

COURSE IN MEDICINE

DIVISION OF MEDICINE, UKZN

CONTENTS

Introduction.....	1
Using the Core Syllabus	4
Cardiovascular Disorders	5
Endocrine Disorders	8
GIT and Liver Disorders	10
Geriatric Disorders.....	13
Haematological Disorders.....	14
Infectious Diseases	16
Miscellaneous Disorders.....	18
Musculoskeletal Disorders.....	19
Neurological Disorders	21
Renal Disorders.....	24
Respiratory Disorders.....	26
Skin Disorders	28
Toxicology	29

INTRODUCTION

The purpose of the course in Medicine is to equip the student with the knowledge, skills and conceptual background necessary to allow him or her to manage patients presenting with disorders relevant to internal medicine with confidence, at a level appropriate to supervised practice in the first and second years of internship.

Training, Teaching and Assessment

The aim of the course is to produce an intern who is

1. Confident and competent at handling patients with common disorders and important (even if uncommon) disorders
2. Equipped with sound principles and a basic framework of knowledge and understanding to enable the acquisition of further abilities as required in the future.

The theory he or she is expected to learn is therefore directed at clearly supporting practically demonstrated ability at diagnosing, investigating and treating, and must always be related to actual clinical presentations.

Assessment will mirror and support learning. Assessment is principally directed at evaluating the student's ability to use his or her skills, knowledge of the clinical sciences and clinically appropriate knowledge of the basic sciences to recognise common or important clinical presentations, to support effective clinical reasoning and to select rational and appropriate diagnostic and therapeutic interventions.

We do not teach or assess knowledge for its own sake.

Exit Competence

Definitions in this document:

Presentation: a characteristic symptom complex which may be common to more than one disorder.

Condition: a particular disease, with a specific set of investigations and treatments.

For example: Right heart failure is a specific *presentation* (oedema, raised JVP, hepatomegaly etc); but is associated with a number of *conditions*, (e.g. pulmonary embolism, cor pulmonale, dilated cardiomyopathy).

The approach expected of students is that they will rapidly recognise the type of presentation in a patient, and then zero in on the specific condition responsible for it.

By the end of the final year, the student is expected to show evidence of competence in the following:

1. Sound interviewing and communication skills.
2. Ability to take a good history directed to the determination of the individual patient's problems.
3. Competence at physical examination, directed to the determination of the individual patient's problems.
4. Competence in the interpretation of common diagnostic investigations, as listed in this syllabus.
5. Strength and reliability in clinical reasoning, evidenced by the ability to relate the presentation, the context and an awareness of the frequency with which specific disorders are encountered to generate a problem list ordered by probability.
6. Identification of the problems and/or type of **presentation** demonstrated by the patient.

7. Demonstration of his or her understanding of the scientific underpinning of Internal Medicine, by:
 - Explaining how the condition/presentation comes about in terms of basic pathology, pathophysiology and microbiology.
 - Explaining the utility of investigations and treatment in terms of these factors.
8. Presentation of the history and examination findings in a concise, accurate format which is tailored to the individual patient.
9. Planning of rational and cost effective investigations to pin down specific **conditions** as the cause of the presentation, in the degree of detail suggested by this syllabus.
10. Planning of rational and cost effective therapy, in the degree of detail suggested by this syllabus.
11. Provision of emergency therapy at point of first contact for all common emergencies.
12. Ability to summarise all of the above succinctly and empathetically in a form appropriate to:
 - communication with colleagues
 - communication with patient and family.

Core Syllabus

The purpose of the core syllabus is:

1. To guide the student in selecting the range and depth of knowledge and skills which they should acquire
2. To guide the staff in building teaching and learning about those areas most required.
3. To guide the staff in setting appropriate assessments at the appropriate standard

Items are listed under the following headings.

PRINCIPLES

Students are expected to revise and understand the listed areas of knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine

ESSENTIAL SKILLS

The listed skills are essential and may be tested at the bedside or in theory examinations.

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

The student is expected to be able to:

1. Recognise the presentation when encountered.
2. Describe the salient features of the syndrome, particularly those which distinguish it from other, similar, syndromes.
3. Have a sensible differential diagnosis for the presentation, listed in order of probability, for a particular patient.
4. Devise a rational and cost-effective plan of investigation, leading to a specific diagnosis, for the patient with such a presentation.
5. Demonstrate competence with 1-4 in a clinical setting (at the bedside), and in the setting of a theory examination (answering MCQs, short written answers or oral questioning).

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT

The student is expected to be able to:

1. Recognise the condition as the cause of a specific presentation, given sufficient history, clinical findings and special investigations, which the student is expected to request or elicit him/herself.
2. Devise a rational and cost-effective plan of further investigation and management for the condition. Items marked with an asterisk require detailed knowledge only of emergency care at point of first contact and prior to referral, as well as the broad outlines of therapy (not detailed) likely to be applied after referral.
3. Demonstrate competence with 1-4 in a clinical setting (at the bedside), and in the setting of a theory examination (answering MCQs, short written answers or oral questioning).

CONDITIONS: RECOGNIZE AND REFER

The student is expected to be able to:

1. Recognise the condition as the cause of a specific presentation, given sufficient history, clinical findings and special investigations, which the student is expected to request or elicit him/herself
2. Suggest a rational plan of preliminary investigation to prepare the patient for referral, and provide the broad outlines of therapy (not detailed) likely to be applied after referral.
3. Demonstrate competence with 1-2 in a clinical setting (at the bedside), and in the setting of a theory examination (answering MCQs, short written answers or oral questioning).

NICE TO KNOW

The student is not expected to have done much more than heard of these conditions, and have some idea of where they fit into the spectrum of pathology.

USING THE CORE SYLLABUS

Students

1. Base your learning around the topics listed for each system
2. Ensure you revise the “principles” – the basic sciences. The topics listed are examinable.
3. Concentrate your learning and understanding around the presentations first, and persuade your tutors to concentrate on this too.
4. Learn about the specific conditions through your own reading and discussion.
5. These topics run through to the end of final year. Some are labelled “Once you have mastered the earlier material “: this is to guide you as to which material can reasonably be left safely until you become more experienced, perhaps in your fifth year.

Tutors

1. Base your tutorials around history-taking, physical examination, diagnostic reasoning, investigation and management as applied to presentations, not diseases.
2. Stress that students are expected to learn about specific diseases themselves. Make yourself available however to answer their queries arising from their reading.

