define COPD and describe its epidemiology.
2. Explain pathophysiology and risk factors.
3. Recognize clinical features and GOLD classification.
4. Interpret spirometry and relevant investigations.
5. Outline stable COPD and acute exacerbation management according to GOLD guidelines.
6. Discuss complications, pulmonary rehabilitation and prevention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of chronic cough and dyspnea	Case discussion
5–10	Introduction	Definition, epidemiology	PPT
10–20	Pathophysiology	Airflow limitation, emphysema, chronic bronchitis	Diagrams
20–30	Clinical Features	Symptoms, signs, GOLD assessment	Interactive discussion
30–40	Diagnosis	Spirometry, CXR, ABG	Investigation review
40–50	Management	Bronchodilators, ICS, oxygen, rehabilitation, exacerbation	Treatment algorithm
50–60	Summary	Complications, smoking cessation, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, spirometry curves, chest X-rays, GOLD guideline charts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare asthma and COPD and summarize GOLD assessment and treatment.

Lesson Plan (Medicine)

Topic: Dengue

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Dengue.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Dengue
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic virology, infectious diseases and fluid management.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define dengue and describe its epidemiology and transmission.
2. Explain the pathophysiology and WHO classification.
3. Recognize warning signs and severe dengue.
4. Interpret laboratory findings and diagnostic tests.
5. Outline fluid management and supportive treatment.
6. Discuss prevention, vector control and patient counseling.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of acute febrile illness	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	Disease phases and WHO classification	Diagrams
20–30	Clinical Features	Warning signs and severe dengue	Interactive discussion
30–40	Diagnosis	NS1, IgM/IgG, CBC and hematocrit	Investigation review
40–50	Management	Fluid therapy, monitoring and supportive care	Treatment algorithm
50–60	Summary	Prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO dengue guideline summaries, clinical algorithms and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of dengue according to WHO guidelines.

Lesson Plan (Medicine)

Topic: Diabetes Mellitus (DM)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Diabetes Mellitus.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Diabetes Mellitus (DM)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of carbohydrate metabolism and endocrine physiology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define Diabetes Mellitus and classify its major types.
2. Explain pathophysiology and risk factors.
3. Recognize clinical features and diagnostic criteria.
4. Interpret blood glucose, HbA1c and related investigations.
5. Outline lifestyle modification, pharmacological treatment and insulin therapy.
6. Discuss acute and chronic complications and prevention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of polyuria and polydipsia	Case discussion
5–10	Introduction	Definition, classification and epidemiology	PPT
10–20	Pathophysiology	Type 1, Type 2, insulin resistance	Diagrams
20–30	Clinical Features & Diagnosis	Symptoms, ADA criteria, HbA1c	Interactive discussion
30–40	Investigations	Blood glucose, HbA1c, complications screening	Investigation review
40–50	Management	Lifestyle, oral agents, insulin, monitoring	Treatment algorithm
50–60	Summary	Complications, prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, ADA guideline summaries, glucose monitoring charts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and comprehensive management of Type 2 Diabetes Mellitus.

Lesson Plan (Medicine)

Topic: Diabetic Ketoacidosis (DKA)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Diabetic Ketoacidosis (DKA).

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Diabetic Ketoacidosis (DKA)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic endocrinology, diabetes mellitus and emergency medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define DKA and explain its pathophysiology.
2. Identify common precipitating factors.
3. Recognize clinical manifestations and severity.
4. Interpret ABG, ketones and electrolyte abnormalities.
5. Outline evidence-based fluid, insulin and electrolyte management.
6. Discuss monitoring, complications and prevention.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Definition and diagnostic criteria	PPT
10–20	Pathophysiology	Insulin deficiency and ketosis	Lecture
20–30	Clinical Features	Symptoms, signs and complications	Interactive
30–40	Diagnosis	ABG, ketones, electrolytes	Discussion
40–50	Management	Fluids, insulin, potassium, monitoring	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, ADA guidelines, treatment algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis and management of diabetic ketoacidosis.

Lesson Plan (Medicine)

Topic: Drowning

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Drowning.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Drowning
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic emergency medicine, respiratory physiology and resuscitation.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define drowning and describe its epidemiology.
2. Explain the pathophysiology of drowning-related injury.
3. Recognize clinical features and complications.
4. Outline initial assessment and investigations.
5. Describe evidence-based resuscitation and supportive management.
6. Discuss prevention strategies and public health measures.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Emergency case scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Pathophysiology	Hypoxia, aspiration and organ injury	Lecture
20–30	Clinical Features	Assessment and complications	Interactive
30–40	Diagnosis	Investigations and monitoring	Discussion
40–50	Management	Resuscitation, ventilation and supportive care	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, resuscitation guidelines, emergency algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the assessment and management of drowning.

Lesson Plan (Medicine)

Topic: Enteric Fever (Typhoid)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Enteric Fever (Typhoid).

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Enteric Fever (Typhoid)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic microbiology, infectious diseases and antimicrobial therapy.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define enteric fever and describe its epidemiology and transmission.
2. Explain the pathophysiology and clinical stages of typhoid fever.
3. Recognize clinical features and complications.
4. Interpret blood culture, stool culture and serological tests.
5. Outline evidence-based antimicrobial therapy and supportive management.
6. Discuss prevention, vaccination and public health measures.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of prolonged fever	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	Salmonella Typhi infection and disease progression	Diagrams
20–30	Clinical Features	Symptoms, examination and complications	Interactive discussion
30–40	Diagnosis	Blood culture, stool culture, bone marrow culture and serology	Investigation review
40–50	Management	Antibiotics, supportive care and management of complications	Treatment algorithm
50–60	Summary	Vaccination, prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO typhoid guideline summaries, clinical algorithms and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, management and prevention of enteric fever.

Lesson Plan (Medicine)

Topic: Environmental Disease

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Environmental Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Environmental Disease
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic public health, epidemiology and internal medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define environmental diseases and their public health impact.
2. Identify major physical, chemical and biological environmental hazards.
3. Recognize common environmental disease presentations.
4. Outline diagnostic evaluation and exposure assessment.
5. Discuss prevention, management and risk reduction strategies.
6. Explain the role of health education and environmental protection.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical/public health scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Hazards	Air, water, chemicals, occupational exposure	Lecture
20–30	Clinical Features	Common environmental illnesses	Interactive
30–40	Diagnosis	Exposure history and investigations	Discussion
40–50	Management	Treatment, prevention and public health	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, WHO publications, environmental health guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize common environmental diseases and preventive strategies.

Lesson Plan (Medicine)

Topic: Epilepsy

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Epilepsy.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Epilepsy
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neuroanatomy and neurophysiology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define epilepsy and classify seizure types.
2. Explain etiology and pathophysiology.
3. Recognize clinical manifestations and seizure semiology.
4. Interpret EEG and neuroimaging findings.
5. Outline acute and long-term management with antiseizure medications.
6. Discuss status epilepticus, counseling and driving considerations.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of recurrent seizures	Case discussion
5–10	Introduction	Definition, epidemiology and classification	PPT
10–20	Etiology & Pathophysiology	Focal and generalized epilepsy	Diagrams
20–30	Clinical Features	Seizure types and examination	Interactive discussion
30–40	Diagnosis	EEG, MRI brain, laboratory evaluation	Investigation review
40–50	Management	Acute seizure care, antiseizure drugs, status epilepticus	Treatment algorithm
50–60	Summary	Counseling, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, EEG tracings, MRI images, ILAE guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize seizure classification and the management of epilepsy and status epilepticus.

Lesson Plan (Medicine)

Topic: Falls

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Falls.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Falls
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic geriatrics, neurology and emergency medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define falls and identify risk factors.
2. Explain intrinsic and extrinsic causes of falls.
3. Recognize injuries and complications associated with falls.
4. Perform a structured clinical assessment after a fall.
5. Outline prevention strategies and multidisciplinary management.
6. Discuss rehabilitation and patient education.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Risk Factors	Intrinsic and extrinsic factors	Lecture
20–30	Assessment	History, examination and investigations	Interactive
30–40	Complications	Injuries, fractures and outcomes	Discussion
40–50	Management	Treatment, prevention and rehabilitation	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, geriatric fall prevention guidelines, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Describe the assessment and prevention of falls in adults and older people.

