Course content

1. Clinical Methods in the Practice of Medicine

Course Contents	Must know	Desirable to know
Clinical approach to patients: The art of medicine, doctor-patient relationship, communication skills, doctor's responsibilities	√	
Clinical approach to disease and care of patients: Clinical diagnostic reasoning i.e. diagnostic possibilities based on interpretation of history, physical findings and laboratory investigations	√	
Principles of rational management: keeping in mind the best evidence in favor of or against different remedial measures (EBM**)**	√	

2. Common Symptoms of Disease

Course Contents	Must know	Desirable to know
Pain: pathophysiology, clinical types, assessment and management	√	
Fever: clinical assessment and management	√	
Cough, chest pain, dyspnoea, hemoptysis	√	
Edema, anasarca, ascites	√	
Pallor, jaundice	√	
Bleeding	√	
Anorexia, nausea and vomiting	√	
Constipation and diarrhea	√	
Hematemesis, malena and hematochezia	√	
Common urinary symptoms- dysuria, pyuria, anuria, oliguria, polyuria, nocturia, enuresis	√	
Body pains and joint pains	√	
Headache, seizures, fainting, syncope, dizziness, vertigo	√	
Disturbances of consciousness and coma	√	
Weight loss and weight gain	√	

Course Contents	Must Know	Desirable to know
Clinical genetics – common types, clinical presentation, investigation and prevention of genetic diseases and genetic counseling	√	
Medial disorders and pregnancy	√	

3. Nutrition and Nutritional Disorders

Course Contents	Must know	Desirable to know
Nutritional assessment & needs	√	
Protein energy malnutrition	√	
Obesity	√	

Vitamin deficiency & excess	√	
Mineral deficiency and excess		√
Diet therapy	√	
Parenteral nutrition therapy		√

4. Fluid, Electrolyte and Acid-base Imbalance

Course Contents	Must Know	Desirable to know
Fluid and electrolyte balance; acidosis and alkalosis in particular relevance to diarrhea, vomiting, dehydration, uremia and diabetic ketoacidosis	√	

5. Poisonings, Stings and Bites

Course Contents	Must Know	Desirable to know
General approach to the poisoned patient	√	
Poisoning by specific pharmaceutical agents- organophosphorus compounds, methyl alcohol, narcotics, aluminium phosphide, sedatives/ hypnotics, other poisonings common locally	√	
Drugs of misuse	√	
Snake bite and Envenomation	√	
Other bites and stings – scorption, spider	√	

6. Specific Environmental and Occupation Hazards

Course Contents	Must Know	Desirable to know
Heatstroke and hypothermia	√	
Chemicals and pesticides	√	
Drowning and near drowning	√	
Electrical injuries	√	
Radiation injury		√
Heavy metal poisoning		√

7. Immune Response and Infections

Course Contents	Must Know	Desirable to know
Approach to infectious diseases – diagnostic and therapeutic	√	

principles		
Immune defense mechanisms	√	
Laboratory diagnosis of infections	√	
Principles of immunization and vaccine use	√	
Immunodeficiency disorders - acquired	√	
Immunodeficiency disorders – congenital		√
Clinical syndromes – diagnostic and therapeutic approach • The febrile patient • Fever and rash • Fever of unknown origin • Infective endocarditis • Intra-abdominal infections and abscesses • Acute infectious diarrhoeal diseases and food poisoning • Sexually transmitted diseases – overview & clinical approach • Infections of skin, muscle & soft tissues • Osteomyelitis • Hospital acquired infections • Infections in immuno-compromised hosts	√	

8. Specific Infections – Epidemiology, clinical features, laboratory diagnosis, rational use of antimicrobial therapy against the following and their prevention:

Course Contents	Must Know	Desirable to know
Protozoal infections Amoebiasis, Giardiasis, Malaria, Leishmaniasis Trichomoniasis	√	
Toxoplasmosis, Trypanosomiasis	√	
Bacterial infections **Common gram positive infections**		
Common gram-negative infections	√	
Enteric fevers	√	
Tetanus	√	
Pertussis and diphtheria		√
Legionella infections	√	
Botulism	√	

