

CURRICULUM OF MEDICINE

MBBS COURSE

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INTRODUCTION

EDUCATIONAL HOURS

MEDICINE			
Year	Theory	Practical	Total
1st year	25 hours	25 hours	50
2nd year	25 hours	25 hours	50
3rd year	25 (Medicine)	50 (Medicine Rotation 4 weeks) 75 (Specialities Rotation 6 weeks)	75 (Med) 75 (Spe)
4th year	25 (Medicine) 25 (Specialites)	50 (Medicine Rotation 4 weeks) 75 (Specialities Rotation 6 weeks)	75 (Med) 100 (Spe)
5th year	100 (Medicine) 75 (Specialites)	150 (Medicine Rotation 6 weeks) 200 (Specialities Rotation 6 weeks)	250 (Med) 275 (Spe)
Total	200 hours (Medicine) 100 hours (Specialities)	300 hours (Medicine) 350 hours (Specialities)	500 (Med) 450 (Spe)
Strategy	Lectures Problem based learning Small group discussion Case based discussion	Clinical attachment Evening duties in wards Clinical skills laboratory Early clinical exposure	

LEARNING OUTCOMES

AT THE END OF CURRICULUM STUDENT WILL BE ABLE TO

- Take a focused history
- Perform physical examination(s) in order to identify specific problems
- Formulate a provisional diagnosis problems, Order appropriate investigations for common surgical problems
- Formulate management plans in partnership with Using cost-effective best evidence
- Competent graduates require professional values, attitudes and behaviors that embody good medical practice, that is, life-long learning, altruism, empathy, cultural and religious sensitivity, honesty, accountability, probity, ethics, communication skills, and working in teams
- Can demonstrate knowledge of basic medical and clinical sciences required for the practice of surgery.
- Can display the ability to critically evaluate existing knowledge, technology and information, and to be able to reflect on it, is necessary for solving problems.
- Perform basic procedures with the consent of the patient, ensuring infection control
- Medical and dental graduates must continually acquire new scientific knowledge and skills to maintain competence, and incorporate it into their day-to-day medical practice.
- Graduates should be able to demonstrate Communication Skills, when dealing with patients and their families, nurses, other health professionals, community, the general public and the media.

EDUCATION STRATEGIES

The educational strategies in this curriculum are multiple and aligned with domain of learning and according to the desired outcome

Interactive lectures

One-third of the curriculum will be delivered in a traditional didactic format including PowerPoint presentations and case discussions. Didactic education is considered to be a one-way transmission of material from teacher to learner, we cannot overlook the possibility of meaningful interaction between experts and learners during live lectures. This type of interaction, which allows for immediate clarification of concepts and extension of knowledge, may be particularly important for novice learners who have relatively little exposure to the subject matter, such as our study population(4).

Case based Discussion

A lot of emphasis is on case based discussion during ward placement. Problem-based learning (PBL) is complex and heterogeneous. A wide variety of educational methods are referred as PBL. These include Lecture-based case, Case based lecture, Case based discussions, Problem or inquiry based and Closed loop or reiterative. Incorporation of case based discussion in teaching enhances the critical thinking and problem-solving skills. It also helps in developing a broader prospective of clinical case scenarios (5).

Small Group Discussion

Small group discussion provides a unique environment to achieve high standards in medical education. Activation of prior knowledge, exchange of ideas, and engagement at a higher cognitive level are assumed to result in deeper learning and better academic achievements by students (6).

Clinical Skills Sessions

Clinical skills session are important part of curriculum to achieve psychomotor and affective outcomes. Learning manual skills is a fundamental part of health care education, and motor, sensory and cognitive learning processes are essential aspects of professional development. Simulator training has been shown to enhance factors that facilitate motor and cognitive learning. Students learned manual skills, how to perform the procedure, and professional behaviour. They learned by preparing, watching, practising and reflecting. The simulator contributed by providing opportunities for students to prepare for the skills training, to see anatomical structures, to feel resistance, and to become aware of their own performance ability (7).