Lesson Plan (Medicine)

Topic: Filariasis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Filariasis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Filariasis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic parasitology, infectious diseases and lymphatic anatomy.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define filariasis and identify the causative organisms.
2. Explain transmission and life cycle.
3. Recognize clinical manifestations and complications.
4. Interpret diagnostic investigations.
5. Outline treatment and morbidity management.
6. Discuss prevention and vector control.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Etiology	Life cycle and transmission	Lecture
20–30	Clinical	Acute and chronic manifestations	Interactive
30–40	Diagnosis	Blood smear, antigen tests, ultrasound	Discussion
40–50	Management	DEC, supportive care, prevention	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, WHO guidelines, parasitology atlas and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis, treatment and prevention of Filariasis.

Lesson Plan (Medicine)

Topic: General Principle and Rational Use of Antibiotic

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on the general principles and rational use of antibiotics.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	General Principle and Rational Use of Antibiotic
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic microbiology, pharmacology and infectious diseases.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Explain the principles of rational antibiotic prescribing.
2. Differentiate empiric, targeted and prophylactic therapy.
3. Interpret culture and antimicrobial susceptibility reports.
4. Recognize antimicrobial resistance and stewardship principles.
5. Select appropriate antibiotics based on host, pathogen and site of infection.
6. Discuss adverse effects, monitoring and prevention of misuse.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Principles of antibiotic use	PPT
10–20	Selection	Empiric vs targeted therapy	Lecture
20–30	Stewardship	Resistance and prescribing strategies	Interactive
30–40	Investigations	Culture, sensitivity and monitoring	Discussion
40–50	Management	Dose optimization, duration and de-escalation	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, antimicrobial stewardship guidelines, pharmacology textbooks and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Write the principles of rational antibiotic use and antimicrobial stewardship.

Lesson Plan (Medicine)

Topic: Gastroesophageal Reflux Disease (GERD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Gastroesophageal Reflux Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Gastroesophageal Reflux Disease (GERD)
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of esophageal anatomy, physiology and acid secretion.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define GERD and explain its epidemiology.
2. Describe pathophysiology and risk factors.
3. Recognize typical and atypical clinical features.
4. Interpret upper GI endoscopy, pH monitoring and manometry.
5. Outline lifestyle modification, pharmacological and surgical management.
6. Discuss complications including Barrett's esophagus.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of chronic heartburn	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	LES dysfunction, hiatal hernia, reflux	Diagrams
20–30	Clinical Features	Typical, atypical and alarm symptoms	Interactive discussion
30–40	Diagnosis	Endoscopy, pH monitoring, manometry	Investigation review
40–50	Management	Lifestyle measures, PPIs, H2 blockers, surgery	Treatment algorithm
50–60	Summary	Complications, Barrett's esophagus, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, endoscopy images, reflux management algorithms, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize GERD management and compare GERD with peptic ulcer disease.

Lesson Plan (Medicine)

Topic: Glomerulonephritis

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Glomerulonephritis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Glomerulonephritis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, physiology and immunology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define glomerulonephritis and classify primary and secondary forms.
2. Explain immunopathogenesis and common etiologies.
3. Recognize clinical manifestations and complications.
4. Interpret urinalysis, serology and renal biopsy findings.
5. Outline evidence-based management.
6. Discuss prognosis and follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of hematuria and edema	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Etiology & Pathophysiology	Immune-mediated glomerular injury	Diagrams
20–30	Clinical Features	Nephritic vs nephrotic presentations	Interactive discussion
30–40	Diagnosis	Urinalysis, complements, serology, biopsy	Investigation review
40–50	Management	Supportive care, immunosuppressants	Treatment algorithm
50–60	Summary	Complications, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, renal pathology images, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the classification and management principles of glomerulonephritis.

Lesson Plan (Medicine)

Topic: Gout

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Gout.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Gout
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic musculoskeletal anatomy, purine metabolism and joint examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define gout and describe its epidemiology.
2. Explain purine metabolism, hyperuricemia and crystal-induced inflammation.
3. Recognize acute and chronic clinical manifestations.
4. Interpret serum uric acid, synovial fluid analysis and imaging findings.
5. Outline management of acute gout and urate-lowering therapy.
6. Discuss lifestyle modification, complications and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of acute first MTP arthritis	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	Purine metabolism, hyperuricemia, urate crystals	Diagrams
20–30	Clinical Features	Acute gout, tophi and chronic gout	Interactive discussion
30–40	Diagnosis	Synovial fluid, serum uric acid and imaging	Investigation review
40–50	Management	NSAIDs, colchicine, corticosteroids, allopurinol and febuxostat	Treatment algorithm
50–60	Summary	Lifestyle advice, prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, crystal microscopy images, radiographs, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of gout.

Lesson Plan (Medicine)

Topic: Headache

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Headache.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Headache
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neuroanatomy and neurological examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Classify primary and secondary headache disorders.
2. Describe the pathophysiology of migraine, tension-type and cluster headache.
3. Recognize red flag features requiring urgent evaluation.
4. Interpret appropriate investigations including neuroimaging when indicated.
5. Outline acute and preventive treatment strategies.
6. Discuss patient education and follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of severe unilateral headache	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Migraine, tension-type, cluster headache	Diagrams
20–30	Clinical Features	History, examination and red flags	Interactive discussion
30–40	Diagnosis	Clinical approach and neuroimaging indications	Investigation review
40–50	Management	Acute treatment, prophylaxis and lifestyle modification	Treatment algorithm
50–60	Summary	Complications, counseling and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, ICHD classification charts, neuroimaging examples and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare migraine, tension-type and cluster headache and summarize their management.

Lesson Plan (Medicine)

Topic: Heat Related Illness

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Heat Related Illness.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Heat Related Illness
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic physiology, emergency medicine and fluid-electrolyte balance.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define heat-related illnesses and classify their types.
2. Explain the pathophysiology and risk factors.
3. Recognize clinical features of heat exhaustion and heat stroke.
4. Interpret relevant investigations.
5. Outline emergency management and supportive care.
6. Discuss prevention and public health measures.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definitions and classification	PPT
10–20	Pathophysiology	Thermoregulation and risk factors	Lecture
20–30	Clinical Features	Heat cramps, exhaustion and heat stroke	Interactive
30–40	Diagnosis	Laboratory evaluation and monitoring	Discussion
40–50	Management	Rapid cooling, fluids and supportive care	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, emergency medicine guidelines, standard textbooks and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the assessment, emergency management and prevention of heat-related illness.

Lesson Plan (Medicine)

Topic: Hematuria

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Hematuria.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hematuria
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, urinary tract pathology and urinalysis.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define microscopic and macroscopic hematuria.
2. Classify glomerular and non-glomerular causes.
3. Recognize clinical features and red flags.
4. Interpret urinalysis, urine microscopy and imaging.
5. Outline a systematic diagnostic approach.
6. Discuss management based on etiology.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of painless gross hematuria	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Etiology	Glomerular, urologic and systemic causes	Diagrams
20–30	Clinical Features	History and examination	Interactive discussion
30–40	Diagnosis	Urinalysis, microscopy, CT urography, cystoscopy	Investigation review
40–50	Management	Cause-directed treatment and referral	Treatment algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, urine microscopy images, imaging examples, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Prepare the diagnostic approach to a patient presenting with hematuria.

Lesson Plan (Medicine)

Topic: Hemophilia

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Hemophilia.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hemophilia
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic coagulation physiology and interpretation of coagulation tests.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define hemophilia and differentiate Hemophilia A and B.
2. Explain inheritance, coagulation defects and pathophysiology.
3. Recognize clinical manifestations and complications.
4. Interpret PT, aPTT, factor assays and inhibitor testing.
5. Outline factor replacement therapy, desmopressin and management of bleeding episodes.
6. Discuss prophylaxis, genetic counseling and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of recurrent hemarthrosis	Case discussion
5–10	Introduction	Definition, types and epidemiology	PPT
10–20	Pathophysiology	Factor VIII and IX deficiency	Diagrams
20–30	Clinical Features	Bleeding manifestations and complications	Interactive discussion
30–40	Diagnosis	Coagulation profile, factor assays and inhibitor testing	Investigation review
40–50	Management	Factor replacement, desmopressin, emicizumab and supportive care	Treatment algorithm
50–60	Summary	Prevention, counseling and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, coagulation pathway diagrams, factor assay reports, WFH guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of Hemophilia A and B.