Gas gangrene, other clostridia infections		√
Cholera	√	
Shigellosis and bacillary dysentery	√	
Brucellosis	√	
Plague		√
Leptospirosis	√	
Donovanosis (Granuloma inguinale)		√
Helicobacter Pylori		√
Infections due to pseudomonas & other gram- negative bacteria	√	
Anaerobic infections	√	
Mycobacterial diseases Tuberculosis	√	
Leprosy	√	
Viral infections Common exanthemata e.g.Measles, mumps, rubella, varicella	√	
Herpes simplex and herpes zoster	√	
Influenza and other common viral respiratory infections	√	
Human immunodeficiency virus (HIV)	√	
Viral gastroenteritis	√	
Dengue fever	√	
Rabies	√	
Viral encephalitis	√	
Infectious mononucleosis		√
Rickettsia, Mycoplasma & Chlamydial diseases		√
Infections in immunocompromised host	√	
Common fungal infections e.g.Candidiasis, Aspergillosis Histoplasmosis, Cryptococcosis,Mucormycosis, Pneumocystis carinii	√	
Common worm infestations e.g. hookworm, roundworm, thread worm,	√	

9. Cardiovascular system

Course Contents	Must Know	Desirable to know
Clinical examination of the cardiovascular system	√	
Functional anatomy, physiology and investigations	√	
Major manifestations of cardiovascular disease Chest pain, breathlessness, palpitation Acute circulatory failure (cardiogenic shock) Presyncope and syncope Cardiac arrest and sudden cardiac death Abnormal heart sounds and murmurs	√	
ECG, x ray chest with reference to common CVS diseases	√	
Acute and chronic **c**ongestive cardiac failure	√	
Rheumatic fever and rheumatic heart disease	√	
Valvular heart disease	√	
Infective endocarditis	√	
Coronary artery disease	√	
Common congenital heart disease in the adults: ASD,VSD,PDA,TOF and coarctation of aorta	√	
Cor pulmonale	√	
Hypertension and hypertensive heart disease	√	
Common cardiac arrhythmias	√	
Deep vein thrombosis	√	
Atherosclerosis and peripheral vascular disease		√
Pericardial disease: pericardial effusion and cardiac tamponade	√	
Aortic aneurysm		√
Myocarditis and cardiomyopathy		√

10. Respiratory system

Course Contents	Must Know	Desirable to know
Clinical examination of the respiratory system	√	
Respiratory physiology and diagnostic investigations – x ray chest, sputum examination, pulmonary function tests	√	
Bronchoscopy		√
Major manifestations of lung disease Cough, dyspnoea,chest pain,haemoptysis The solitary radiographic pulmonary lesion Acute and chronic respiratory failure	√	
Upper respiratory infections	√	
Pneumonias	√	
Bronchial asthma	√	
Chronic obstructive pulmonary disease	√	
Pulmonary tuberculosis: different presentations	√	
Suppurative lung diseases: bronchiectasis, lung abscess	√	
Pleural diseases – effusion, empyema, pneumothorax	√	
Interstitial and infiltrative lung diseases		√
Common occupational lung diseases	√	
Tumors of the bronchus and lung		√
Pulmonary vascular diseases • Pulmonary hypertension • Pulmonary thromboembolism		√
Acute respiratory distress syndrome	√	
Obstructive sleep apnoea		√
Diseases of the nasopharynx, larynx and trachea		√
Diseases of the mediastinum, diaphragm and chest wall		√

11. Renal and genitourinary system

Course Contents	Must Know	Desirable to know
Renal physiology and common renal function tests: urine examination, renal function tests, common imaging methods	√	
Major manifestations of renal and urinary tract disease Dysuria, pyuria, urethral symptoms,disorders of urine volume,hematuria,proteinuria, oedema, incontinence, obstruction of the urinary tract	√	
Acute renal failure	√	
Chronic renal failure	√	
Urinary tract infections and pyelonephritis	√	
Congenital abnormalities of the kidneys and urinary system		√
Glomerulonephritides and nephritic syndrome	√	
Tubulo-interstitial diseases		√
Renal involvement in systemic disorders	√	
Drugs and the kidney	√	
Renal vascular diseases		√
Urinary tract calculi and nephrocalcinosis	√	
Tumors of the kidney and genitourinary tract		√
Renal replacement therapy: basics		√