ASSESSMENT

MCQ's and SEQ's

Multiple choice question and short essay question test will be used at the end of part of curriculum to assess the learning of knowledge. These all assessment exercises will be formative. The written tests like Multiple-Choice Questions (MCQs) and Short-Essay Questions (SEQs) test formats are used for the assessment of cognitive domain. The MCQs are more objective and essentially select type of item response format. MCQs have a cueing effect, which promotes guessing and leads to higher scores. In addition, writing MCQs of higher cognitive level of problem solving is challenging. On the contrary, the SEQs are more subjective and have a supply or construct type item response format, which does not have any cueing effect and can effectively assess problem solving skills(8).

OSCE AND SHORT CASE

Short case and OSCE will be used to evaluate clinical skills and procedural skills at the ward end of placement. The OSCE is a method of clinical skill assessment, and it has been reported to be appropriate for assessing learning achievement levels in the psychomotor and emotional domains, which are difficult to evaluate with written examinations(9).

CLINICAL LOG BOOK

Clinical log book is meant for self directed learning (SDL) and assessment of students. The clinical logbook includes reflection which helps the students to set educational goals.

MINI-CEX

Mini-CEX is used to assess the clinical skills and problem solving skills of medical students. This is the tool used by clinical teachers. This can assess all three domains, Psychomotor, cognitive and affective. This also used as formative assessment.

Evaluation plan

Each Module	Written test (MCQ and SEQ)	Formative
After 12 weeks of ward placement	Ward test (OSCE and short case)	Formative
At end of 36 weeks	Send up exam (MCQ and SEQ) Viva voce	Formative
Annual	University Professional exam	Summative

INTERNAL ASSESSMENT

- i. The weightage of internal assessment shall be 10% of totals marks.
- ii. Continuous internal assessment shall consist of evaluation at the end of each assignments, e.g. stages/sub-stage, class tests etc., attitudinal assessment from educational supervisors.
- iii. Assessment of knowledge, Skills and Attitude shall contribute toward internal assessment. Methods used to assess these domains shall include Multiple Choice Questions of one-best type, Short essay questions, Oral/Viva, and Practical/Clinical examinations.
- iv. The score of internal assessment shall contribute to the score in the final examination, Final university examination of each subject shall contribute 90 to total score, and the candidate shall pass in aggregate.
- v. Proper record of continuous internal assessment shall be maintained.

LEARNING RESOURCES

The department of medicine will require following resources for implementation resources:

- Human resource
- Instructors (faculty members 8)
- Curriculum coordinator curriculum secretary
- Infrastructure
- Lecture hall with AV aids
- Tutorial room with AV aids
- Clinical skills Lab with manikins
- Simulated patients and simulated manikins
- Computers

LISTS OF CONTENT RESOURCES

- Practice of Medicine by Davidson.
- Clinical Medicine by Parveen J Kumar & Michael, Clark
- Hutchison's Clinical Methods by Michael Swash. 21st edition
- Oxford Text Book of Psychiatry
- ABC of Dermatology. Latest Edition.
- Online Journals and Reading Materials through HEC Digital Library Facility

CONTENTS MODULES

COURSE CONTENTS		
3rd Year	1st Term	History Taking GPE
	2nd Term	Symptoms and examination of GIT Symptoms and examination of CNS
	3rd Term	Symptoms and examination of Respiratory system Symptoms and examination of Cardiovascular System
4th Year	1st Term	Infectious Diseases Psychiatry
	2nd Term	Infectious Diseases Dermatology
	3rd Term	Hematology, oncology Nephrology and electrolyte
Final Year	1st Term	Gastroenterology Hepatology Cardiovascular System
	2nd Term	Diabetes Mellitus Endocrinology Rheumatology
	3rd Term	Respiratory system CNS

IMPLEMENTATION

The curriculum will be spread over 5 year with 36 working weeks each year. During this period student will be exposed to various education strategies to achieve the learning objectives.

1st Year.

In this year student will be exposed to do early clinical exposure to develop understanding of applied aspects of basic sciences.

Theory (Lecture, SGD and PBL)	Practical (Early clinical exposure, Skills lab)
25 Hours (36 Weeks)	25 Hours

2nd Year.