Lesson Plan (Medicine)

Topic: Hereditary Hemolytic Anemia

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Hereditary Hemolytic Anemia.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hereditary Hemolytic Anemia
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic hematology, genetics and pathology.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define hereditary hemolytic anemia and classify its major types.
2. Explain membrane, enzyme and hemoglobin defects.
3. Recognize clinical manifestations and complications.
4. Interpret laboratory investigations and peripheral blood film findings.
5. Outline evidence-based management strategies.
6. Discuss long-term follow-up and genetic counseling.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Pathophysiology	Membrane, enzyme and Hb disorders	Lecture
20–30	Clinical Features	Symptoms, signs and complications	Interactive
30–40	Diagnosis	CBC, smear and specialized tests	Discussion
40–50	Management	Supportive care, transfusion and splenectomy	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, hematology textbooks, clinical guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the classification, diagnosis and management of hereditary hemolytic anemia.

Lesson Plan (Medicine)

Topic: HIV Infection

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on HIV Infection.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	HIV Infection
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology, virology and infectious diseases.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define HIV infection and describe epidemiology and transmission.
2. Explain HIV pathogenesis and disease progression.
3. Recognize clinical manifestations and opportunistic infections.
4. Interpret HIV diagnostic tests, CD4 count and viral load.
5. Outline antiretroviral therapy, monitoring and prevention strategies.
6. Discuss counseling, post-exposure prophylaxis and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of prolonged fever and weight loss	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	HIV life cycle and immune dysfunction	Diagrams
20–30	Clinical Features	Acute HIV, chronic infection and AIDS	Interactive discussion
30–40	Diagnosis	HIV testing algorithm, CD4 count and viral load	Investigation review
40–50	Management	ART, opportunistic infection prophylaxis and monitoring	Treatment algorithm
50–60	Summary	Prevention, PEP/PrEP and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO HIV guideline summaries, ART algorithms and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, management and prevention of HIV infection.

Lesson Plan (Medicine)

Topic: Hypersensitivity Disorders

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Hypersensitivity Disorders.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hypersensitivity Disorders
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology, pathology and pharmacology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define hypersensitivity reactions and classify Types I–IV.
2. Explain the immunological mechanisms of each type.
3. Recognize common clinical manifestations.
4. Interpret appropriate diagnostic tests.
5. Outline treatment and preventive strategies.
6. Discuss complications and patient education.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Classification of hypersensitivity	PPT
10–20	Mechanisms	Types I–IV immunopathology	Lecture
20–30	Clinical Features	Examples of each type	Interactive
30–40	Diagnosis	Allergy testing and laboratory evaluation	Discussion
40–50	Management	Avoidance, medications and immunotherapy	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, immunology textbooks, allergy guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Compare the four types of hypersensitivity reactions with examples and management.

Lesson Plan (Medicine)

Topic: Hypertension

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Hypertension.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hypertension
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of cardiovascular physiology, blood pressure regulation and r
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define hypertension and classify it according to current guidelines.
2. Describe the etiology, pathophysiology and risk factors.
3. Recognize clinical features and target organ damage.
4. Interpret investigations and cardiovascular risk assessment.
5. Outline lifestyle modification and pharmacological management.
6. Discuss hypertensive emergencies and prevention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of uncontrolled hypertension	Case discussion
5–10	Introduction	Definition, epidemiology, classification	PPT
10–20	Pathophysiology	BP regulation and mechanisms	Diagrams
20–30	Clinical Features	Symptoms, signs, target organ damage	Interactive discussion
30–40	Diagnosis	BP measurement, ECG, labs, fundus, renal assessment	Investigation review
40–50	Management	Lifestyle, antihypertensives, emergencies	Treatment algorithm
50–60	Summary	Complications, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, sphygmomanometer demonstration, ECGs, guideline charts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Prepare a comparison table of antihypertensive drug classes and summarize management of hypertensive emergency.

Lesson Plan (Medicine)

Topic: Hypertensive Emergency

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Hypertensive Emergency.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hypertensive Emergency
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic cardiovascular physiology, hypertension and emergency medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define hypertensive emergency and differentiate it from hypertensive urgency.
2. Explain the pathophysiology of acute target-organ damage.
3. Recognize clinical presentations and red flags.
4. Interpret investigations for target-organ involvement.
5. Outline evidence-based blood pressure reduction strategies.
6. Discuss intravenous antihypertensive agents and monitoring.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Emergency case scenario	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Pathophysiology	Target-organ injury	Lecture
20–30	Clinical Features	Neurologic, cardiac and renal manifestations	Interactive
30–40	Diagnosis	ECG, labs, imaging and fundoscopy	Discussion
40–50	Management	IV antihypertensives, BP targets, monitoring	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, hypertension guidelines, emergency algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Describe the diagnosis and management of hypertensive emergency.

Lesson Plan (Medicine)

Topic: Hypoglycemia

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Hypoglycemia.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hypoglycemia
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic endocrinology, diabetes mellitus and emergency medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define hypoglycemia and describe its classification.
2. Explain the pathophysiology and common causes.
3. Recognize autonomic and neuroglycopenic symptoms.
4. Interpret laboratory evaluation and Whipple's triad.
5. Outline emergency and long-term management.
6. Discuss prevention and patient education.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case scenario	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Pathophysiology	Causes and mechanisms	Lecture
20–30	Clinical Features	Symptoms and signs	Interactive
30–40	Diagnosis	Whipple's triad and investigations	Discussion
40–50	Management	Immediate treatment and prevention	Algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, ADA guidelines, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis, emergency management and prevention of hypoglycemia.

Lesson Plan (Medicine)

Topic: Hypothyroidism

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Hypothyroidism.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Hypothyroidism
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of thyroid anatomy, physiology and endocrine regulation.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define hypothyroidism and classify primary, secondary and tertiary forms.
2. Describe etiology and pathophysiology.
3. Recognize clinical manifestations and complications.
4. Interpret thyroid function tests and thyroid autoantibodies.
5. Outline evidence-based management with levothyroxine.
6. Discuss monitoring, special situations and prevention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of fatigue and weight gain	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	Hashimoto thyroiditis, iodine deficiency, central causes	Diagrams
20–30	Clinical Features	Symptoms, signs and myxedema	Interactive discussion
30–40	Diagnosis	TSH, Free T4, anti-TPO antibody	Investigation review
40–50	Management	Levothyroxine therapy, dose adjustment and follow-up	Treatment algorithm
50–60	Summary	Complications, pregnancy considerations and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, thyroid function test charts, ATA guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of primary hypothyroidism.

Lesson Plan (Medicine)

Topic: Ischemic Heart Disease (IHD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Ischemic Heart Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Ischemic Heart Disease (IHD)
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of coronary anatomy, cardiac physiology, ECG and atherosc
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define Ischemic Heart Disease and explain its epidemiology.
2. Describe the pathophysiology and risk factors of coronary atherosclerosis.
3. Classify IHD into chronic coronary syndrome and acute coronary syndromes.
4. Recognize the clinical features and diagnostic approach including ECG and cardiac biomarkers.
5. Outline evidence-based management of stable angina, NSTEMI and STEMI.
6. Discuss complications, prognosis and prevention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Clinical case of acute chest pain	Case discussion
5–10	Introduction	Review coronary anatomy and objectives	PPT + Questions
10–20	Pathophysiology	Atherosclerosis and myocardial ischemia	Animated slides
20–30	Classification	Stable angina, UA, NSTEMI, STEMI	Flowchart
30–40	Diagnosis	ECG, biomarkers, Echo, Angiography	ECG interpretation
40–50	Management	Medical therapy, PCI, thrombolysis, secondary prevention	Treatment algorithm
50–60	Summary	Clinical correlation and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, ECG strips, coronary angiography images, guideline flowcharts and whiteboard.

Assessment: Formative—interactive questioning and ECG interpretation. Summative—2–3 MCQs and one short clinical scenario.

Assignment: Draw and label coronary arteries. Compare Stable Angina, NSTEMI and STEMI. Read current ACS guidelines.