CARDIOVASCULAR DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy	Heart and great vessels Coronary circulation Conducting system of the heart Normal chest x-ray
Physiology	Cardiac output Maintenance of blood pressure The ECG
Pathophysiology	Response to a falling cardiac output Clear understanding of the differences between right and left heart failure
Microbiology	Streptococcus Organisms causing endocarditis

ESSENTIAL SKILLS

The following skills are essential and may be tested at the bedside or in theory examinations.

Clinical Skills	History taking Physical Examination
Chest radiography	<ol style="list-style-type: none"> Sensible approach in the following order: <ol style="list-style-type: none"> Clear statement as to whether normal or abnormal, and severity of abnormality. Identification of abnormal areas. Description of abnormal areas using standard. Systematic inspection anatomically: heart, mediastinum, hila, apices, costophrenic angles, lung fields, bony structures, soft tissues Ability to relate probable clinical diagnosis to x ray findings Confidence in diagnosing cardiomegaly <ol style="list-style-type: none"> Confidence in suspecting pericardial effusion Confidence in diagnosing pulmonary oedema

Once you have mastered the earlier material

ECG	<ol style="list-style-type: none"> Sensible approach in the following order: <ol style="list-style-type: none"> Clear statement as to whether likely to be normal or abnormal from brief inspection Rate Rhythm Confident recognition of atrial fibrillation Appropriate suspicion of other supraventricular tachycardias Appropriate suspicion of wide-complex tachycardias Recognition of malignant arrhythmias: frequent VEBs, ventricular tachycardia, VF, complete heart block Axis: recognition of significant left and right axis deviation Recognition of left/right atrial enlargement Recognition of left ventricular hypertrophy Recognition of right ventricular hypertrophy Recognition of acute ischaemia <ol style="list-style-type: none"> Must be able to recognise and differentiate hyperacute infarct, evolving infarct, fully evolved infarct and acute non-transmural ischaemia on ECG. Recognition of bundle branch block
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RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Breathlessness at rest	Including both cardiovascular and respiratory causes; provides differential without hesitation
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Breathlessness on exertion	Including both cardiovascular and respiratory causes; provides differential without hesitation
Acute ischaemic chest pain	Has a clear pathophysiological concept of the acute coronary syndromes, of the association between unstable angina and myocardial infarction and a basic concept of diagnosis and treatment
Chronic stable angina	Can distinguish this clearly from unstable angina and able to discuss how and when to treat empirically, and when to refer
Right heart failure	Provides differential without hesitation. Clear grasp of pathophysiology.
Left heart failure	Provides differential without hesitation. Clear grasp of pathophysiology.
Biventricular heart failure	Provides differential without hesitation. Clear grasp of pathophysiology.
Pericardial syndrome: constriction and tamponade	Provides differential without hesitation. Clear grasp of pathophysiology.
Shock	Recognises shock and provides differential without hesitation. Provides rational plan for monitoring and treatment appropriate to the clinical presentation.
Valvular heart disease	Recognises the likely presence of valvular heart disease. Clear concept of functional murmurs (MR and TR) and of innocent systolic murmurs. Definitive identification of individual valve dysfunction not essential, though simpler murmurs should be identified by average-good students. Confident approach to further diagnosis via CXR, ECG, echo and referral, without being expected to know the details.
Pulmonary hypertension	Recognises and advances differential diagnosis
Syncope	Recognises the syndrome of syncope and has a reasonable differential, listed in order of probability

Once you have mastered the earlier material

Acute ischaemic chest pain	<ol style="list-style-type: none"> Has a clear pathophysiological concept of the acute coronary syndromes, of the association between unstable angina and myocardial infarction confident on diagnosis using ECG and troponin T. Confident with acute management. Must be able to recognise and differentiate hyperacute infarct, evolving infarct, fully evolved infarct and acute non-transmural ischaemia on ECG.
Accelerated/malignant hypertension	Recognises the importance of cardiac, renal complications, can look for these clinically and via lab tests, and makes a decent attempt at fundoscopy
Suspected pulmonary embolus	Has a clear pathophysiological concept of pulmonary embolism, knows when to suspect both acute and chronic pulmonary embolism, and knows how to investigate and manage
Severe bradyarrhythmia	Lists the common causes
Severe tachyarrhythmia	Lists the common causes
Cardiorespiratory arrest	Recognises and able to initiate and maintain resuscitation

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT

Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

Acute rheumatic fever	Should be known in detail
Endocarditis	Should be known in detail
Hypertension	Pathophysiology and management known in detail. Causes of secondary hypertension known in less detail. Must be able to recognise LVH on ECG.
Heart failure	Thorough understanding of causes, presentations, diagnosis and treatment. Lists causes in order of frequency without hesitation. Clear understanding of pathophysiology, with no confusion between predominantly left- and right-sided failure.
Dilated cardiomyopathy	Understands the concept of dilated cardiomyopathy, lists causes without hesitation
Shock	Lists causes without hesitation, and can relate these to specific clinical circumstances. Provides rational plan for management appropriate to the circumstances.
Chronic stable angina	ECG diagnosis is core.
Atrial fibrillation	Confident at recognition, ECG diagnosis, can list the causes. Understands the importance of the rate and the pulse deficit, and of rate control. Can initiate management and recognises need for anticoagulation.
Acute pericarditis	Lists causes without hesitation

Once you have mastered the earlier material

Acute coronary syndromes	Unstable angina, myocardial infarction (ST Elevation, ST Elevation). Detailed initial care is required. ECG diagnosis is core.
Accelerated/malignant hypertension	Understands diagnosis, complications and treatment
Non-cardiac chest pain	Knows when to suspect a non-ischæmic origin for chest pain and how and when to investigate
Ventricular tachycardia	ECG diagnosis is core.
Ventricular fibrillation	ECG diagnosis is core.

CONDITIONS: RECOGNISE AND REFER

Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.

Rheumatic valvular heart disease	Ability to recognise presence of valvular disease per se on examination is more important than detailed diagnosis. The more classical the murmur and findings, the higher the expectation that students may recognise it correctly.
Constrictive pericarditis	Recognises on clinical grounds, can recommend initial investigation and treatment.
Pericardial effusion	Recognises on clinical grounds, can recommend initial investigation and treatment.
Pulmonary embolus	Recognises on clinical grounds, can recommend initial investigation and treatment.

Once you have mastered the earlier material

Narrow-complex tachycardia	Aware of the entities of sinus tachycardia, atrial fibrillation, atrial flutter, SVT. Has an approach to management. Detailed knowledge is not required
Complete heart block	ECG diagnosis is core. Has a concept of emergency management.
Wide-complex tachycardia	ECG diagnosis is core. Has a concept of emergency management, including cardioversion for shock. Detailed knowledge is not required

NICE TO KNOW

Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.

