Operational Manual of MBBS Curriculum 2021

Subject:
Medicine & Allied Subjects

Developed By
Research, Publication & Curriculum Development Wing
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Preface

Curriculum is not the sole determinant of the outcome, it is very important as it guides the faculty in preparing their instruction and tells the students what knowledge, skills and attitude they are to develop through the teaching learning process. The ultimate indicators of assessing curriculum in medical education is the quality of health services provided by its graduates with required competencies.

To implement that curriculum all concerned such as teachers, students, deans, administrators, policymakers to be more dynamic, should run smoothly with the time & appropriate pace. This operational manual to implement the curriculum will act as a catalyst, will give momentum in implementing the curriculum. This operational manual will help to implement the curriculum uniformly, effectively, efficiently & smoothly at all the govt. & non govt. medical colleges under all the universities all over the country.

I would like to mention that the curriculum planning process is continuous, dynamic and never-ending as it is not static. If it is to serve best, the needs of the individual student, teacher, educational institution and the community to whom we are ultimately accountable, must be assessed. Before that assessment we should seriously concentrate for the better implementation of the curriculum. Implementation in regards to teaching-learning, integrated teaching, teaching on generic topics on medical humanities, clinical teaching, ambulatory care/OPD based teaching and acquiring identified competencies of each subject. There is a proverb that "Assessment drives Learning". To ensure students' learning formative and summative assessments should be taken care of properly. This operational manual on developed MBBS curriculum 2021 will play a vital role in those regards.

I congratulate all who were involved in developing this operational manual implement MBBS curriculum 2021, particularly the Director (Research, Publication & Curriculum Development), DGME, focal persons, teachers, members of the concerned society, seniors, juniors, legendary teachers & heads of the departments of Medicine & Allied Subjects. Different Govt. and non Govt. medical colleges. Special appreciation to the Deans, Faculty Medicine of different medical Universities who were requesting to develop this operational manual and will take lead to implement this operational manual. They contributed a lot to complete this activity, a commendable job and deserve special appreciation.

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Acknowledgement

It is easier to change a graveyard than to change a curriculum. Yet then time & society demand for the change of the curriculum. In such a situation MBBS curriculum 2012 was reviewed and updated in 2021 to fulfill the need of the stakeholders. The updated MBBS curriculum 2021 was started to implement from the August 2022. For implementation of that reviewed & updated curriculum operational manual is also the demand of the present time.

For better implementation of integrated teaching, teaching as per identified competencies, teaching on generic topics on medical humanities, planning, designing, constructing assessment tools for formative and summative assessment, this operational manual will act as the road map.

Research, Publication & Curriculum Development (RPCD) of DGME in association with heads of the departments of Medicine & Allied Subjects of different Govt. & non govt. medical colleges & Deans Offices, DGME, ME, FWD, BM&DC took the initiative to develop the operational manual. Concerned stakeholders meetings were held through active participation of different professional groups, focal persons, faculty members, heads of the department of Medicine & Allied Subjects of Phase IV of different govt. & non govt medical colleges of Bangladesh.

I hope this operational manual will help to serve as guiding principle for the students and as well as for faculty members.

Last but not least, I would like to extend my deep gratefulness to the Director General, DGME, ADG(ME) & ADG(Admin), DGME, all Directors of DGME, faculty members of Medicine & Allied Subjects of different Govt & non Govt medical colleges and others who shared their expertise, insights, contributed and worked hard to develop this precious document. Efforts given by the focal persons providing their valuable time, opinions & efforts during the development process of this operational manual for Phase IV of MBBS curriculum are duly acknowledged.

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Background and Rationale

Curriculum is a study track along which students travel throughout the course of study. In this journey teachers play an important role in regards to teaching learning and assessment. To produce need based, community oriented, competent graduate medical doctors, MBBS curriculum was reviewed and updated in 2021. The updated MBBS curriculum 2021 was started to implement from the August 2022. For better implementation of MBBS curriculum 2021 effectively, uniformly & competently an operational manual of each subject was felt by each of the Faculty of Medicine of all universities. In this regard Director (Research, Publication & Curriculum Development (RPCD) of Directorate General of Medical Education (DGME) has taken the time felt initiative under the gradience of Director General, DGME. Thanks to DG, DGME, Director (RPCD), DGME, focal persons, members of the concerned society, senior, junior and legendary teachers and heads of the department of concerned subject of different government & non government medical colleges to finalise this operational manual. This operational manual will work as the skeleton of the curriculum in a comprehensive manner. This user-friendly document will serve the purposes of the faculty to ensure better teaching-learning and assessment to produce knowledge competent and compassionate physicians in Bangladesh.