Lesson Plan (Medicine)

Topic: Infective Endocarditis

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Infective Endocarditis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Infective Endocarditis
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of cardiac valves, bacteremia and microbiology.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define infective endocarditis and describe its epidemiology.
2. Explain the pathogenesis, risk factors and causative organisms.
3. Recognize clinical features and Duke diagnostic criteria.
4. Interpret blood cultures, echocardiography and other investigations.
5. Outline antimicrobial therapy, surgical indications and complications.
6. Discuss prevention and antibiotic prophylaxis.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of prolonged fever with murmur	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathogenesis	Vegetation formation, microbiology, risk factors	Diagrams
20–30	Clinical Features	Symptoms, signs, Duke criteria	Interactive discussion
30–40	Diagnosis	Blood cultures, Echo, laboratory findings	Investigation review
40–50	Management	IV antibiotics, surgery indications, complications	Treatment algorithm
50–60	Summary	Prevention, prophylaxis, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, echocardiography images, blood culture flowcharts, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize Duke criteria and list indications for surgery in infective endocarditis.

Lesson Plan (Medicine)

Topic: Inflammatory Bowel Disease (IBD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Inflammatory Bowel Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Inflammatory Bowel Disease (IBD)
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of gastrointestinal anatomy, physiology and immunology.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define inflammatory bowel disease and differentiate ulcerative colitis from Crohn's disease.
2. Describe epidemiology, etiology and pathogenesis.
3. Recognize clinical features and extraintestinal manifestations.
4. Interpret colonoscopy, histopathology and laboratory findings.
5. Outline medical, biologic and surgical management.
6. Discuss complications, surveillance and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of chronic bloody diarrhea	Case discussion
5–10	Introduction	Definition, epidemiology	PPT
10–20	Etiology & Pathophysiology	Immune dysregulation, genetics, microbiome	Diagrams
20–30	Clinical Features	Ulcerative colitis vs Crohn's disease	Interactive discussion
30–40	Diagnosis	Colonoscopy, biopsy, fecal calprotectin, imaging	Investigation review
40–50	Management	5-ASA, steroids, immunomodulators, biologics, surgery	Treatment algorithm
50–60	Summary	Complications, colorectal cancer surveillance, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, colonoscopy images, histopathology slides, ECCO guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare ulcerative colitis and Crohn's disease and summarize the stepwise management of IBD.

Lesson Plan (Medicine)

Topic: Immune Thrombocytopenia (ITP)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Immune Thrombocytopenia (ITP).

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Immune Thrombocytopenia (ITP)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic hematology, platelet physiology and coagulation.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define immune thrombocytopenia and describe its epidemiology.
2. Explain the pathophysiology and causes of immune-mediated platelet destruction.
3. Recognize clinical manifestations and bleeding severity.
4. Interpret CBC, peripheral blood smear and exclusion of secondary causes.
5. Outline first-line and second-line treatment including corticosteroids, IVIG, TPO receptor agonists and splenectomy.
6. Discuss monitoring, prognosis and patient counseling.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of petechiae and thrombocytopenia	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Autoimmune platelet destruction	Diagrams
20–30	Clinical Features	Bleeding manifestations and examination	Interactive discussion
30–40	Diagnosis	CBC, smear and exclusion of secondary causes	Investigation review
40–50	Management	Steroids, IVIG, TPO agonists, rituximab and splenectomy	Treatment algorithm
50–60	Summary	Follow-up, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, peripheral blood smear images, ASH guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of immune thrombocytopenia.

Lesson Plan (Medicine)

Topic: Kala-azar (Visceral Leishmaniasis)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Kala-azar (Visceral Leishmaniasis).

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Kala-azar (Visceral Leishmaniasis)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic parasitology and tropical medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define kala-azar and describe its epidemiology and transmission.
2. Explain the life cycle and pathophysiology of Leishmania donovani.
3. Recognize clinical manifestations and complications.
4. Interpret rk39, microscopy and other diagnostic tests.
5. Outline current treatment options and supportive care.
6. Discuss vector control and prevention strategies.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of prolonged fever with splenomegaly	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	Life cycle and disease mechanisms	Diagrams
20–30	Clinical Features	Fever, splenomegaly, pancytopenia	Interactive discussion
30–40	Diagnosis	rk39, microscopy, PCR and laboratory findings	Investigation review
40–50	Management	Liposomal amphotericin B and other therapies	Treatment algorithm
50–60	Summary	Prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, national/WHO visceral leishmaniasis guidelines, clinical images and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, management and prevention of kala-azar.

Lesson Plan (Medicine)

Topic: Leukemia

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Leukemia.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Leukemia
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic hematopoiesis, CBC interpretation and bone marrow physiology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define leukemia and classify acute and chronic leukemias.
2. Describe the pathophysiology and risk factors.
3. Recognize clinical manifestations and complications.
4. Interpret CBC, peripheral blood smear, bone marrow examination and cytogenetic studies.
5. Outline principles of chemotherapy, targeted therapy and stem cell transplantation.
6. Discuss supportive care, prognosis and follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of fever, anemia and leukocytosis	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	ALL, AML, CLL and CML	Diagrams
20–30	Clinical Features	Symptoms, signs and complications	Interactive discussion
30–40	Diagnosis	CBC, smear, bone marrow, flow cytometry and cytogenetics	Investigation review
40–50	Management	Chemotherapy, TKIs, supportive care and HSCT	Treatment algorithm
50–60	Summary	Prognosis, follow-up and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, peripheral smear images, bone marrow slides, WHO classification and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the classification, diagnosis and management of leukemia.

Lesson Plan (Medicine)

Topic: Lymphadenopathy

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Lymphadenopathy.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Lymphadenopathy
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic anatomy, pathology and internal medicine.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define lymphadenopathy and classify localized and generalized forms.
2. Identify infectious, malignant and autoimmune causes.
3. Recognize key clinical features and red flags.
4. Interpret laboratory tests, imaging and lymph node biopsy findings.
5. Outline a systematic diagnostic approach.
6. Discuss management based on the underlying etiology.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Etiology	Infectious, malignant and autoimmune causes	Lecture
20–30	Clinical Features	History and examination	Interactive
30–40	Diagnosis	Laboratory tests, imaging and biopsy	Discussion
40–50	Management	Cause-specific treatment	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, standard textbooks, diagnostic algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnostic approach and management of lymphadenopathy.

Lesson Plan (Medicine)

Topic: Lymphoma

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Lymphoma.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Lymphoma
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic hematology, lymphatic system anatomy and pathology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define lymphoma and classify Hodgkin and Non-Hodgkin lymphoma.
2. Explain the pathophysiology and risk factors.
3. Recognize clinical manifestations including B symptoms.
4. Interpret lymph node biopsy, immunophenotyping, imaging and staging.
5. Outline chemotherapy, immunotherapy, radiotherapy and stem cell transplantation.
6. Discuss prognosis, follow-up and supportive care.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of painless cervical lymphadenopathy	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Hodgkin vs Non-Hodgkin lymphoma	Diagrams
20–30	Clinical Features	B symptoms, nodal and extranodal disease	Interactive discussion
30–40	Diagnosis	Biopsy, PET-CT, bone marrow and Ann Arbor staging	Investigation review
40–50	Management	Chemotherapy, immunotherapy, radiotherapy and HSCT	Treatment algorithm
50–60	Summary	Prognosis, follow-up and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO lymphoma classification, pathology slides, PET-CT images and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the classification, diagnosis and management of lymphoma.

Lesson Plan (Medicine)

Topic: Malaria

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Malaria.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Malaria
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic parasitology, infectious diseases and interpretation of peripheral blood s
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define malaria and describe its epidemiology and transmission.
2. Explain the life cycle of Plasmodium species and pathophysiology.
3. Recognize uncomplicated and severe malaria.
4. Interpret peripheral blood smear, rapid diagnostic tests and other investigations.
5. Outline WHO-recommended treatment and supportive care.
6. Discuss malaria prevention, chemoprophylaxis and vector control.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of fever with chills and rigors	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	Plasmodium life cycle and disease mechanisms	Diagrams
20–30	Clinical Features	Uncomplicated and severe malaria	Interactive discussion
30–40	Diagnosis	Peripheral smear, RDT and laboratory evaluation	Investigation review
40–50	Management	ACT, IV artesunate and supportive care	Treatment algorithm
50–60	Summary	Prevention, chemoprophylaxis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO malaria guideline summaries, peripheral smear images and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, management and prevention of malaria.