1st and 2nd degree AV Block	
Congenital heart disease	All forms
Hypertrophic cardiomyopathy	
Restrictive cardiomyopathy	

ENDOCRINE DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy	Position, shape and surface anatomy of the thyroid Position of the hypothalamus and pituitary Position of the adrenal glands Anatomy of the pancreas
Histology	Basic concept of cell types, function and position within pituitary, thyroid, adrenal, ovary, testis and pancreas
Physiology	The hypothalamo-pituitary-adrenal axis Thyroid function and regulation Parathyroid function Testicular and ovarian function Glucose homeostasis
Chemical pathology	Acid-base balance

ESSENTIAL SKILLS

The following skills are essential and may be tested at the bedside or in theory examinations.

	<ol style="list-style-type: none"> 1History taking 2. Physical Examination, with particular reference to: <ol style="list-style-type: none"> 2.1. Examination of the thyroid 2.2. General examination for features of endocrine disease 2.3. General examination for features of hyperlipidaemia
Finger prick blood glucose	Can perform and interpret
Blood glucose and glycated haemoglobin estimation	Can interpret

Once you have mastered the earlier material

Thyroid function tests	Able to recognise hypo- and hyperthyroidism and suggest probable causes of each
Fasting lipogram	<ol style="list-style-type: none"> 1. Approach to interpretation 2. Able to recognise the common atherogenic profile

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Diabetes mellitus	Understand in detail
Diabetic coma and precoma	Recognise diabetic ketoacidosis and hyperosmolar non-ketotic coma, suggest possible precipitants, investigate, treat and monitor. Indicate appropriate management as patient emerges from the acute phase
Hypoglycaemia	Recognise, list common causes, treat
Osteoporosis	Recognise, suggest relevant investigations and treatment
Hyperthyroidism	Recognise, list commonest causes, suggest appropriate investigations, describe therapy in outline only
Hypothyroidism	Recognise, list commonest causes, suggest appropriate investigations, describe therapy in outline only

Once you have mastered the earlier material

Addisonian crisis	<ol style="list-style-type: none"> 1. As seen in adrenal tuberculosis, corticosteroid withdrawal 2. Recognise clinical presentation, know which biochemical indices may support the diagnosis, know how to treat
Goitre	Recognise, list commonest causes, suggest rational investigation. Detail not required.
Metabolic syndrome	Recognise, understand pathophysiology at a simple level, list complications and outline comprehensive approach to therapy

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT	Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.
Insulin-dependent DM	In detail
Non-insulin-dependent DM	In detail
Diabetic ketoacidosis	In detail
Hyperosmolar non-ketotic coma	In detail
Hypoglycaemia	List possible causes without hesitation, describe treatment
<i>Once you have mastered the earlier material</i>	
Obesity	Describe pathophysiology, complications and comprehensive management
Osteoporosis	Describe aetiology, pathophysiology, complications, investigation and comprehensive management
Hypercholesterolaemia	Recognise clinical features, able to interpret lipogram to the extent of diagnosing hypercholesterolaemia, can suggest rational therapy
CONDITIONS: RECOGNISE AND REFER	Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.
Hypothyroidism	Can recognise and describe the clinical presentation, describe the pathophysiology, suggest relevant investigations and outline the principles of therapy, though not in detail. Can identify on thyroid function tests
Hyperthyroidism	Lists the common causes and can identify on thyroid function tests
<i>Once you have mastered the earlier material</i>	
Graves disease	Can recognise and describe the clinical presentation, describe the pathophysiology, suggest relevant investigations and outline the principles of therapy, though not in detail
Goitre	Can recognise and describe the clinical presentation, describe the pathophysiology, suggest relevant investigations and outline the principles of therapy, though not in detail
Cushing's syndrome	Can list the major clinical signs and suggest the most common causes
Hypercalcaemia	Can list the major clinical signs and suggest the most common causes
Secondary hypertension	Can list endocrine causes
Hypoadrenalism (Addison's disease)	Can describe the typical presentation
NICE TO KNOW	Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.
Thyroid carcinoma	
Parathyroid disorders	
Hypocalcaemia	Can list the major clinical signs and suggest the most common causes
Phaeochromocytoma	
Conn's syndrome	
Diabetes Insipidus	
Hypopituitarism	
Pituitary adenoma	
Prolactinoma	
Short stature	
Other dyslipidaemias	
Hypocalcaemia / hypercalcaemia	
Acromegaly / Gigantism	

GIT AND LIVER DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy	<ol style="list-style-type: none"> 1. Position of organs within the abdomen and approximate surface markings for abdominal organs. Specifically, shape and position of the: <ol style="list-style-type: none"> 1.1. oesophagus 1.2. stomach 1.3. small bowel 1.4. colon and rectum 1.5. pancreas 1.6. liver 1.7. spleen <p>Anatomy of the stomach Portal circulation Hepatic venous drainage Biliary tree</p>
Physiology	<p>Acid secretion in the stomach Digestive juices and pancreatic enzymes Digestion and absorption Functions of the liver Formation and excretion of bile Functions of the spleen</p>
Histopathology	<p>Gastritis and peptic ulcer Hepatitis Cirrhosis</p>
Chemical pathology	<p>Liver enzymes Hepatic protein synthesis and serum albumin Formation and excretion of bilirubin</p>
Microbiology	<p>Organisms responsible for diarrhoea and dysentery <i>H pylori</i> Hepatitis A and B viruses Organisms responsible for cholangitis Amoebiasis</p>

ESSENTIAL SKILLS

The following skills are essential and may be tested at the bedside or in theory examinations.