In this year student will be exposed to do early clinical exposure to develop understanding of applied aspects of basic sciences.

Theory (Lecture, SGD and PBL)	Practical (Early clinical exposure, Skills lab)
25 Hours (36 Weeks)	25 Hours

3rd Year.

In this year student will be placed on ward attachments and formative assessment of clinical skills will be started.

Theory (Lecture, SGD and PBL)	Practical (Ward Placement, Skills lab)
25 Hours (36 Weeks)	125 Hours (12 Weeks)

4th Year.

In this year student will be placed on ward attachments and clinical skills lab. formative assessment of clinical skills will be started.

Theory (Lecture, SGD and PBL)	Practical (Ward Placement, Skills lab)
50 Hours (36 Weeks)	125 Hours (12 Weeks)

Final Year.

In this year student will be placed on ward attachments and clinical skills lab. All students will be assessed for knowledge and clinical skills during year. This year will have summative assessment as final professional at the end of year.

Theory (Lecture, SGD and PBL)	Practical (Ward Placement, Skills lab)
175 Hours (36 Weeks)	350 Hours (12 Weeks)

THIRD YEAR WARD ROTATION IN MEDICINE

Duration: 8 weeks (100 hours)

Location: ward, OPD, Tutorial room

Tutors: Assistant professor, associate Professor, Professor

	Ward	C	P	A	% age	Assessment
Week 1	History Taking	C2 C2	P1 P1	A1 A1	15	Ward test Mini CEX OSPE
Week 2	GPE	C2 C2	P1 P1	A1 A1	15	Ward test Mini CEX OSPE
Week 3	Examination of GIT	C2 C2	P1 P1	A1 A1	15	Ward test Mini CEX OSPE
Week 4	Examination of GIT	C2 C2	P1 P1	A1 A1	15	Ward test Mini CEX OSPE
Week 5	Examination of CVS	C2 C2	P1 P1	A1 A1	10	Ward test Mini CEX OSPE
Week 6	Examination of CVS	C2 C2	P1 P1	A1 A1	10	Ward test Mini CEX OSPE
Week 7	Examination of Respiratory System	C2 C2 C2	P1 P1 P1	A1 A1 A1	10	Ward test Mini CEX OSPE
Week 8	Examination of Respiratory System	C2 C2 C2	P1 P1 P1	A1 A1 A1	10	Ward test Mini CEX OSPE
Week 9	Examination of cranial nerves	C2	P1	A1	A1	Ward test Mini CEX OSPE
Week 10	Examination of Motor system and cerebellum	C2	P1	A1		Ward test Mini CEX OSPE
Week 11 & 12	Examination of sensory system <i>Revision and assessment.</i>					

Evaluation:

- Attendance of 75% is mandatory
- 15 clinical histories must be completed on history register
- Every Saturday will be formative assessment for course work of that week
- End of course work will be ward test
- Ward test will be OSPE and 2 short cases

FOURTH YEAR WARD ROTATION IN MEDICINE

Duration: 8 weeks (100 hours)

Location: Ward, OPD, Tutorial room

Tutors: Assistant Professor, Associate Professor, Professor

	Ward	C	P	A	% age	Assessment
Week 1	History taking and Differential Diagnosis	C2 C2 C3	P2 P2	A2 A2	15	Ward test Mini CEX OSPE
Week 2	General Physical Examination and interpretation	C2 C2 C3	P2 P2	A2 A2	15	Ward test Mini CEX OSPE
Week 3	History and Examination of GIT	C2 C2 C3 C3	P2 P2	A2 A2	15	Ward test Mini CEX OSPE
Week 4	History and Examination of Respiratory System	C2 C2 C3	P2 P2	A2 A2	15	Ward test Mini CEX OSPE
Week 5	History and Examination of CVS	C2 C2 C3	P2 P2	A2 A2	10	Ward test Mini CEX OSPE
Week 6	History and Examination of CNS	C2 C2 C3 C3	P2 P2	A2 A2	10	Ward test Mini CEX OSPE
Week 7	History and Examination of patients with Diabetes and Musculoskeletal System	C2 C2 C2	P2 P2 P2	A2 A2 A2	10	Ward test Mini CEX OSPE
Week 8	Revision and Assessment	C2 C2	P2 P2	A2 A2	10	Ward test Mini CEX OSPE