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Objective of the Manual

This operational manual will help in conducting the courses in Medicine & Allied subjects in MBBS e.g., teaching, in course assessment, question setting, moderation of questions, conducting the final professional MBBS examination, and tabulation based on the MBBS curriculum 2021. This manual will also help to maintain uniformity in the implementation of the MBBS curriculum throughout all the medical colleges of Bangladesh.

Overview and Assessment of Phase- IV: Implementing MBBS Curriculum 2021

Departmental Objectives:

At the end of clinical postings in medicine, undergraduate medical students will be able to:

- acquire appropriate knowledge, attitude, and skill to become an effective doctor for society.
- elicit an appropriate clinical history and physical findings, outline the clinical problems based on these, and identify the means of solving the problems.
- plan relevant investigations, considering the socioeconomic perspective.
- outline the principles of management of various diseases, considering the patient's socio-economic circumstances.
- diagnose and manage medical and paediatric emergencies.
- diagnose and manage common psychiatric disorders.
- recognize and provide competent initial care and refer complicated cases to secondary and tertiary care centers at the appropriate time.
- perform common clinical procedures.
- possess the knowledge to consider the ethical and social implications of his/ her decision.
- demonstrate the art of medicine involving communication, empathy, and reassurance with patients.
- develop an interest in caring for all patients and evaluate each patient as a person in society.
- have an open attitude to the newer developments in medicine to keep abreast of new knowledge.
- learn how to adapt new ideas in situations where it is necessary.
- learn to keep the clinical records for future reference.
- make them oriented to carry out clinical research in the future.

List of competencies to acquire:

At the end of the course in Medicine, undergraduate medical students will be able to:

- gather history and perform physical examination.
- prioritize a differential diagnosis following a clinical encounter.
- recommend and interpret common diagnoses and screening tests.
- enter and discuss orders and prescriptions.
- document a clinical encounter in a patient's record.
- provide an oral presentation of clinical encounters.
- form clinical questions and retrieve evidence to advance patient care.
- give or receive a patient handover to transition care responsibility.
- collaborate as a member of an inter-professional team.
- recognize a patient requiring urgent care and initiate evaluation and management.
- obtain informed consent for tests and/or procedures.
- perform general procedures of a physician.
- understand the preventive perspective of disease.
- identify system failures and contribute to a culture of safety and improvement.

Course structure, subject with duration, and professional examination

Phase	Duration	Subject	Examination
1st phase	1½ year	• Anatomy • Physiology • Biochemistry	First Professional MBBS
2nd phase	1 year	• Pharmacology & Therapeutics • Forensic Medicine & Toxicology NB: Only lectures, small group teaching, clinical teaching & formative assessment will be conducted in the General Pathology part of Pathology, General Microbiology part of Microbiology, Medicine & Allied subjects, Surgery & Allied subjects	Second Professional MBBS
3rd phase	1 year	• Community Medicine & Public Health • Pathology • Microbiology NB: Only lectures, small group teaching, clinical teaching & formative assessment be conducted in the Medicine & Allied subjects, Surgery & Allied subjects, Obstetrics and Gynaecology	Third Professional MBBS
4th phase	1½ year	• Medicine & Allied subjects • Surgery & Allied subjects • Obstetrics and Gynaecology	Final Professional MBBS

Common Rules for Examinations

- University professional MBBS examination will be started from the first working day of May and November.
- University professional MBBS examinations will have to be completed within the specified time of the concerned phase.
- A student must pass all the subjects of a previous professional examination to be eligible to appear at the next professional examination provided other prerequisites for appearing at the examination are fulfilled as per curriculum.
- Central OSPE/OSCE from the Dean's Office after moderation will be encouraged.

Generic Topics on Medical Humanities in Phase-IV

- Topics will be taught in the 4th phase under the supervision of the phase IV coordination committee in collaboration with the medical education unit (MEU).
- The sessions will be under the guidance of the principal & vice-principal, coordinated by concerned departments and sessions will be delivered by concerned experts on the topics.
- Each session will be one and a half hours. Attending these sessions will be mandatory and will be reflected in the formative & summative assessment of phase IV.