Clinical Skills	<ol style="list-style-type: none"> 1. History taking 2. Physical Examination
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Once you have mastered the earlier material

Biochemical liver profile	<ol style="list-style-type: none"> 2.1. Able to distinguish hepatitic from cholestatic picture on liver profile and have differential diagnosis for each 2.2. Able to suspect infiltration on liver profile 2.3. Has a differential diagnosis for hypoalbuminaemia
Ultrasound and CT	<ol style="list-style-type: none"> 2.4. Able to point out gross pathology and differentiate between more typical presentations of cysts, abscesses and solid tumours in the liver and pancreas

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Nausea and vomiting

Non-serious:

- When and how to treat symptomatically

Potentially serious:

	<ul style="list-style-type: none"> • When to be concerned • Differential diagnosis, investigation and management
Diarrhoea	Differential diagnosis for acute and chronic diarrhoea, principles of investigation and management
Dysentery	Differential diagnosis, investigation, management
Constipation	<p><i>Non-serious:</i></p> <ul style="list-style-type: none"> • When and how to treat symptomatically <p><i>Potentially serious:</i></p> <ul style="list-style-type: none"> • When to be concerned • Differential diagnosis, investigation and management
Acute and chronic abdominal pain	<p><i>Non-serious:</i></p> <ul style="list-style-type: none"> • When and how to treat symptomatically <p><i>Potentially serious:</i></p> <ul style="list-style-type: none"> • When to be concerned, differential diagnosis, investigation and management
Dyspepsia and acid reflux	Recognition on symptomatology and approach to empiric therapy; concept of when to refer
Acute abdomen	Immediate recognition, appropriate differential diagnosis without hesitation, approach to investigation and management (detailed management not required)
Jaundice	Clear understanding of the differentiation of large duct obstruction from intrahepatic cholestasis, can use liver function tests to differentiate predominantly hepatocellular from cholestatic injury, recognises importance of ultrasound in their differentiation and has a differential diagnosis for both
Haematemesis	Differential diagnosis, investigation and management
Hepatomegaly	Can list the probable causes without hesitation, relate these to other features of the case, and suggest sensible plan of investigation.
Splenomegaly	Can list the probable causes without hesitation, relate these to other features of the case, and suggest sensible plan of investigation.
Melaena	Differential diagnosis, investigation and management
Ascites	<ol style="list-style-type: none"> 1. Can list the probable causes without hesitation, relate these to other features of the case, and suggest sensible plan of investigation 2. Can discuss investigation and management
Acute liver failure	Can recognise the clinical presentation and list possible causes

Once you have mastered the earlier material

Dyspepsia and acid reflux	Understand the pathophysiological principles, be able to apply empiric therapy, know when to refer for endoscopy. Understand the principles of ulcer eradication and of long-term acid suppression
Diarrhoea in HIV-positive patients	Differential diagnosis for acute and chronic diarrhoea, principles of investigation and management
CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT	Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.
Gastroenteritis and food poisoning	Understands the concepts of infection versus toxin ingestion, public health principles to ensure food safety, management
Acute self-limiting diarrhoea	Understands the microbiology and aetiology, public health principles to ensure food and water safety, management
Acute hepatitis	<p>Understands viral hepatitis well, including clinical presentation, virology, diagnosis, management and prognosis</p> <p>Recognises the importance of drug-associated hepatitis in the differential diagnosis and can give examples of this</p>
Typhoid	Know when to suspect, how to diagnose and how to treat
Dysentery	Confident approach to differential diagnosis of bacterial and amoebic dysentery and know how to treat
Amoebic liver abscess	Know how to recognise, diagnose and treat
Oral/oesophageal candidiasis	Know how to recognise and treat

Dyspepsia and acid reflux	Understand the pathophysiological principles, be able to apply empiric therapy, know when to refer for endoscopy. Understand the principles of ulcer eradication and of long-term acid suppression
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CONDITIONS: RECOGNISE AND REFER	Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.
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Cholangitis and cholecystitis	Know how to recognise, principles of diagnosis and treatment. Can suggest rational antibiotics for use
Acute hepatitis	Has a differential for acute hepatitis extending beyond viral and drugs
Colonic carcinoma	Know the clinical findings which should lead one to suspect this and suggest appropriate first-line investigation
Chronic hepatitis	Has a differential diagnosis for chronic hepatitis and knows the names of the treatments used for chronic viral hepatitis B and C
Cirrhosis	Recognise clinically, list possible causes without hesitation, discuss principles of management
Portal hypertension	<ol style="list-style-type: none"> 1. Able to describe anatomy of portal circulation and hepatic venous drainage without hesitation. 2. Able to distinguish features/complications of portal hypertension and distinguish these from features of hepatocellular failure without hesitation 3. Able to recognise encephalopathy and suggest management 4. Able to suspect varices, recommend investigation and emergency management
Biliary obstruction	Can recognise the clinical presentation, list possible causes, suggest initial investigation and suggest emergency management pending referral
Hepatocellular carcinoma	Can recognise from the characteristic presentation, can recommend first-line investigation and discuss prognosis

Once you have mastered the earlier material

Peptic ulcer disease and H pylori infection	Understand the pathophysiological principles, be able to apply empiric therapy, know when to refer for endoscopy. Understand the principles of ulcer eradication
Irritable bowel syndrome	Able to recognise this as a diagnostic possibility. Little detail required.
Inflammatory bowel disease	Knows when to suspect IBD. Details not required.
Acute liver failure	Can recognise the clinical presentation, list possible causes and suggest emergency management pending transfer
Liver metastases	Can recognise from the characteristic presentation, can recommend first-line investigation and discuss prognosis
Pancreatitis	Can recognise the clinical presentation, list possible causes, suggest initial investigation and suggest emergency management pending transfer
Oesophageal carcinoma	Know the clinical findings which should lead one to suspect this and suggest appropriate first-line investigation
Gastric carcinoma	Know the clinical findings which should lead one to suspect this and suggest appropriate first-line investigation
Pancreatic carcinoma	Know the clinical findings which should lead one to suspect this and suggest appropriate first-line investigation

NICE TO KNOW	Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.
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Liver cysts
 Crohn's disease
 Ulcerative colitis
 Portal vein thrombosis
 Hepatic vein thrombosis
 Porphyrin

GERIATRIC DISORDERS

PRINCIPLES Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Physiology Changes with ageing
Pharmacology Drug metabolism in the elderly

ESSENTIAL SKILLS The following skills are essential and may be tested at the bedside or in theory examinations.

1. History taking
2. Physical Examination, with particular reference to:
 - 2.1. Hypertension
 - 2.2. Postural hypotension
 - 2.3. Steadiness

Mini-mental state examination Can perform and interpret

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Confusion Must be able to list causes without hesitation using the DIMTOP approach and suggest practical steps for investigation and management

Dementia Must be able to list common clinical features, confirm with MMSE examination and list the most common causes

Falls Must be able to list predisposing conditions without hesitation, identify these on history and examination and suggest rational management

Incontinence Must be able to list predisposing conditions without hesitation, identify these on history and examination and suggest rational management

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

Hypertension in the elderly Pathophysiology and management; differences from hypertension in younger people

Hypotension and syncope in the elderly Common causes and pathophysiology, investigation and management

Incontinence in the elderly Common causes and pathophysiology, investigation and management

Once you have mastered the earlier material

Drug therapy in the elderly Principles with specific examples

CONDITIONS: RECOGNISE AND REFER Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.