Evaluation:

- Attendance of 75% is mandatory
- 15 clinical histories must be completed on history register
- Every Saturday will be formative assessment for course work of that week
- End of course work will be ward test
- Ward test will be OSPE and 2 short cases

FINAL YEAR WARD ROTATION IN MEDICINE

Duration: 12 weeks (350 hours)

Location: ward, OPD, Tutorial room, Operation theatre

Tutors: Assistant Professor, Associate Professor, Professor

	Small Group Discussion	ward	% age	Assessment
Week 1	Ethical issues	General Physical Examination	8	Short case SEQ, OSPE
Week 2	GIT and Liver with introduction to abdominal ultrasound and CT	History and examination interpretation of patients with GI and Liver problems	8	Short case SEQ, OSPE
Week 3	CVS with interpretation of ECG and introduction to Echocardiography	History and examination interpretation of patients with Cardiovascular problems	8	Short case SEQ, OSPE
Week 4	Respiratory System with interpretation of chest X ray and introduction to CT Chest	History and examination interpretation of patients with Respiratory problems	8	Short case SEQ, OSPE
Week 5	Neurology and interpretation of CT scan Brain	History and examination interpretation of patients with Neurological problems	10	Short case SEQ, OSPE
Week 6	Rheumatology	History and examination interpretation of patients with Musculoskeletal problems	10	Short case SEQ, OSPE
Week 7	Endocrinology	History and examination interpretation of patients with Endocrine problems	10	Short case SEQ, OSPE
Week 8	Diabetes Mellitus	History and examination interpretation of patients with Diabetes mellitus	10	Short case SEQ, OSPE
Week 9	Nephrology	History and examination interpretation of patients with Kidney problems	8	Short case SEQ, OSPE
Week 10	Psychiatry	History and examination interpretation of patients with Psychiatric issues	8	Short case SEQ, OSPE
Week 11	Dermatology	History and examination interpretation of patients with Skin problems	8	Short case SEQ, OSPE
Week 12	Revision and assessment		4	Short case SEQ, OSPE

Evaluation:

- Attendance of 75% is mandatory
- 15 clinical histories must be completed on history register
- Every Saturday will be formative assessment for course work of that week
- End of course work will be ward test
- Ward test will be OSPE and 2 short cases

PROGRAMME EVALUATION

Purpose of Evaluation

The major goals of the evaluation are to provide information that the students can use to achieve curricular objectives and that the faculty can use to monitor quality of and improve curriculum.

Design of Evaluation

The evaluation design as only posttest.

Users of evaluation: students, curriculum faculty, Principal Office

Resources: Curriculum faculty and departmental secretaries. No additional funding

Evaluation question:

- What percentage of students achieved 75% mandatory attendance?
- What percentage of students achieved pass marks in university exam?
- What are the strengths of the curriculum? What are the weaknesses? How can the curriculum can be improved?

Because of limited resources, the evaluation was kept simple. Data Collection was integrated into the curriculum schedule. The major goals of the evaluation are to provide information that the students can use to achieve curricular objectives and that the faculty can use to monitor quality of and improve curriculum. The evaluation design as only posttest.

End of curriculum evaluation form:

This will be filled by students and faculty members for evaluation of adequacy with each content was covered, whether they would recommend the curriculum to others and written comments on curriculum strengths, weaknesses and suggestions for improvements.

Annual Report:

Based on evaluation of the educational programe report will be generated annually and submitted to Medical Educational Department.