Lesson Plan (Medicine)

Topic: Measles

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Measles.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Measles
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic virology, immunization and infectious diseases.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define measles and describe its epidemiology and transmission.
2. Explain the pathophysiology and stages of illness.
3. Recognize clinical features and complications.
4. Interpret laboratory diagnosis and differential diagnosis.
5. Outline supportive treatment, vitamin A therapy and infection control.
6. Discuss vaccination and prevention strategies.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of fever with rash	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	Disease progression and immune response	Diagrams
20–30	Clinical Features	Koplik spots, rash and complications	Interactive discussion
30–40	Diagnosis	Serology, RT-PCR and differential diagnosis	Investigation review
40–50	Management	Supportive care, vitamin A and isolation	Treatment algorithm
50–60	Summary	Vaccination, prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO measles guideline summaries, clinical photographs and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, management and prevention of measles.

Lesson Plan (Medicine)

Topic: Meningitis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Meningitis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Meningitis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neuroanatomy, microbiology and neurological examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define and classify meningitis.
2. Describe common etiologic organisms and pathophysiology.
3. Recognize clinical features and complications.
4. Interpret CSF analysis and neuroimaging.
5. Outline empirical antimicrobial therapy and adjunctive treatment.
6. Discuss prevention and vaccination.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of fever, headache and neck stiffness	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Etiology	Bacterial, viral, TB and fungal meningitis	Diagrams
20–30	Clinical Features	Symptoms, signs and complications	Interactive discussion
30–40	Diagnosis	CSF, lumbar puncture, CT/MRI indications	Investigation review
40–50	Management	Empirical antibiotics, steroids and supportive care	Treatment algorithm
50–60	Summary	Prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, CSF reports, imaging examples, treatment guidelines and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of acute bacterial meningitis.

Lesson Plan (Medicine)

Topic: Movement Disorders (Parkinsonism)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Movement Disorders with emphasis on Parkinsonism.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Movement Disorders (Parkinsonism)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neuroanatomy, basal ganglia physiology and neurological examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define movement disorders and Parkinsonism.
2. Describe the pathophysiology and causes of Parkinsonism.
3. Recognize cardinal motor and non-motor features.
4. Interpret clinical diagnosis and supportive investigations.
5. Outline pharmacological and non-pharmacological management.
6. Discuss complications, rehabilitation and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of resting tremor and bradykinesia	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Basal ganglia circuitry and causes	Diagrams
20–30	Clinical Features	Motor, non-motor symptoms and examination	Interactive discussion
30–40	Diagnosis	Clinical criteria and supportive investigations	Investigation review
40–50	Management	Levodopa, dopamine agonists, DBS, rehabilitation	Treatment algorithm
50–60	Summary	Complications, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, examination videos, treatment guidelines and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of Parkinson disease.

Lesson Plan (Medicine)

Topic: Myasthenia Gravis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Myasthenia Gravis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Myasthenia Gravis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neurophysiology, immunology and neurology.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define myasthenia gravis and explain its autoimmune pathogenesis.
2. Recognize characteristic clinical features and patterns of weakness.
3. Differentiate myasthenic crisis from cholinergic crisis.
4. Interpret antibody tests, electrophysiology and imaging findings.
5. Outline pharmacological and non-pharmacological management.
6. Discuss long-term follow-up and prognosis.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Pathophysiology	Neuromuscular junction autoimmunity	Lecture
20–30	Clinical Features	Ocular, bulbar and generalized weakness	Interactive
30–40	Diagnosis	Antibodies, EMG, CT thymus	Discussion
40–50	Management	Pyridostigmine, immunotherapy, thymectomy	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, neurology guidelines, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis and management of myasthenia gravis.

Lesson Plan (Medicine)

Topic: Nephrotic Syndrome

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Nephrotic Syndrome.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Nephrotic Syndrome
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, physiology and urinalysis.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define nephrotic syndrome and describe diagnostic criteria.
2. Explain primary and secondary causes.
3. Recognize clinical features and complications.
4. Interpret urinalysis, protein quantification and renal biopsy findings.
5. Outline evidence-based management.
6. Discuss prognosis and follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of generalized edema	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	Minimal change disease, FSGS, membranous nephropathy	Diagrams
20–30	Clinical Features	Edema, proteinuria, hyperlipidemia, complications	Interactive discussion
30–40	Diagnosis	Urine protein, serum albumin, renal biopsy	Investigation review
40–50	Management	ACEI/ARB, diuretics, statins, immunosuppressants	Treatment algorithm
50–60	Summary	Complications, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, renal biopsy images, KDIGO guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the causes of nephrotic syndrome and prepare a management plan for an adult patient.

Lesson Plan (Medicine)

Topic: Organophosphorus Compound (OPC) Poisoning

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Organophosphorus Compound (OPC) Poisoning.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Organophosphorus Compound (OPC) Poisoning
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic pharmacology, toxicology and emergency medicine.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define OPC poisoning and describe its epidemiology.
2. Explain the pathophysiology of acetylcholinesterase inhibition.
3. Recognize muscarinic, nicotinic and CNS manifestations.
4. Interpret relevant investigations including cholinesterase levels.
5. Outline emergency management including atropine, pralidoxime and supportive care.
6. Discuss complications, prognosis and preventive measures.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Pathophysiology	Cholinesterase inhibition and toxic effects	Lecture
20–30	Clinical Features	Muscarinic, nicotinic and CNS signs	Interactive
30–40	Diagnosis	Clinical assessment and laboratory tests	Discussion
40–50	Management	Decontamination, atropine, pralidoxime, ventilation	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, toxicology guidelines, standard textbooks and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis and management of organophosphorus compound poisoning.

Lesson Plan (Medicine)

Topic: Osteoarthritis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Osteoarthritis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Osteoarthritis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic musculoskeletal anatomy and joint examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define osteoarthritis and describe its epidemiology.
2. Explain risk factors and pathophysiology.
3. Recognize clinical features and affected joints.
4. Interpret radiographic findings and differential diagnosis.
5. Outline pharmacological and non-pharmacological management.
6. Discuss prevention, rehabilitation and indications for surgery.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of chronic knee pain	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	Cartilage degeneration and risk factors	Diagrams
20–30	Clinical Features	Symptoms, examination and diagnosis	Interactive discussion
30–40	Investigations	X-ray findings and differential diagnosis	Investigation review
40–50	Management	Lifestyle, analgesics, injections and arthroplasty	Treatment algorithm
50–60	Summary	Complications, prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, radiographic images, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of osteoarthritis.

Lesson Plan (Medicine)

Topic: Osteoporosis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Osteoporosis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Osteoporosis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic bone physiology, calcium metabolism and musculoskeletal examination
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define osteoporosis and describe its epidemiology.
2. Explain bone remodeling and risk factors for osteoporosis.
3. Recognize clinical manifestations and fragility fractures.
4. Interpret DEXA scan results, FRAX score and laboratory evaluation.
5. Outline pharmacological and non-pharmacological management.
6. Discuss fracture prevention, monitoring and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of low-trauma hip fracture	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	Bone remodeling, risk factors and secondary causes	Diagrams
20–30	Clinical Features	Fragility fractures and clinical assessment	Interactive discussion
30–40	Diagnosis	DEXA, FRAX and laboratory investigations	Investigation review
40–50	Management	Calcium, vitamin D, bisphosphonates and lifestyle modification	Treatment algorithm
50–60	Summary	Prevention, monitoring and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, DEXA scan reports, FRAX charts, treatment guidelines and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, prevention and management of osteoporosis.

Lesson Plan (Medicine)

Topic: Paraquat Poisoning

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Paraquat Poisoning.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Paraquat Poisoning
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic toxicology, emergency medicine and critical care.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define paraquat poisoning and its toxic effects.
2. Explain the pathophysiology of organ injury.
3. Recognize clinical features and prognostic indicators.
4. Interpret appropriate laboratory investigations.
5. Outline emergency management and supportive care.
6. Discuss prevention and safe handling of herbicides.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Definition and epidemiology	PPT
10–20	Pathophysiology	Oxidative injury and organ damage	Lecture
20–30	Clinical	GI, renal and pulmonary toxicity	Interactive
30–40	Diagnosis	History, labs and prognostic tests	Discussion
40–50	Management	Decontamination, supportive care	Algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, toxicology guidelines, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Write a short note on the diagnosis and management of paraquat poisoning.