12. Gastrointestinal tract

Course Contents	Must Know	Desirable to know
Clinical examination of the abdomen	√	
Basic investigations: stool examination, role of imaging, endoscopy and tests of functions	√	
Major manifestations of gastrointestinal disease Abdominal pain (acute and chronic), dysphagia, dyspepsia, vomiting, constipation, diarrhea, abdominal lump, weight loss, gastrointestinal bleeding-upper and lower, approach to the patient with gastrointestinal disease	√	
Diseases of the mouth and salivary glands – oral ulcers, candidiasis, parotitis	√	
Diseases of the oesophagus – GERD, other motility disorders, oesophagitis , carcinoma oesophagus	√	
Diseases of the stomach and duodenum-gastritis, peptic ulcer disease, tumors of stomach	√	
Disease of the small intestine Acute gastroenteritis & food poisoning , acute, sub-acute and chronic intestinal obstruction , intestinal tuberculosis	√	
Inflammatory bowel disease Malabsorption syndrome Tumors of small intestine		√
Disorders of the colon and rectum Bacillary dysentery, amoebic colitis ,ulcerative colitis Tumors of the colon & rectum Irritable bowel disease	√	
Abdominal tuberculosis :peritoneal,nodal, gastrointestinal	√	
Ischaemic gut injury		√
Anorectal disorders	√	
Diseases of the peritoneal cavity :acute and chronic peritonitis, ascites	√	

13. Disease of pancreas

Course Contents	Must Know	Desirable to know
Acute and chronic pancreatitis	√	
Tumors of pancreas		√

14. Hepatobiliary tract disease

Course Contents	Must Know	Desirable to know
Clinical examination of the abdomen for liver and biliary disease		
Functional anatomy, physiology , liver function tests, basics of role of imaging of the hepatobiliary disease	√	
Major manifestations of liver disease • 'Asymptomatic' abnormal liver function tests • Jaundice • Acute (fulminant) hepatic failure • Portal hypertension and ascites • Hepatic (porto-systemic encephalopathy)	√	
Hepatorenal failure		√
Liver abscess- amoebic & pyogenic	√	
Acute and chronic hepatitis –viral and toxic	√	
Alcoholic liver disease	√	
Cirrhosis of liver and chronic liver disease	√	
Fatty liver and non alcoholic steatohepatitis		√
Infiltrative diseases of liver		√
Acute and chronic 'cholecystitis', cholelithiasis	√	
Tumors of gall bladder and bile ducts		√

15. Endocrine and Metabolic disorders

Course Contents	Must Know	Desirable to know
Diabetes mellitus: aetiopathogenesis, diagnosis, management, recognition of acute and chronic complications, and immediate management of acute complications , special problems in management	√	
Hypo and hyperthyroidism – major manifestations, recognition , interpretation of thyroid function tests	√	
Iodine deficiency disorders	√	
Cushing's syndrome and Addison's disease - recognition	√	
Pituitary disorders: Acromegaly and Sheehan's syndromes		√
Calcium and phosphorus metabolism: parathyroid and metabolic bone Disease	√	
Hypogonadism		√
Hypopituitarism and hyperpituitarism		√
Hypothalamic disorders		√
Hypoparathyroidism and hyperparathyroidism		√

16. Hematological disorders

Course Contents	Must Know	Desirable to know
Definition, prevalence, etiological factor, pathophysiology, pathology, recognition, investigations and principles of treatment of: • Anemias: iron deficiency, megaloblastic and common haemolytic anemias (thalassemia, sickle cell and acquired hemolytic) • Common bleeding disorders (thombocytopenia and hemophilia) • Agranulocytosis and aplastic anemia	√	
Leukemias: Recognition, diagnosis, differential diagnosis and broad principles of management	√	
Lymphomas: Recognition , diagnosis , differential diagnosis and broad principles of management	√	
Blood group and transfusion: Major blood group systems and histo compatibility complex, concepts of transfusion and component therapy; indications for transfusion therapy, precautions to be taken during blood transfusion, hazards of transfusion and safe handling of blood and blood products	√	
Disorders of coagulation and venous thrombosis	√	
Bone marrow transplantation		√