TABLE OF SPECIFICATION

MEDICINE 1

No	Subject	SEQ
1	Cardiovascular System	02
2	Pulmonary System	01
3	Centraul Nervous System	01
4	Gastroitestinal System	02
5	Liver, Pancrease, Gall Bladder.	01
6	Blood	01
7	Rhematology	01
	Total	09
No	Subject	MCQ
1	Cardiovascular System	07
2	Pulmonary System	07
3	Centraul Nervous System	07
4	Gastroitestinal System	07
5	Liver, Pancrease, Gall Bladder.	06
6	Blood	05
7	Rhematology	06
	Total	45

TABLE OF SPECIFICATION

MEDICINE 1

No	Subject	SEQ
1	Endocrine	02
2	Renal system, Fluid and Electrolytes	02
3	Infectious disease	02
4	Neuro-Psychiatry	02
5	Dermatology	01
	Total	09
No	Subject	MCQ
1	Endocrine Diabetes, Thyroid, Adrenal, Others (One Each)	05
2	Renal system, Fluid and Electrolytes	10
3	Infectious disease	07
4	Neuro-Psychiatry Signs and symptoms, Fear and panic, Persistent complainer and somatization, depression, Psychosis, Conversion states, Mental handicap, Confusion, Substance abuse, Obsessional states.	10
5	Dermatology. Eczema, Papulosquamous dermatoses, Drug Eruptions, Bullous Dermatoses, Bacterial infections of skin, Cutaneous infestations, Sexually transmitted infections, Skin Manifestations of systemic disorder.	06
6	Nutrition	02
	Total	40

TABLE OF SPECIFICATION FOR OSPE

OSPE	TOTAL MARKS 65 Total Station 15 (02 Rest Station) 05 Marks at Each Station 04 Minutes at Each Station
Static Stations	11 09 Internal Medicine 01 of the Two sub-speciaties (Dermatology, Psychaitry)
Interactive / Observed Stations	02 Internal Medicine and Trauma only

FINAL PROFESSIONAL MARKING SCHEME

Theory

	SEQ	MCQ	Int. Ass	Sub Total
Medicine 1	45	45	25	200
Medicine 2	45	40		

Clinical

Short case X2 cases	Long case X1 case	OSPE	Int. Ass	Sub total
120	90	65	25	300
				Total: 500

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-2: PULMONOLOGY</p> <ul style="list-style-type: none"> Asthma. Environmental lung diseases/occupational, Asbestosis, Silicosis, Bagassosis, Pneumoconiosis, Byssinosis, , Farmer’s lung Pneumonia, Community acquired, Nosocomial, Lobar and bronchiopneumonia. Adult respiratory distress syndrome. Acute respiratory failure. Mechanical ventilation. Bronchiectasis. Chronic obstructive airway diseases, Chronic bronchitis, Emphysema. Interstitial lung diseases. Pulmonary thromboembolism Acute cor pulmonale. Type-I and type-II respiratory failure Pleural effusion. Pneumothorax. Tuberculosis Tumors of the lung Disorders of chest wall and pleura Chest trauma Deformities of the rib cage Dry pleurisy, pleural effusion, empyema, pneumothorax. Basics of pulmonary function tests. Imaging in pulmonary diseases/investigations 	<ul style="list-style-type: none"> Understand the Symptomatology to reach the Differential Diagnosis Breathlessness. Understand the Symptomatology to reach the Differential Diagnosis Wheezing. Understand the Symptomatology to reach the Differential Diagnosis Haemoptysis. Understand the Symptomatology to reach the Differential Diagnosis Orthopnoea. Understand the Symptomatology to reach the Differential Paroxysmal nocturnal dyspnoea (PND) Understand the Symptomatology to reach the Differential Pain in calf on walking. Understand the Symptomatology to reach the Differential Undue coldness, redness or blueness of extremities. Understand the Symptomatology to reach the Differential Chest pain. Understand the Symptomatology to reach the Differential Cough/expectoration/sputum. Can performe examiantion of chest. Can interpret of related radiological and laboratory investigations and pulmonary function test. Can expline O₂ therapy, indications, complications. Has observe pleural aspiration, Endotracheal suction, Pleural biopsy, FNA biopsy, Under water seas aspiration, bronchoscopy. Can manage respiratory failure. 	<p>C3P3A3 C3P3A3 C3P3A3 C3 C3 C3P3A3 C3P3A3 C3 C3A3 C3P3A3 C3P3A3</p>	<p>Bedside Bedside Bedside SGD SGD Bedside Skills lab SGD SGD Skills Lab SGD</p>	<p>SC/OSPE SC SC/OSPE SEQ SEQ OSPE MCQ SEQ OSPE SEQ</p>