Once you have mastered the earlier material

Dementia Can list reversible causes of dementia, know Alzheimer's and vascular dementia in moderate detail.

NICE TO KNOW Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.

Dementia Other types of dementia

HAEMATOLOGICAL DISORDERS

PRINCIPLES	Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.
Haematology	Blood and its constituents Haemoglobin synthesis Maturation of red cells, white cells and platelets Coagulation
ESSENTIAL SKILLS	The following skills are essential and may be tested at the bedside or in theory examinations.
	<ol style="list-style-type: none"> 1. History taking 2. Physical Examination, with particular reference to: <ol style="list-style-type: none"> 2.1. General examination to detect evidence of bleeding disorders, immunodeficiency, lymphadenopathy 2.2. Hepatosplenomegaly
Full blood count, differential count and morphology	<ol style="list-style-type: none"> 1. Can interpret rationally and with confidence, in particular: <ol style="list-style-type: none"> 1.1. Red cells: evidence for anaemia and cause thereof, polycythaemia 1.2. White cells: clear understanding of the significance of moderately raised, very raised, normal and low white cell counts respectively; Ability to discuss differences between viral and bacterial infections on WCC and differential 1.3. Platelets: appropriate differential for low and high platelet counts 2. Recognition of leukaemic states
Coagulation profile	<ol style="list-style-type: none"> 1. Confident differential for prolonged INR 2. Will recognise possible DIC
RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT	Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.
Anaemia	<ol style="list-style-type: none"> 1. Able to identify confidently and list causes without hesitation, relate history and examination to possible causes, correlate with FBC and smear to suggest probable diagnosis, recommend appropriate investigations and treat commoner forms of anaemia appropriately. 2. Confident on when and how to transfuse
Bleeding disorder	Will recognise evidence on history and examination of a bleeding diathesis, lists causes without hesitation, relates history and examination to possible causes, correlates with FBC and smear to suggest probable diagnosis, recommends appropriate investigations and treats appropriately.
Leucocytosis	Has a reasonable differential for both slightly elevated and highly elevated white cell counts, and can relate this to differential count and morphology.
Thrombocytopenia	Lists possible causes confidently
Pancytopenia	Lists possible causes confidently
CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT	Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.
Anaemia	Iron deficiency Folate deficiency B12 deficiency Anaemia of chronic disorders
CONDITIONS: RECOGNISE AND REFER	Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.
Anaemia	Haemolytic: should be able to diagnose haemolysis and list most frequent causes: detail not required Aplastic anaemia: should be able to diagnose and list most frequent causes: detail not required

Idiopathic thrombocytopenic purpura	Can recognise, knows associations and complications, can commence basic treatment pending referral.
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Once you have mastered the earlier material

Lymphoma	Broad classification only. Detail is not required. Details re management not required.
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Leukaemia	Broad classification only. Detail is not required. Details re management not required.
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Polycythaemia

Myelofibrosis

Haemophilia

INFECTIOUS DISEASES

PRINCIPLES Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Histopathology	Acute and chronic inflammation
Pathophysiology	Systemic response to inflammation and infection
Pharmacology	Antibiotic classes, mechanism of action, spectrum Antibiotic metabolism
Microbiology	Appropriate to the specific infections listed below

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Common upper respiratory tract infections	Viral, bacterial: sinusitis, otitis
Lower respiratory tract infections	Viral, pneumonia, acute bronchitis
Lower urinary tract infection	
Acute pyelonephritis	
Septicaemia	Recognise septicaemia, septic shock and severe inflammatory response syndrome
Acute meningitis	Can list causes without hesitation
Chronic meningitis	Can list causes without hesitation
Acute non-specific viraemia	Suspect from the characteristic clinical presentation
Influenza	Recognise
Colds	Recognise
HIV early, late, seroconversion	Recognise and discuss in detail
Herpes simplex	Recognise common presentations
Herpes varicella-zoster	Recognise common presentations
Cellulitis	Recognise, discuss differential diagnosis where appropriate, suggest management
Soft-tissue infections	Recognise, discuss differential diagnosis where appropriate, suggest management
Thrombophlebitis	Recognise, discuss differential diagnosis where appropriate, suggest management
Pulmonary tuberculosis	In detail
Other forms of tuberculosis	In detail
Malaria	In detail

Once you have mastered the earlier material

Ebstein-Barr virus	Recognise common presentations
Viral exanthems	1. Measles, mumps, rubella 2. Recognise and discuss

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

Pyrexia of unknown origin	Discuss possible causes and rational investigation
Common upper respiratory tract infections	Microbiology, rational investigation and management, antibiotic therapy
Lower respiratory tract infections	Microbiology, rational investigation and management, antibiotic therapy. Indicate: <ul style="list-style-type: none"> When empiric outpatient therapy is appropriate When X-Ray is indicated
Lower urinary tract infection	Microbiology, rational investigation and management, antibiotic therapy
Acute pyelonephritis	Microbiology, rational investigation and management, antibiotic therapy

Septicaemia	Microbiology, rational investigation and management, antibiotic therapy
Acute meningitis	1. Predisposing causes, clinical presentation 2. Microbiology, rational investigation and management, antibiotic therapy
Chronic meningitis	1. Predisposing causes, clinical presentation 2. Microbiology, rational investigation and management, antibiotic therapy
Acute non-specific viraemia	Recognition and management
Influenza	Natural history, epidemiology and management
Colds	Natural history, epidemiology and management
Herpes simplex	Natural history, diagnosis and treatment
Herpes varicella-zoster	Natural history, diagnosis and treatment
Cellulitis	Predisposing causes, clinical presentation, microbiology, rational investigation and management, antibiotic therapy
Soft-tissue infections	Predisposing causes, clinical presentation, microbiology, rational investigation and management, antibiotic therapy
Thrombophlebitis	Predisposing causes, clinical presentation, microbiology, rational investigation and management, antibiotic therapy
Malaria	In detail
Pulmonary tuberculosis	In detail
Other forms of tuberculosis	In detail
Typhoid	Clinical presentation, microbiology, investigation and management, antibiotic therapy
Infectious diarrhoea	Microbiology, investigation and management
Amoebiasis	Amoebic dysentery and liver abscess; natural history, investigation and treatment

Once you have mastered the earlier material

HIV early, late, seroconversion	Understand in detail
Infectious mononucleosis: Epstein-Barr virus	Clinical features, natural history, investigation, treatment
Viral exanthems: measles, mumps, rubella	Clinical features, natural history, investigation, treatment, complications and prevention

MISCELLANEOUS DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy

Venous drainage of the lower limbs and abdomen

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Acute swollen leg

Good differential, approach to investigation and treatment

Chronically swollen leg

Good differential, approach to investigation and treatment

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT

Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

DVT

Clear understanding of investigation and management, including place for long-term anticoagulation

Chronic venous insufficiency

MUSCULOSKELETAL DISORDERS

PRINCIPLES Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Histology Structure and function of the synovium

Structure and function of cartilage

Histopathology Histopathology of synovitis

Microbiology Chlamydial infections

ESSENTIAL SKILLS The following skills are essential and may be tested at the bedside or in theory examinations.