Topics	Learning objective	List of Contents	Method	Time
Medical Professionalism	• explain the terminology professionalism, medical professionalism • state the importance of medical professionalism • explain the professional responsibilities in health care • mention the ways and means of improving medical professionalism	• The terminology: professionalism, medical professionalism • Importance of medical professionalism • Professional responsibilities in health care • Ways and means of improving medical professionalism	• Interactive • Lecture • Seminar	One and half hour
Inter professionalism	• define Inter-professionalism (IP) • mention importance of IP in health care • list the members of the inter-professional collaboration • state the means of developing inter-professional collaboration among health team • mention some health service related areas requiring inter-professional collaboration	• Definition of IP • Importance of IP in health care • Members of the inter-professional team collaboration • Means of developing inter-professional collaboration among health team • Some health service related areas requiring inter-professional collaboration	• Interactive • Lecture • Seminar	One and half hour
Patient Safety & medical error	• define patient safety • mention the importance of patient safety • define medical errors and medical negligence • list common medical errors and medical negligence • explain responsibility of patient safety and rights of a patient • mention the common patient safety issues and goals • explain the means of administration of quality care to the patient	• Definition and importance of patient safety • Definition and common medical errors and medical negligence • Responsibility of patient safety and rights of a patient • Common patient safety issues and goals • Means of administration of quality care to the patient	• Interactive • Lecture • Seminar	One and half hour

Generic Topics on Medical Humanities in Internship Period

- Generic Topics on Medical Humanities will be held at the initial part of internship training period under the supervision of Phase-IV coordination committee in collaboration with MEU.
- The session will be under the guidance of Director and Deputy Director of the concerned hospital, coordinated by the Medicine Department and the sessions will be conducted by concerned experts.

Topics	Learning objective	List of Contents	Method	Time
White coat ceremony	• State the ethical codes of BMDC for doctors • State international code of medical ethics • State Declaration of Geneva • Take Oath (Hippocratic oath)	• Ethical codes of BMDC for doctors • International code of medical ethics • Geneva declaration • Oath taking (Hippocratic oath)	• Interactive • Lecture • Seminar	One and half hour
Career planning	• Define carrier planning • List the carrier options for medical graduates in the country • List the carrier options for medical graduates internationally • Mention the strategies to choose the best carrier as a doctor	• Definition of carrier planning • Carrier options for medical graduates in the country • Carrier options for medical graduates internationally • Strategies to choose the best carrier as a doctor	• Interactive • Lecture • Seminar	One and half hour
Continuing Medical Education (CME) & Continuing Professional Development (CPD)	• Define CME & CPD • Mention importance of CME & CPD for a doctor • Describe means of CME & CPD for a doctor • List the barrier of CME & CPD and ways of overcoming those barriers	• Definition of CME & CPD • Importance of CME & CPD for a doctor • Means of CME & CPD for a doctor • Barriers of CME & CPD and ways of overcoming those barriers	• Interactive • Lecture • Seminar	One and half hour
Basic Infection control practice	• Define the healthcare-associated infection (HAI) • Describe the global burden and Bangladesh situation of HAI • Illustrate the chain of infections • Mention the root of transmission of infection • Describe different issues related to standard precautions • Describe different transmission-based precaution • Perform different activities related to infection control practices	• HAI • global burden and Bangladesh situation of HAI • Chain of infections • Transmission of infection • Standard precautions • Transmission-based precaution • Infection control practices ✓ hand washing and rubbing ✓ respiratory hygiene & cough etiquette ✓ use PPE ✓ needle stick injury ✓ disinfection and sterilization ✓ linen and waste management	• Interactive Lecture • Case studies • Demonstration	Five hours

Integrated Teaching in Phase IV

- All the departments of phase IV must be present and take part in the integrated teaching while the faculty representatives from concerned clinical and other departments will also participate actively.
- Teachers will be the speakers in each session.
- Participation of the students of phase IV should be ensured.
- Marks obtained in the integrated teaching will be added to the practical part of oral, clinical & practical examination.
- Each student has to submit summary of the integrated teaching topics of the medicine & allied subjects (Internal Medicine, Paediatrics, Skin & VD and Psychiatry) to the respective department and collect after verification by concerned teacher. At the end of all integrated teaching topics, a student has to submit summary of the topics to the respective department for formative marks.
- Schedule of integrated teaching sessions will be set at the phase IV committee meeting in collaboration with MEU
- Total number of topics is 42.
- Each session will be for at least 3 hours.