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-3: DERMATOLOGY</p> <ul style="list-style-type: none"> Anatomy, physiology of skin related to clinical dermatology Infestations: scabies, pediculosis. Bacterial and mycobacterial infections Fungal and viral diseases. Acne vulgaris, Eczemas, Psoriasis, Lichen planu, Bullous disorders, Pigmentary disorders, Disorders of nails, Disorders of hair's, Sexually transmitted diseases. 	<ul style="list-style-type: none"> Can take adequate clinical history in dermatology. Can perform clinical examination of various skin lesions. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in Dermatology. Will observe scraping for fungus, Use of magnifying glass, Observe skin biopsy, Use of Wood's lamp. 			
<p>Module-4: Neurology and Central Nervous System</p> <ul style="list-style-type: none"> Infections and inflammatory lesions, Meningitis, Bacterial, Tuberculous, Viral etc. Brain abscess, Encephalitis, Hydrocephalus, Epilepsy and other convulsive disorders Cerebrovascular diseases (stroke), Ischemic, Embolism, Infarction, Haemorrhage, Intra-cerebral, Subarachnoid, Dementia and Alzheimer's disease. Parkinson's disease and other movement disorders, Motor neuron disease, Multiple sclerosis, Cranial nerve disorders. Transient mono-ocular blindness (amaurosis fugax), Trigeminal neuralgia, Facial palsy (Bell's), Vertigo, nystagmus. Spinal cord disorders, Spinal cord compression, Hemiplegia, paraplegia, quadriplegia, Myelitis, Spondylosis, Syringomyelia and syringobulbia. Peripheral nerve disorders, Peripheral polyneuropathy, Gullian Barry syndrome, Mononeuritis multiplex. Space occupying lesions of brain and spinal cord, Muscular dystrophies, Myopathies, myasthenia gravis. 	<ul style="list-style-type: none"> Can take adequate clinical history in CNS dermatology. Can perform clinical examination of nervous system. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in Neurology. Will observe Lumber puncture. 			

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-5: ALIMENTARY SYSTEM</p> <ul style="list-style-type: none"> • Oral cavity, Infections and inflammatory disorders, Benign and malignant diseases. • Esophagus, Dysphagia with special reference to, Ca oesophagus, GERD, Achalasia • Candidiasis of oral cavity and oesophagus. • Stomach, Gastritis. • Peptic ulcer. • Intestines, Malabsorption syndromes. • Tropical sprue. • Coeliac disease. • Inflammatory bowel diseases. • Ulcerative colitis. • Crohn's disease. • Irritable bowel syndrome (IBS). • Liver. • Ascites, Jaundice. • Congenital hyperbilirubinaemia. • Gilbert syndrome. • Dubin Johnson syndrome. • Rotor syndromes. • Haemolytic. • Obstructive. • Hepatitis. • Viral, acute and chronic. • Toxic. • Drugs. • Auto immune hepatitis. • Cirrhosis of liver. • Hepatic encephalopathy. • Carcinoma liver and transplant. • Acute and chronic pancreatitis. • Upper GI bleeding. • Lower GI bleeding. • Drugs contraindicated in liver diseases. 	<ul style="list-style-type: none"> • Can take adequate clinical history in vomiting, diarrhoea, pain abdomen, constipation, haematemesis, melena, dyspepsia, distension. • Can perform clinical examination of GIT. • Can perform interpretation of related radiological and laboratory investigations. • Can perform General medication and prescription writing in GIT diseases. • Will observe N/G tube passing and feeding. • Will observe aspiration of peritoneal fluids. • Will observe endoscopies, upper and lower GIT. • Can prepare a patient for GI endoscopies. 			