- Clinical Skills
1. History taking
 2. Physical examination of the musculoskeletal system

Once you have mastered the earlier material

- Radiography
1. Will recognise common abnormalities of bones and joints on x ray, particularly:
 - 1.1. Osteopenia
 - 1.2. Osteoarthritis
 - 1.2.1. Degenerative disease of hip, knee, cervical and lumbar spine
 - 1.3. Rheumatoid arthritis
 - 1.4. Spinal tuberculosis
 - 1.5. Metastatic disease of bone

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Backache Will be thoroughly familiar with mechanical backache and can recommend treatment. Will recognise features of more serious pathology and will be able to recommend further investigation.

Polyarthritis Provides differential diagnosis without hesitation

Monoarthritis Provides differential diagnosis without hesitation

Lupus-like syndrome Recognises the features suggestive of SLE or SLE-like syndromes and can recommend further investigations relevant to the clinical presentation and the organs affected. Detailed treatment is not required.

Once you have mastered the earlier material

Soft-tissue rheumatism Recognises commoner forms and can recommend treatment at family practitioner level

Tenosynovitis Recognises commoner forms and can recommend treatment at family practitioner level

Fibromyalgia. Recognises the syndrome and recommends treatment

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

Osteoarthritis Thorough understanding

Gout Thorough understanding

Septic arthritis Provides differential diagnosis, investigations and recommends treatment including rational antibiotic therapy

Once you have mastered the earlier material

Reactive arthritis Differential diagnosis and principles of treatment required

CONDITIONS: RECOGNISE AND REFER Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.

Systemic lupus erythematosus Only principles of treatment, and not detailed knowledge, required

Rheumatoid arthritis Only principles of treatment, and not detailed knowledge, required

Psoriatic arthropathy	Recognition only required
HIV-associated arthropathy	Recognition only required

Once you have mastered the earlier material

Scleroderma	Sufficient to recognise the syndrome
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NICE TO KNOW

Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.

Polymyositis

Dermatomyositis

Seronegative spondylo-arthropathies

Can list these and has limited knowledge of their presentation and associations

Raynaud's phenomenon

Can recognise and suggests some possible associations

Regional pain syndromes

NEUROLOGICAL DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy	Gross structure of the brain Parts of the brainstem Location of cranial nerve nuclei and paths of the cranial nerves Segmental spinal nerves Visual pathways Structure of the meninges Cerebral arterial circulation Cross-section of the spinal cord in broad outline Basic understanding of the anatomy of the brain as depicted on typical CT slices Basic understanding of the anatomy of the spine and spinal cord as depicted on longitudinal CT and MRI scans
Physiology	Circulation of CSF
Microbiology	Organisms responsible for meningitis

ESSENTIAL SKILLS

The following skills are essential and may be tested at the bedside or in theory examinations.

Clinical Skills	<ol style="list-style-type: none"> History taking Physical Examination, concentrating on recognition of common patterns <ol style="list-style-type: none"> meningism level of consciousness dementia/confusion cranial neuropathies hemiparesis paraparesis peripheral neuropathy cerebellar disease extrapyramidal disease Pinpoint localization of lesions is not required.
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Once you have mastered the earlier material

CT scan	<ol style="list-style-type: none"> Ability to recognise: <ol style="list-style-type: none"> Basic signs of raised intracranial pressure Typical infarction/haemorrhage Typical subdural haematoma Mass lesions Educated guess for neurocysticercosis, toxoplasmosis
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RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiology and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Headaches	Has a sensible approach. Distinguishes acute from chronic headaches. Can place headache in a clinical context, particularly the importance of advanced HIV. Has a sensible approach to empiric therapy with an awareness of when to investigate further.
Stroke	Clear concept of haemorrhagic, thrombotic and embolic stroke with associated pathophysiology, aetiology and management. Able to assign clinical pattern of stroke to specific vascular territory. Understands place of CT in diagnosis. Intelligent grasp of prognosis. Able to discuss rehabilitation and secondary prevention.
Hemiparesis	Recognises classic hemiparetic stroke immediately. Has a concept of less common causes: particularly post-ictal Todd's paralysis.
Paraparesis	Recognises paraparesis instantly and able to list the features without hesitation. Able to list the causes in order of likelihood, and distinguish HIV-positive patients as a subgroup. Understands the importance of CT and MRI in making the diagnosis

Meningitis	Recognises immediately and lists causes without hesitation. Confident approach to further investigation, diagnosis and management. Clear understanding of meningitis in HIV-positive patients, and of difficulties in assigning a particular diagnosis in practice.
Seizures	Suspects immediately from history. Distinguishes focal from generalized seizures. Has an efficient differential diagnosis. Able to distinguish probability in younger patients, older patients and HIV-positive patients. Distinguishes acute-onset seizures from chronic epilepsy. Has an approach to investigation and management appropriate to each of these patient groups.
Cerebellar disease	Recognises clinical presentation, lists the common causes. Can list the clinical features.
Chronic sensory/sensorimotor peripheral neuropathy	Lists causes without hesitation. Has a sensible plan for investigation

Once you have mastered the earlier material

Confusion	Lists causes without hesitation in a systematic fashion, based on DDMTOP.
Coma	Able to assess level of consciousness on a 4-point scale (Awake, drowsy, stupor, coma). Lists causes without hesitation.
Parkinsonism and obvious extrapyramidal syndromes	Recognises clinical presentation, lists idiopathic Parkinsons, vascular disease and drugs as causes. Can list the features of Parkinsonism. Principles of therapy in broad outline only.
Raised intracranial pressure	Diagnosis and broad overview of causes required. Must understand the concept of transtentorial herniation as the origin of the typical signs. Understands foramen magnum herniation as the final step only. Understands the importance of CT scanning in the diagnosis.
Acute LMN weakness	Advances a differential diagnosis without hesitation. Has a sensible plan for investigation
Dementia	Recognises a dementia and can perform objective tests such as MMSE. Details of individual forms of dementia are not required
Nerve entrapment syndromes, mononeuropathies including sciatica	Recognises that such a syndrome is present but further detailed knowledge is not required.
Muscular weakness	Recognises that in addition to neurological illness, there are diseases of muscle and electrolyte and endocrine disturbances and can list these.