Lesson Plan (Medicine)

Topic: Peptic Ulcer Disease (PUD)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Peptic Ulcer Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Peptic Ulcer Disease (PUD)
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of gastrointestinal anatomy, physiology and acid secretion.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define peptic ulcer disease and describe its epidemiology.
2. Explain the role of Helicobacter pylori, NSAIDs and acid-pepsin injury.
3. Recognize clinical features and complications.
4. Interpret upper GI endoscopy and H. pylori diagnostic tests.
5. Outline medical and surgical management.
6. Discuss prevention and recurrence.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of epigastric pain	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	H. pylori, NSAIDs, acid secretion	Diagrams
20–30	Clinical Features	Symptoms, signs, complications	Interactive discussion
30–40	Diagnosis	Upper GI endoscopy, H. pylori tests	Investigation review
40–50	Management	PPI therapy, eradication regimen, surgery indications	Treatment algorithm
50–60	Summary	Complications, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, endoscopic images, H. pylori testing algorithm, guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare gastric and duodenal ulcer and summarize H. pylori eradication therapy.

Lesson Plan (Medicine)

Topic: Peripheral Neuropathy

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Peripheral Neuropathy.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Peripheral Neuropathy
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neuroanatomy and neurological examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define peripheral neuropathy and classify its major types.
2. Describe common etiologies including diabetes, nutritional deficiency and immune-mediated disorders.
3. Recognize clinical features and neurological examination findings.
4. Interpret nerve conduction studies, EMG and relevant laboratory investigations.
5. Outline evidence-based management and treatment of underlying causes.
6. Discuss prevention of complications and rehabilitation.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of distal numbness and weakness	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Etiology & Pathophysiology	Metabolic, toxic, infectious and inherited causes	Diagrams
20–30	Clinical Features	Sensory, motor and autonomic involvement	Interactive discussion
30–40	Diagnosis	NCS, EMG and laboratory evaluation	Investigation review
40–50	Management	Treat underlying cause, pain control and rehabilitation	Treatment algorithm
50–60	Summary	Prevention, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, nerve conduction study examples, EMG reports and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the classification, diagnosis and management of peripheral neuropathy.

Lesson Plan (Medicine)

Topic: Pituitary Disorders

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Pituitary Disorders.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Pituitary Disorders
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of endocrine physiology and hypothalamic-pituitary axis.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Describe the anatomy and physiology of the pituitary gland.
2. Classify common pituitary disorders including hypo- and hyperpituitarism.
3. Recognize clinical manifestations of pituitary adenomas and hormone excess/deficiency.
4. Interpret pituitary hormone assays and MRI findings.
5. Outline medical, surgical and radiotherapy options.
6. Discuss long-term follow-up and endocrine replacement therapy.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of pituitary adenoma	Case discussion
5–10	Introduction	Anatomy, physiology and classification	PPT
10–20	Pathophysiology	Pituitary adenomas, hypopituitarism, hormone excess	Diagrams
20–30	Clinical Features	Acromegaly, prolactinoma, Cushing disease, DI	Interactive discussion
30–40	Diagnosis	Hormonal profile, dynamic tests, MRI pituitary	Investigation review
40–50	Management	Medical therapy, transsphenoidal surgery, radiotherapy	Treatment algorithm
50–60	Summary	Complications, follow-up and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, endocrine algorithms, MRI images, Endocrine Society guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of pituitary adenomas and hypopituitarism.

Lesson Plan (Medicine)

Topic: Pleural Effusion

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Pleural Effusion.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Pleural Effusion
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of respiratory anatomy, pleural physiology and chest examin
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define pleural effusion and classify transudative and exudative effusions.
2. Describe etiology and pathophysiology.
3. Recognize clinical features and physical signs.
4. Interpret chest X-ray, ultrasound, CT and pleural fluid analysis including Light's criteria.
5. Outline medical management and indications for thoracentesis/chest tube drainage.
6. Discuss complications and prevention.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of dyspnea with unilateral pleural effusion	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Fluid formation and causes	Diagrams
20–30	Clinical Features	Symptoms, examination findings	Interactive discussion
30–40	Diagnosis	Imaging, thoracentesis, Light's criteria	Investigation review
40–50	Management	Treat cause, drainage, pleurodesis	Treatment algorithm
50–60	Summary	Complications, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, chest X-rays, ultrasound images, pleural fluid analysis charts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Explain Light's criteria and compare transudative versus exudative pleural effusion.

Lesson Plan (Medicine)

Topic: Pneumothorax

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Pneumothorax.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Pneumothorax
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of respiratory anatomy, pleural physiology and chest examin
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define pneumothorax and classify its different types.
2. Describe etiology, risk factors and pathophysiology.
3. Recognize clinical features including tension pneumothorax.
4. Interpret chest X-ray, lung ultrasound and CT findings.
5. Outline emergency and definitive management.
6. Discuss complications, prognosis and preventive strategies.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of sudden chest pain and dyspnea	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	Primary, secondary and traumatic pneumothorax	Diagrams
20–30	Clinical Features	Symptoms, signs and tension pneumothorax	Interactive discussion
30–40	Diagnosis	Chest X-ray, ultrasound, CT scan	Investigation review
40–50	Management	Needle decompression, chest tube, surgery	Treatment algorithm
50–60	Summary	Complications, recurrence, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, chest X-rays, ultrasound images, BTS/ERS guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare primary, secondary and tension pneumothorax, and summarize emergency management.

Lesson Plan (Medicine)

Topic: Poisoning (General Approach)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on the general approach to poisoning.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Poisoning (General Approach)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic pharmacology, toxicology and emergency medicine.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define poisoning and classify common toxins.
2. Perform initial assessment using ABCDE.
3. Interpret common toxidromes.
4. Outline investigations and decontamination methods.
5. Describe antidotes and supportive care.
6. Discuss prevention and medico-legal aspects.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Case scenario	Discussion
5–10	Overview	Definitions and epidemiology	PPT
10–20	Assessment	ABCDE and toxidromes	Lecture
20–30	Investigations	Labs and ECG	Interactive
30–40	Treatment	Decontamination and antidotes	Algorithm
40–50	Supportive Care	Monitoring and complications	Lecture
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, toxicology guidelines, emergency protocols and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Write the general principles of assessment and management of acute poisoning.

Lesson Plan (Medicine)

Topic: Proteinuria

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Proteinuria.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Proteinuria
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, physiology and urinalysis.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define proteinuria and describe normal urinary protein excretion.
2. Classify transient, orthostatic and persistent proteinuria.
3. Recognize glomerular, tubular and overflow proteinuria.
4. Interpret urine dipstick, urine protein quantification and ACR/PCR.
5. Outline a systematic diagnostic approach.
6. Discuss management based on the underlying etiology.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of asymptomatic proteinuria	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Etiology	Glomerular, tubular and overflow causes	Diagrams
20–30	Clinical Features	Associated symptoms and complications	Interactive discussion
30–40	Diagnosis	Dipstick, ACR/PCR, 24-hour urine, biopsy indications	Investigation review
40–50	Management	Cause-directed therapy, RAAS blockade, follow-up	Treatment algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, urinalysis reports, KDIGO guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Prepare a diagnostic algorithm for persistent proteinuria in adults.

Lesson Plan (Medicine)

Topic: Pulmonary Eosinophilia

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Pulmonary Eosinophilia.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Pulmonary Eosinophilia
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic respiratory medicine, immunology and parasitology.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define pulmonary eosinophilia and classify its causes.
2. Explain the pathophysiology and etiologies.
3. Recognize clinical manifestations and differential diagnosis.
4. Interpret laboratory tests, imaging and bronchoscopy findings.
5. Outline evidence-based treatment strategies.
6. Discuss prognosis and follow-up.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical case	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Etiology	Parasitic, allergic and drug-related causes	Lecture
20–30	Clinical Features	Symptoms and examination	Interactive
30–40	Diagnosis	CBC, imaging, BAL and other investigations	Discussion
40–50	Management	Cause-specific treatment and corticosteroids	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, respiratory medicine textbooks, clinical guidelines and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis and management of pulmonary eosinophilia.