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-6: KIDNEYS AND URINARY SYSTEM</p> <ul style="list-style-type: none"> Acute renal failure, Chronic renal failure, Nephrotic syndrome, Nephritic syndrome, Urinary tract infections, Infections of the kidneys, Infections of the lower urinary tract. Inflammatory lesions of the kidneys Introduction to dialysis & renal transplant Drugs causing renal disease (brief). Analgesic nephropathy, Lead, uric acid, hypercalcemia, radiation & hypersensitivity, Nephropathy, Drugs contra indicated in renal insufficiency, Drugs to be used with caution in renal disease, Polycystic kidneys, Renal vascular disorders, Renal artery stenosis, Renal vein thrombosis, Tumours, Hemolytic uremic syndrome, Prostatic diseases. 	<ul style="list-style-type: none"> Can take adequate clinical history in lumbar pain, anuria, oliguria, hematuria, dysuria, urgency/frequency of micturition, pyuria, urinary retention, nocturia, urinary incontinence, pelvic pain. Can perform clinical examination of abdomen and lumbar area. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in Urinary trace diseases. 			
<p>Module-7: ENDOCRINOLOGY</p> <ul style="list-style-type: none"> Anterior pituitary, Growth hormone disorders, Acromegaly, Gigantism, Short stature, Infertility, Diseases of hypothalamus and posterior pituitary, Empty sella syndrome, Diabetes insipidus, Syndrome of inappropriate ADH secretion (SIADH), Thyroid gland, Hyperthyroidism (thyrotoxicosis), Hypothyroidism (myxedema, cretinism), Inflammatory lesions, Benign and malignant tumors, Adrenal Gland. Cushing Syndrome, Aldosteronism Primary/Secondary, Hirsutism, Addison's disease, Acute Addisonian crisis, Inflammatory lesions, Adrenocortical tumors including Pheochromocytoma, Endocrine Pancreas, Diabetes mellitus and hypoglycaemic states, Other associated endocrine disorders, Testes, Sexual precocity, Heterosexual precocity, Gynaecomastia, Inflammations, Tumours, Multiple endocrine neoplasia, Type I, Type II 	<ul style="list-style-type: none"> Can take adequate clinical history and correlate with a specific diagnosis. Can perform clinical examination of thyroid gland, male and female genital organs etc. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in endocrinology. 			

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module 8: RHEUMATOLOGY</p> <ul style="list-style-type: none"> Osteoarthritis Osteoporosis Rheumatoid arthritis and related arthropathies Paget's disease of the bone. Osteopetrosis (marble bone disease). Multiple myeloma Multi-System Immunological Diseases Systemic lupus erythematosus (SLE) Serum sickness Systemic sclerosis (scleroderma). Mixed connective tissue diseases (brief). Sjogren's syndrome (brief). Ankylosing spondylitis. Bechet's syndrome (brief). Vasculitis syndromes (brief), Anaphylactoid purpura, Polyarteritis nodosa, Hpersensitivity vasculitis, Wegner's granulomatosis. Temporal arteritis Takayasu's arteritis Thromboangitis obliterans (Burger's disease) Sarcoidosis (brief). 	<ul style="list-style-type: none"> Can take adequate clinical history and correlate with a specific diagnosis. Can perform clinical examination of bones, joints, skin and other organs. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in rheumatology. 			
<p>Module 9: METABOLIC DISORDERS</p> <ul style="list-style-type: none"> Hyperlipidemia, Hemochromatosis, Porphyrias, Wilson's disease, Gout and hypercalcemia, Storage diseases, Lipid. Leukodystrophies, Niemann pick disease. Gaucher's disease, Glycogen, Fabry's disease, Hereditary connective tissue disorders, Osteogenesis imperfecta. Ehler's danlos syndrome, Chondrodysplasias. Marfan syndrome, Alport syndrome. Disorders of amino acid metabolism and storage, Homocystinuria, Alkaptonuria, Hartnup disease, Renal glycosuria 	<ul style="list-style-type: none"> Can take adequate clinical history and correlate with a specific diagnosis. Can perform clinical examination of bones, joints, skin and other organs. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in metabolic diseases. 			