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT **Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.**

Stroke: classic internal capsule/hemispherical	Clear concept of haemorrhagic, thrombotic and embolic stroke with associated pathophysiology, aetiology and management. Understands place of CT in diagnosis. Intelligent grasp of prognosis. Able to discuss rehabilitation and secondary prevention.
Acute meningitis	Must be understood well
Tuberculous meningitis	Must be understood well
Cryptococcal meningitis	Must be understood well
Cerebral toxoplasmosis	Can suspect, recognise on CT and treat
Epilepsy	Understands generalized and focal motor seizures, their causes and their treatment well. Other forms of epilepsy less well—see below.

Once you have mastered the earlier material

Wernicke's encephalopathy	Knows to look for this in all patients with history of malnutrition, alcohol abuse etc.
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CONDITIONS: RECOGNISE AND REFER **Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.**

CNS manifestations of HIV infection	Tuberculous and cryptococcal meningitis known in detail. Can recognise clinical presentations where a space-occupying lesion is likely and understands principles of investigation and management.
Subarachnoid haemorrhage	Only initial management required, with broad principles of neurosurgical management which may follow
Parkinsonism	Recognises clinical presentation and lists the common causes. Can list the features of Parkinsonism. Principles of therapy in broad outline only.

Cerebellar disease	Recognises clinical presentation, lists the common causes. Can list the clinical features.
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Once you have mastered the earlier material

Epilepsy: other forms	Complex partial seizures: temporal lobe epilepsy
Dementia	Can discuss the epidemiology broadly. Has a concept of multiple causes, of which Alzheimer's and vascular dementia are the most important. Has some concept of management and prognosis. Detail is not required.
Raised intracranial pressure	Diagnosis and broad overview of causes required. Must understand the concept of transtentorial herniation as the origin of the typical signs. Understands foramen magnum herniation as the final step only. Understands the importance of CT scanning in the diagnosis.
Transverse myelitis	Recognises this as a cause of paraparesis, can list clinical features, understands importance of MRI scanning in making diagnosis
Guillaine-Barre syndrome	Knows the clinical features, recognises the syndrome and understands only the most basic principles of investigation and management.
Rabies	Will suspect this from the clinical presentation. Knows the principles of pathophysiology.
Polio	Understands the concept of acute flaccid paralysis and knows to remain vigilant for polio in the community

NICE TO KNOW	Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.
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Other CNS manifestations of HIV infection	HIV dementia, HIV-associated PML, CNS lymphoma etc
Epilepsy: other forms	Myoclonus, absence etc.
Motor neurone disease	
Muscular dystrophy	
Multiple sclerosis	
Muscular dystrophies and myopathies	
Movement disorders	

RENAL DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy	Position, shape and surface anatomy of the kidneys Position, shape and surface anatomy of the bladder
Physiology	Function of the kidneys
Chemical pathology	Urea, creatinine and electrolytes Acid-base balance
Pathology	Basic histopathology of nephritis
Microbiology	Organisms responsible for urinary tract infections Streptococcus

ESSENTIAL SKILLS

The following skills are essential and may be tested at the bedside or in theory examinations.

Clinical Skills	<ol style="list-style-type: none"> History taking Physical Examination, with particular reference to: <ol style="list-style-type: none"> Clinical features of hypovolaemia, list causes of this without hesitation, and suggest rational fluid replacement therapy Clinical features of fluid overload, list causes of this without hesitation and suggest rational therapy
Urine dipstix	Can test urine and discuss appropriate differential and response to abnormalities on the test

Once you have mastered the earlier material

Biochemical renal profile	<ol style="list-style-type: none"> Able recognise renal dysfunction and suggest a differential diagnosis in a clinical setting Can recognise the typical pattern of hypovolaemia/renal underperfusion Has a reasonable differential diagnosis for hyperkalaemia and hypokalaemia Has a reasonable differential diagnosis for hypernatraemia and hyponatraemia Can describe the characteristic changes in calcium and phosphate levels in chronic renal failure: no detail however required
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RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Lower urinary tract infection	Immediate recognition, approach to investigation and management, suggests rational antibiotic prescription
Acute pyelonephritis	Immediate recognition, approach to investigation and management, suggests rational antibiotic prescription
Renal colic	Recognises and suggests suitable investigation and management
Bladder outlet obstruction	Recognises and suggests suitable investigation and management
Acute nephritic syndrome	Immediate recognition, appropriate differential diagnosis without hesitation, approach to investigation and management (detailed management not required)
Nephrotic syndrome	Immediate recognition, appropriate differential diagnosis without hesitation, approach to investigation and management (detailed management not required)
Acute renal failure	<ol style="list-style-type: none"> Immediate recognition, appropriate differential diagnosis without hesitation, approach to investigation and management. Can list the four major complications without hesitation and discuss institution of emergency therapy.
Haematuria	Can list possible causes and has an approach to investigation of haematuria

Once you have mastered the earlier material

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| Chronic renal insufficiency | <ol style="list-style-type: none"> 1. 1Can recognise the syndrome by a combination of clinical findings and laboratory investigation, understands how to distinguish acute from chronic renal failure, can list possible causes without hesitation, can suggest appropriate investigations and principles of therapy, without detail. 2. Can recognise a presentation with possible acute-on-chronic renal failure, list the most likely precipitants of the acute deterioration without hesitation and suggest sensible investigations and treatments to reverse these. |
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Proteinuria	Has an approach to investigation of proteinuria
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CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT

Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

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| Lower urinary tract infections | Including rational antibiotic therapy |
| Acute pyelonephritis | Including rational antibiotic therapy |
| Post-infectious glomerulonephritis | Understanding in detail |
| Schistosomiasis | Understanding in detail |

CONDITIONS: RECOGNISE AND REFER

Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.

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| Nephrotic syndrome | Able to list possible causes and suggest initial workup |
| Acute renal failure | Possible causes, serious complications and emergency management are required |

Once you have mastered the earlier material

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| Lupus kidney | Detail not required |
| Chronic renal insufficiency | Able to list possible causes |

NICE TO KNOW

Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.