Lesson Plan (Medicine)

Topic: Pulmonary Tuberculosis (PTB)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Pulmonary Tuberculosis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Pulmonary Tuberculosis
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of respiratory anatomy, microbiology and immunology.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define pulmonary tuberculosis and explain its epidemiology.
2. Describe pathogenesis, transmission and risk factors.
3. Recognize clinical features and differential diagnosis.
4. Interpret sputum tests, GeneXpert, chest X-ray and other investigations.
5. Outline treatment according to the National TB Control Programme/WHO guidelines.
6. Discuss prevention, contact tracing and complications.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of chronic cough with weight loss	Case discussion
5–10	Introduction	Definition, epidemiology	PPT
10–20	Pathogenesis	Transmission, immunity, granuloma formation	Diagrams
20–30	Clinical Features	Symptoms, signs, differential diagnosis	Interactive discussion
30–40	Diagnosis	Sputum AFB, GeneXpert, CXR, Mantoux	Investigation review
40–50	Management	Standard anti-TB regimen, monitoring, DOT	Treatment algorithm
50–60	Summary	Complications, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, chest X-rays, GeneXpert workflow, national TB guideline charts and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the standard anti-TB treatment regimen and compare latent versus active TB.

Lesson Plan (Medicine)

Topic: Rabies

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Rabies.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Rabies
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic virology, infectious diseases and immunization principles.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define rabies and describe its epidemiology and transmission.
2. Explain the virology and pathophysiology of rabies infection.
3. Recognize clinical manifestations and disease progression.
4. Interpret the diagnostic approach and indications for laboratory testing.
5. Outline wound care, post-exposure prophylaxis (PEP), pre-exposure prophylaxis (PrEP) and supportive management.
6. Discuss prevention, vaccination and public health measures.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of dog bite exposure	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	Rabies virus and CNS spread	Diagrams
20–30	Clinical Features	Prodromal phase, encephalitic and paralytic rabies	Interactive discussion
30–40	Diagnosis	Clinical diagnosis and laboratory methods	Investigation review
40–50	Management	Wound care, RIG, vaccine schedules, supportive care	Treatment algorithm
50–60	Summary	Prevention, One Health approach and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO rabies guideline summaries, vaccination schedules and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the post-exposure prophylaxis protocol and prevention of rabies.

Lesson Plan (Medicine)

Topic: Rheumatic Fever

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Rheumatic Fever and Rheumatic Heart Disease.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Rheumatic Fever
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of Streptococcal infection, immunology and cardiac anatomy
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define Rheumatic Fever and explain its epidemiology.
2. Describe the pathogenesis and Jones criteria.
3. Recognize clinical manifestations and complications.
4. Interpret relevant investigations.
5. Outline treatment and secondary prophylaxis.
6. Discuss prevention of Rheumatic Heart Disease.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Clinical case	Case discussion
5–10	Introduction	Definition, epidemiology	PPT
10–20	Pathogenesis	Post-streptococcal autoimmune response	Diagrams
20–30	Clinical Features	Jones criteria	Interactive discussion
30–40	Diagnosis	ASO, ESR, CRP, ECG, Echo	Investigation review
40–50	Management	Antibiotics, anti-inflammatory therapy, prophylaxis	Treatment algorithm
50–60	Summary	Complications, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint, ECG, Echocardiography images, Whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Write revised Jones criteria and outline secondary prophylaxis.

Lesson Plan (Medicine)

Topic: Rheumatoid Arthritis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Rheumatoid Arthritis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Rheumatoid Arthritis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology and musculoskeletal examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define rheumatoid arthritis and describe its epidemiology.
2. Explain the immunopathogenesis and risk factors.
3. Recognize clinical manifestations and extra-articular features.
4. Interpret RF, anti-CCP antibodies and imaging findings.
5. Outline pharmacological and non-pharmacological management including DMARDs and biologics.
6. Discuss complications, monitoring and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of symmetrical polyarthritis	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	Autoimmunity and synovial inflammation	Diagrams
20–30	Clinical Features	Joint and extra-articular manifestations	Interactive discussion
30–40	Diagnosis	Classification criteria, serology and imaging	Investigation review
40–50	Management	DMARDs, biologics, rehabilitation and treat-to-target	Treatment algorithm
50–60	Summary	Complications, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, ACR/EULAR classification criteria, radiographic images and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of rheumatoid arthritis.

Lesson Plan (Medicine)

Topic: Septic Shock

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Septic Shock.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Septic Shock
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic microbiology, infectious diseases and critical care.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define sepsis and septic shock using current criteria.
2. Explain the pathophysiology of septic shock.
3. Recognize clinical features and organ dysfunction.
4. Interpret laboratory tests and sepsis screening tools.
5. Outline evidence-based initial resuscitation and antimicrobial therapy.
6. Discuss monitoring, vasopressors and prognosis.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definitions and epidemiology	PPT
10–20	Pathophysiology	Inflammation, perfusion and organ failure	Lecture
20–30	Clinical Features	Recognition and SOFA/qSOFA	Interactive
30–40	Diagnosis	Cultures, lactate and investigations	Discussion
40–50	Management	Sepsis bundle, fluids, antibiotics, vasopressors	Algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, Surviving Sepsis Campaign guidelines, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis and initial management of septic shock.

Lesson Plan (Medicine)

Topic: Snake Bite

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Snake Bite.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Snake Bite
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic toxicology, emergency medicine and first aid.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Classify venomous and non-venomous snake bites.
2. Describe the pathophysiology of envenomation.
3. Recognize local and systemic clinical features.
4. Interpret bedside and laboratory investigations.
5. Outline first aid, antivenom therapy and supportive management.
6. Discuss prevention and public health measures.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Epidemiology and classification	PPT
10–20	Pathophysiology	Venom effects	Lecture
20–30	Clinical Features	Local and systemic manifestations	Interactive
30–40	Diagnosis	20WBCT and laboratory evaluation	Discussion
40–50	Management	First aid, antivenom, supportive care	Algorithm
50–60	Summary	Key messages and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, national snakebite management guideline, clinical algorithms and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Write a short note on the emergency management of snake bite.

Lesson Plan (Medicine)

Topic: Spondyloarthropathies

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Spondyloarthropathies.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Spondyloarthropathies
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic musculoskeletal anatomy, immunology and joint examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define spondyloarthropathies and classify the major subtypes.
2. Explain the role of HLA-B27 and disease pathogenesis.
3. Recognize axial, peripheral and extra-articular manifestations.
4. Interpret imaging and laboratory investigations.
5. Outline pharmacological and non-pharmacological management.
6. Discuss rehabilitation, biologic therapy and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of inflammatory back pain	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Pathophysiology	HLA-B27, inflammation and disease spectrum	Diagrams
20–30	Clinical Features	Axial, peripheral and extra-articular features	Interactive discussion
30–40	Diagnosis	ASAS criteria, X-ray, MRI and laboratory tests	Investigation review
40–50	Management	NSAIDs, physiotherapy, DMARDs and biologics	Treatment algorithm
50–60	Summary	Complications, prognosis and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, ASAS classification criteria, imaging examples, treatment guidelines and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the classification, diagnosis and management of spondyloarthropathies.

Lesson Plan (Medicine)

Topic: Stroke

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Stroke.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Stroke
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of neuroanatomy, cerebrovascular circulation and neurologic
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define stroke and classify ischemic and hemorrhagic stroke.
2. Describe epidemiology, risk factors and pathophysiology.
3. Recognize clinical presentation using FAST and NIHSS concepts.
4. Interpret CT brain, MRI and vascular imaging findings.
5. Outline acute management including thrombolysis and thrombectomy indications.
6. Discuss secondary prevention, rehabilitation and long-term follow-up.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of sudden hemiplegia	Case discussion
5–10	Introduction	Definition, classification and epidemiology	PPT
10–20	Pathophysiology	Ischemic vs hemorrhagic stroke, risk factors	Diagrams
20–30	Clinical Features	FAST, NIHSS, neurological deficits	Interactive discussion
30–40	Diagnosis	CT brain, MRI, CTA, laboratory evaluation	Investigation review
40–50	Management	Acute stroke protocol, thrombolysis, thrombectomy, BP management	Treatment algorithm
50–60	Summary	Secondary prevention, rehabilitation and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, CT/MRI brain images, AHA/ASA guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, acute management and secondary prevention of stroke.