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-10: INFECTIOUS DISEASES</p> <ul style="list-style-type: none"> • Clinical syndromes, • Sepsis and septic shock • Meningococcaemia, • Acute infectious diarrhoeal diseases and bacterial food poisoning • Hospital acquired infections. • Common disease syndromes caused by the following bacteria and their drug therapy, • Pneumococci, • Staphylococci, • Streptococci, • Hemophilis influenzae, • Shigella, • Gonococci, • Pseudomonas. • Following diseases in detail, • Tetanus, • Enteric fever/salmonellosis, • Cholera, • Tuberculosis, • Leprosy, • Amoebiasis/giardiasis/trichomoniasis, • Malaria, • AIDS, Rabies, • Infectious mononucleosis. • Helminthic infestations, • Ascariasis, • Hookworm, • Whipworm (trichuriasis), • Threadworm (entrobiasis), • Taenia (tapeworm), • Hydatid diseases. 	<ul style="list-style-type: none"> • Can take adequate clinical history and correlate with a specific diagnosis. • Can perform examination and assessment of the pattern of fever, involvement of organ systems and any positive findings. • Can perform Interpretation of related radiological and laboratory investigations. • Can perform General medication and prescription writing in infectious diseases. 			

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-1.1: HAEMATOLOGY</p> <ul style="list-style-type: none"> Anaemias, Iron deficiency, Megaloblastic, B-12 deficiency, Folic acid deficiency, Anaemia of chronic disorder, Haemolytic anaemia, Hereditary, Acquired, Intra-corpuseular, Extra-corpuseular. Aplastic anemia Haemoglobinopathies. Sickle cell syndromes Thalassaemias Myeloproliferative diseases. Chronic myeloid leukemia (CML) Polycythemia vera, Myelofibrosis, Essential thrombocytosis, Leukemias, Acute, Chronic, Lymphomas, Non-Hodgkin's, Hodgkin's Blood groups and blood transfusion. Bone marrow transplantation. Disorders of haemostasis. Thrombocytopenia Idiopathic thrombocytopenic purpura (ITP) Von Willebrand's disease. Vessel wall disorders. Disorders of coagulation. Haemophilia Vitamin K deficiency. Disseminated intravascular coagulation (DIC). Anticoagulants Therapy Heparin Oral (warfarin etc.) Vit. K infusion Antiplatelet drugs 	<ul style="list-style-type: none"> Can take adequate clinical history and correlate with a specific diagnosis. Can perform examination pallor, cyanosis, jaundice, clubbing, koilonychia, lymph nodes, edema, pulse, cyanosis, fever, headache, anorexia, weight loss, pain, facial swelling etc. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in infectious Haematology. Can perform Injection I/V, I/M, S/C, intradermal. Can collect samples of blood/blood film preparation. Can perform I/V lines/fluids/blood/blood products, direct branula, cutdown, CVP etc. Will observe bone marrow aspiration/ trephine. 			

Contents	Objectives	Do-main	Strategy	Assessment
<p>Module-12: PSYCHIATRY</p> <ul style="list-style-type: none"> Mood disorders. Major depressive episodes Unipolar Bipolar Dysthymic Atypical Maniac episodes Anxiety disorders. Acute anxiety states Panic disorders Generalized anxiety disorders Psychic Traumatic disorders Obsessive-compulsive disorders Phobic disorders Schizophrenia. Alcoholism. Addiction. Psychosexual disorders in men and women. 	<ul style="list-style-type: none"> Can take adequate clinical history and correlate with a specific diagnosis. Can do counseling and psychoanalysis especially in patients with suicidal and homicidal attitude. Can perform Interpretation of related radiological and laboratory investigations. Can perform General medication and prescription writing in psychiatry. 			
<p>Module-13: MISCELLANEOUS AND EMERGENCIES</p> <ul style="list-style-type: none"> Heat stroke Snake bite Electric shock Poisoning etc. 				

Domain	Level
Knowledge	C1 Knowledge C2 Comprehension C3 Application C4 Analysis C5 Synthesis C6 Evaluation
Psychomotor	P1 Observe P2 Practice P3 Adjust P4 Master P5 Develop P6 Construct
Affect	A1 Receiving A2 Responding A3 Valuing A4 Organization A5 Characterization