17. Disorders of the Immune System, Connective Tissue and Joints

Course Contents	Must Know	Desirable to know
Introduction to the immune system and autoimmunity	√	
Primary immune deficiency diseases		√
HIV, AIDS and related disorders	√	
Recognition of major manifestations of musculoskeletal disease: Joint pain, bone pain, muscle pain and weakness, regional periarticular pain, back and neck pain	√	
Approach to articular and musculoskeletal disorders	√	
Inflammatory joint disease	√	
Infectious arthritis	√	
Inflammatory muscle disease		√
Osteoarthritis	√	
Systemic connective tissue diseases – systemic lupus erythematosus, rheumatoid arthritis, progressive systemic sclerosis	√	
Vasculitides		√
Ankylosiing spondylitis, reactive arthritis and undifferentiated spondyloarthropathy		√
Sarcoidosis	√	
Amyloidosis	√	
Musculoskeletal manifestations of disease in other systems	√	
Diseases of bone		√

18. Neurological Diseases

Course Contents	Must Know	Desirable to know
Clinical examination of nervous system	√	
Functional anatomy, physiology and investigations : EEG, basics of brain and spinal cord imaging	√	
Major manifestations of nervous system disease: Headache and facial pain, raised intracranial tension, faintness, dizziness, syncope & vertigo, sleep disorders, disorders of movement, ataxia, sensory disturbances(numbness, tingling and sensory loss),acute confusional states coma and brain death, aphasias and other focal cerebral disorders, speech, swallowing and brain-stem disturbance, visual disturbances, sphincter disturbances	√	
Migraine and cluster headaches	√	
Seizures and epilepsy	√	
Cerebrovascular disease	√	
Dementias including Alzhiemer's disease	√	
Acute and chronic meningitis	√	
Viral encephalitis		√
Diseases of cranial nerves		√
Intracranial tumours		√
Diseases of spinal cord –transverse myelitis and cord compression	√	
Multiple sclerosis and other demyelinating diseases		√
Parkinson's disease and other extrapyramidal disorders		√
Cerebellar disorders	√	
Motor neuron disease		√
Peripheral neuropathy	√	
Neurological manifestations of system diseases	√	
Nutritional and metabolic diseases of the nervous system	√	
Myasthenia gravis and other diseases of neuromuscular junction		√
Diseases of muscle		√
Recognition of brain death	√	

19. Clinical Pharmacology and Therapeutics

Course Contents	Must Know	Desirable to know
Principles of drug therapy	√	
Adverse drug reactions	√	
Drug interactions	√	
Monitoring drug therapy	√	
Rational prescription writing	√	
Concept of essential drugs	√	

20. Critical Care Medicine

Course Contents	Must Know	Desirable to know
Physiology of the critically ill patient	√	
Recognition of major manifestations of critical illness circulatory failure: shock, respiratory failure, renal failure, coma sepsis, disseminated intravascular coagulation	√	
General principles of critical care management	√	
Scoring systems of critical care		√
Outcome and costs of intensive care		√
Ethical issues related to critical care	√	

21. Pain Management and Palliative Care

Course Contents	Must Know	Desirable to know
General principles of pain	√	
Assessment and treatment of pain	√	
Palliative care	√	

22. Geriatrics

Course Contents	Must Know	Desirable to know
Principles of Geriatric Medicine:	√	
Normal ageing	√	
Clinical assessment of frail elderly	√	
Decisions about investigations and rehabilitation	√	
Major manifestations of diseases in elderly	√	
Special issues for care of elderly	√	
Drug therapy in elderly	√	

23. Medical Ethics

Course Contents	Must Know	Desirable to know
Principles of medical ethics- Beneficience, non –maleficience, patient autonomy, equity Different concepts- health ethics, bioethics, public health ethics	√	
Brief introduction to perspectives of medical ethics: Hippocratic Oath, declaration of Helsinki, WHO declaration of Geneva, International code of Medical Ethics (1983), Medical Council of India Code of Ethics	√	
Ethics of the individual: Confidentiality, physician patient relationship, Patient autonomy, organ donation	√	
Death and dying, and Euthanasia	√	
Ethics of human life: In vitro fertilization, prenatal sex-determination, surrogate motherhood, genetic engineering	√	
Professional ethics: Code of conduct, fee charging and splitting, allocation of resources in health care	√	
Family and society in medical ethics: Family planning , Care of terminally ill/dying patient	√	
Ethical work up of cases: Gathering information, gain confidentiality, shared decision making, informed consent	√	
Research ethics: animal and experimental research, human experimentation, informed consent, drug trials	√	

Course Contents	Must Know	Desirable to know
Practice of universal precautions	√	
Bio medical waste: types, potential risks and their safe management	√	
PEP Prophylaxis	√	
Hand washing	√	

24. Medical Psychiatry