Lesson Plan (Medicine)

Topic: Systemic Lupus Erythematosus (SLE)

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Systemic Lupus Erythematosus.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Systemic Lupus Erythematosus (SLE)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology, rheumatology and musculoskeletal examination.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define SLE and describe its epidemiology.
2. Explain the immunopathogenesis and risk factors.
3. Recognize multisystem clinical manifestations.
4. Interpret ANA, anti-dsDNA, complement levels and other investigations.
5. Outline pharmacological and supportive management.
6. Discuss disease monitoring, complications and prognosis.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of young female with arthritis and rash	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Pathophysiology	Autoantibodies and immune complex disease	Diagrams
20–30	Clinical Features	Cutaneous, renal, CNS and hematologic involvement	Interactive discussion
30–40	Diagnosis	Classification criteria and laboratory evaluation	Investigation review
40–50	Management	Hydroxychloroquine, steroids, immunosuppressants and biologics	Treatment algorithm
50–60	Summary	Monitoring, complications and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, EULAR/ACR classification criteria, clinical photographs and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of systemic lupus erythematosus.

Lesson Plan (Medicine)

Topic: Systemic Sclerosis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Systemic Sclerosis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Systemic Sclerosis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic immunology, rheumatology and connective tissue disorders.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define systemic sclerosis and describe its epidemiology.
2. Explain the pathogenesis and classification.
3. Recognize clinical manifestations and organ involvement.
4. Interpret relevant laboratory and imaging investigations.
5. Outline evidence-based management.
6. Discuss prognosis and complications.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Pathogenesis	Autoimmunity, fibrosis, vasculopathy	Lecture
20–30	Clinical Features	Skin and systemic involvement	Interactive
30–40	Diagnosis	Autoantibodies and investigations	Discussion
40–50	Management	Medical therapy and monitoring	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, rheumatology guidelines, standard textbooks and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the diagnosis and management of systemic sclerosis.

Lesson Plan (Medicine)

Topic: Tetanus

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Tetanus.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Tetanus
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic microbiology, neurophysiology and immunization principles.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define tetanus and describe its epidemiology and transmission.
2. Explain the pathophysiology of tetanospasmin toxin.
3. Recognize the clinical features and complications of tetanus.
4. Describe the diagnostic approach and differential diagnosis.
5. Outline evidence-based management including wound care, TIG, antibiotics and supportive care.
6. Discuss prevention through immunization and post-exposure prophylaxis.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of lockjaw after wound injury	Case discussion
5–10	Introduction	Epidemiology and transmission	PPT
10–20	Pathophysiology	C. tetani toxin mechanism	Diagrams
20–30	Clinical Features	Trismus, muscle spasms and complications	Interactive discussion
30–40	Diagnosis	Clinical diagnosis and differential diagnosis	Investigation review
40–50	Management	TIG, metronidazole, wound care and ICU support	Treatment algorithm
50–60	Summary	Vaccination, prevention and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, WHO tetanus guideline summaries, management algorithms and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis, management and prevention of tetanus.

Lesson Plan (Medicine)

Topic: Thyrotoxicosis

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Thyrotoxicosis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Thyrotoxicosis
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic knowledge of thyroid anatomy, physiology and endocrine regulation.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define thyrotoxicosis and differentiate it from hyperthyroidism.
2. Describe the etiology and pathophysiology of thyrotoxicosis.
3. Recognize clinical features and complications including thyroid storm.
4. Interpret thyroid function tests and thyroid imaging.
5. Outline evidence-based medical, radioactive iodine and surgical management.
6. Discuss follow-up and prevention of treatment-related complications.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of weight loss and palpitations	Case discussion
5–10	Introduction	Definition and epidemiology	PPT
10–20	Etiology & Pathophysiology	Graves' disease, toxic nodules, thyroiditis	Diagrams
20–30	Clinical Features	Symptoms, signs and thyroid storm	Interactive discussion
30–40	Diagnosis	TSH, Free T4/T3, TRAb, thyroid scan	Investigation review
40–50	Management	Antithyroid drugs, beta-blockers, radioiodine, surgery	Treatment algorithm
50–60	Summary	Complications, follow-up and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, thyroid function test charts, ATA guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of Graves' disease and thyrotoxicosis.

Lesson Plan (Medicine)

Topic: Urinary Tract Infection (UTI)

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Urinary Tract Infection.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Urinary Tract Infection (UTI)
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic renal anatomy, microbiology and urinalysis.
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define urinary tract infection and classify upper and lower UTI.
2. Describe common pathogens, risk factors and pathogenesis.
3. Recognize clinical manifestations and complications.
4. Interpret urinalysis, urine culture and imaging.
5. Outline evidence-based antimicrobial treatment.
6. Discuss prevention of recurrent UTI.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of dysuria and fever	Case discussion
5–10	Introduction	Definition and classification	PPT
10–20	Etiology & Pathophysiology	Common organisms and risk factors	Diagrams
20–30	Clinical Features	Cystitis, pyelonephritis, complicated UTI	Interactive discussion
30–40	Diagnosis	Urinalysis, urine culture, imaging	Investigation review
40–50	Management	Empirical antibiotics, targeted therapy, prevention	Treatment algorithm
50–60	Summary	Complications and MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, urine microscopy images, treatment guidelines and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Summarize the diagnosis and management of complicated urinary tract infection.

Lesson Plan (Medicine)

Topic: Vertigo

This lesson plan is designed for a 60-minute lecture for MBBS 5th Year (CoMC) students focusing on Vertigo.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Vertigo
Duration	60 minutes
Format	Lecture Class
Venue	CoMC Lecture Gallery
Prerequisites	Basic neuroanatomy, ENT and neurology.
Date & Time	_____
Teacher	_____

Learning Objectives

1. Define vertigo and differentiate it from dizziness.
2. Classify peripheral and central causes.
3. Perform focused history and vestibular examination.
4. Interpret bedside tests and appropriate investigations.
5. Outline evidence-based management of common causes.
6. Recognize red flags requiring urgent referral.

Content Outline & Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Introduction	Clinical scenario	Case discussion
5–10	Overview	Definition and classification	PPT
10–20	Clinical Approach	History and examination	Lecture
20–30	Diagnosis	Dix-Hallpike, HINTS, imaging	Interactive
30–40	Differential Diagnosis	Peripheral vs central vertigo	Discussion
40–50	Management	Canalith repositioning, medications and referral	Algorithm
50–60	Summary	Review and MCQs	Discussion

Resources & Evaluation

Resources: PowerPoint slides, neurology and ENT guidelines, standard textbooks and whiteboard.

Assessment: Interactive questions and short MCQs.

Assignment: Summarize the approach to diagnosis and management of vertigo.

Lesson Plan (Medicine)

Topic: Viral Hepatitis

This lesson plan is designed for a 60-minute lecture for fifth-year MBBS students focusing on Viral Hepatitis.

Field	Detail
Course	Medicine
Year	MBBS 5th Year (CoMC)
Topic	Viral Hepatitis
Duration	60 minutes
Format	Lecture Class
Prerequisites	Basic knowledge of liver anatomy, physiology and liver function tests.
Venue	CoMC Lecture Gallery
Date and Time	_____
Teacher	_____

Learning Objectives

1. Define viral hepatitis and classify hepatitis A, B, C, D and E.
2. Describe epidemiology, modes of transmission and pathogenesis.
3. Recognize clinical features and complications.
4. Interpret liver function tests, viral serology and molecular diagnostics.
5. Outline evidence-based management, antiviral therapy and supportive care.
6. Discuss vaccination, prevention and public health measures.

Content Outline and Time Allocation

Time	Activity	Content / Key Points	Teaching Method
0–5	Gaining Attention	Case of acute jaundice	Case discussion
5–10	Introduction	Definition, classification and epidemiology	PPT
10–20	Etiology & Pathophysiology	HAV, HBV, HCV, HDV, HEV; transmission	Diagrams
20–30	Clinical Features	Acute vs chronic hepatitis, complications	Interactive discussion
30–40	Diagnosis	LFT, viral markers, PCR, ultrasound	Investigation review
40–50	Management	Supportive care, antivirals, monitoring, transplantation indications	Treatment algorithm
50–60	Summary	Vaccination, prevention, MCQs	Discussion

Resources and Evaluation

Instructional Materials: PowerPoint presentation, viral serology charts, liver imaging, national/WHO guideline summaries and whiteboard.

Assessment: Formative questioning and 2–3 MCQs.

Assignment: Compare hepatitis A–E and summarize hepatitis B vaccination and antiviral therapy.