- Forms of glomerulonephritis other than post-infectious
- Interstitial nephritis

RESPIRATORY DISORDERS

PRINCIPLES Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Anatomy	Respiratory tract Thorax Normal chest x-ray
Physiology	Respiration Gas exchange
Chemical pathology	Acid-base balance Haemoglobin-oxygen dissociation curve
Histopathology	Pneumonia Tuberculosis
Microbiology	Upper respiratory infections: viral and bacterial. Be able to classify causative agents of pneumonia as gram positive, gram negative, atypical, mycobacterial, viral or fungal Pneumonia and bronchitis Tuberculosis

ESSENTIAL SKILLS The following skills are essential and may be tested at the bedside or in theory examinations.

Clinical Skills	1. History taking 2. Physical Examination
Chest radiography	1. Sensible approach in the following order: 1.1. Clear statement as to whether normal or abnormal, and severity of abnormality 1.2. Identification of abnormal areas 1.3. Description of abnormal areas using standard terminology (to be defined) 1.4. Systematic inspection anatomically: heart, mediastinum, hila, apices, costophrenic angles, lung fields, bony structures, soft tissues 2. Ability to relate probable clinical diagnosis to x ray findings
Arterial blood gas estimation	1. Describes abnormalities in terms of acid-base balance, hypoxia, hypo/hypercarbia 2. Recognises respiratory failure from the arterial blood gas estimation and can differentiate Type 1 and Type 2 respiratory failure

Once you have mastered the earlier material

Arterial blood gas estimation	1. Clear grasp of the haemoglobin-oxygen dissociation curve and of the relationship between arterial saturation and pO_2 . 2. Able to prescribe oxygen therapy, CPAP and assisted ventilation rationally based on these parameters.
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RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Breathlessness at rest	Including both cardiovascular and respiratory causes; provides differential without hesitation
Breathlessness on exertion	Including both cardiovascular and respiratory causes; provides differential without hesitation
Breathlessness with wheeze	Provides differential without hesitation
Upper airway obstruction	Can distinguish upper from lower airway obstruction
Cough	Provides differential without hesitation
Haemoptysis	Provides differential without hesitation
Pleural effusion	Provides differential without hesitation. Clear grasp of investigation and management.
Cor pulmonale	Immediately recognises the coexistence of heart failure with severe lung disease

SVC obstruction	Recognises and provides differential without hesitation
Acute respiratory failure	Recognises immediately, understands importance of clinical observation, pulse oximetry and arterial blood gas estimation in monitoring and decision-making. Has a clear grasp of when and how to apply oxygen therapy, CPAP, assisted ventilation and intubation.

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT	Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.
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Pneumonia	Recognises the differences between community acquired and nosocomial pneumonia, and knows the likely organisms, including both typical and atypical organisms. Knows the criteria for severe pneumonia.
Pulmonary tuberculosis	Recognises the difference between tuberculosis in immunocompromised and in immunocompetent hosts
Pleural effusion	Able to list a differential diagnosis for the cause without hesitation.
Lung abscess	Recognises list aetiologies and manages
Pleural tuberculosis	Can diagnose and treat
COPD	Clear on the differences between asthma and COPD as they present clinically and in terms of pathophysiology.
Asthma	Clear understanding of presentation, pathophysiology and principles of treatment. Essential are an understanding of the relationship between inflammation and obstruction, and of the “family care” principles of education and of improving adherence.
Consolidation or collapse on the chest radiograph	Has a sensible approach to differential diagnosis and further management
Respiratory Failure	Confident about the differences between Type 1 and 2 failure and confident on the practical management of each, including indications for oxygen therapy and assisted ventilation.

Once you have mastered the earlier material

Destructive lung disease	Recognises this as a generic entity and lists possible causes
Bronchiectasis	Can recognise, list aetiologies and manage
HIV and the lung	Confident about the differential diagnosis of TB, pneumocystis and pneumonia in HIV-positive patients
Empyema	Can identify and treat

CONDITIONS: RECOGNISE AND REFER	Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.
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Bronchial carcinoma	Will suspect clinically and on chest x ray
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Once you have mastered the earlier material

Sarcoidosis	Aware of how this fits into the differential of tuberculosis
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NICE TO KNOW	Detailed knowledge is not required. The average student will have limited and not necessarily comprehensive knowledge of these disorders, the weak student will know very little.
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Occupational lung disease	
Mesothelioma	Aware of the link with asbestosis
Other interstitial lung disease	

SKIN DISORDERS

PRINCIPLES

Students are expected to revise and understand the following knowledge covered in the preclinical section of the curriculum. This is examinable in Medicine.

Histology

Histology of the skin

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT

Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

Drug eruptions

Syphilis

Impetigo

Scabies

Tinea

Acne

Candida

Herpes simplex

Herpes zoster

HIV dermatoses

CONDITIONS: RECOGNISE AND REFER

Students can recognise the illness. They are expected to have a concept of what diagnostic tests and treatment may be applied—sufficient to explain to a patient what they can expect following referral—but detailed knowledge of pathogenesis, diagnostic workup and treatment is not required.

Leprosy

Malignant melanoma

Squamous cell carcinoma

Basal cell carcinoma

Atopic eczema

Seborrhoeic eczema

Psoriasis

Cutaneous tuberculosis

TOXICOLOGY

RECOGNISE THE PRESENTATION AND DISCUSS FURTHER MANAGEMENT

Students are expected to recognise the syndrome as it presents clinically, advance a reasonable differential diagnosis, understand pathophysiological and pathogenetic principles, and suggest an intelligent and sensible plan for further investigation and management.

Once you have mastered the earlier material

Acute parasuicidal or accidental ingestion	Can list effects of common toxins and has some concept of the frequency with which each is encountered
Organophosphate poisoning	Lists clinical features and complications without hesitation. Can initiate emergency management and monitor. Lists clinical features and complications without hesitation
Paracetamol poisoning	Lists clinical features and complications without hesitation. Can investigate, monitor and treat effectively

CONDITIONS: RECOGNISE, UNDERSTAND, DIAGNOSE AND TREAT

Students are expected to recognise a patient with this condition. They should have a reasonable concept of pathogenesis, and can discuss complications, differential diagnosis, management and prognosis in considerable detail.

Once you have mastered the earlier material

Organophosphate toxicity	Understand in detail
Paracetamol toxicity	Understand in detail
Warfarin toxicity	Knows the major clinical effects, can monitor and treat
Tricyclic antidepressant toxicity	Knows the major clinical effects, can monitor and treat
Anticonvulsant toxicity	Knows the major clinical effects, can monitor and treat
Benzodiazepine toxicity	Knows the major clinical effects, can monitor and treat
Anticonvulsant toxicity	Knows the major clinical effects, can monitor and treat