Topic	Learning Objective	Core Contents	Other Discipline Involved
Hypertension	At the end of the session students will be able to • define hypertension • classify hypertension • mention causes of secondary hypertension • mention complications • mention accelerated and malignant hypertension • plan Investigations • manage hypertension as well as complications • evaluate and manage hypertension in pregnancy • manage hypertension before, during, and after surgery	• Definition • Classification • Etiology • Secondary hypertension • Approach to newly diagnosed hypertension • Measurement of blood pressure in different postures with importance • History and physical examination • Target organ damage • Investigation • Management • Anti-hypertensive drugs • Hypertension in pregnancy • Hypertension and surgery	• Internal Medicine/ • Cardiology • General Surgery • Obstetrics & Gynaecology • Ophthalmology
Tuberculosis	At the end of the session students will be able to • mention epidemiology • explain pathology and pathogenesis • enumerate organ involvement	• Epidemiology • Pathogenesis & pathology • Clinical features – pulmonary, extrapulmonary • Investigations • Management	• Internal Medicine • General Surgery • Obstetrics & Gynaecology • Dermatology • Ophthalmology

	• describe the natural history of untreated primary TB • mention clinical features of pulmonary TB • mention clinical features of extrapulmonary TB • mention necessary investigations • manage a case of TB • manage TB in pregnancy • diagnose and manage drug reactions to anti-TB drugs. • evaluate the role of surgery in TB	• TB in pregnancy • Drug reaction to anti-TB drugs • TB and surgery	• Otolaryngology • Orthopedics • Paediatrics
Thyroid Disorders	At the end of the session students will be able to • list common thyroid disorders • mention hypofunction of thyroid with etiology • mention hyperfunction of thyroid with etiology • state the causes of thyroid enlargement • enumerate the clinical features of hypothyroidism and hyperthyroidism • perform necessary investigations for a suspected case of thyroid dysfunction and their interpretation • manage hypothyroidism and hyperthyroidism	Thyrotoxicosis • Definition • Causes • Clinical features • Investigations • Management • Crisis Hypothyroidism • Definition • Causes • Clinical features • Investigations • Management • Crisis Thyroid lump/swelling • Causes • Clinical assessment • Investigations Transient thyroiditis Autoimmune thyroiditis Thyroid disorder in pregnancy Surgery and thyroid dysfunction	• Internal Medicine • General Surgery • Obstetrics & Gynaecology • Otolaryngology • Skin and VD
Acute Kidney Injury (AKI)	At the end of the session, students will be able to • define AKI	• Definition of AKI • Causes of AKI • Pathophysiology of AKI	• Internal Medicine/ • Nephrology • General Surgery

	• list causes of AKI • describe the pathophysiology of AKI • mention clinical features • plan Investigations • manage cases • mention complications of AKI • identify and manage AKI in paediatics • evaluate and manage pregnancy with AKI • diagnose and manage AKI related to surgery	• Clinical features • Investigations • Management • Complications of AKI • AKI in paediatics • AKI in Pregnancy • AKI related with surgery.	• Obstetrics and Gynaecology • Paediatrics
Fever	At the end of the session, students will be able to • list the etiology of fever • investigate a case of fever • mention management of cases & management of complications both in adults and in children. • evaluate and manage fever during pregnancy • mention the role of surgery in management of a case of fever • list the consequences of fever	• Aetiology of fever • Investigation of a case of fever • management of fever and management of complications both in adults and in children. • management of fever during pregnancy • Role of surgery in management of a case of fever • Consequences of fever	• Internal Medicine • Gastroenterology • General Surgery • Obstetrics and Gynaecology • Paediatrics
Oedema	At the end of the session students will be able to • define oedema • explain the pathophysiology • list the causes • mention clinical assessment of a case of oedema • investigate a case • plan management both in adults and in children. • evaluate and manage oedema during pregnancy • mention the role of surgery in selective cases of oedema	• Definition of oedema • Pathophysiology • Causes of oedema • Clinical assessment of a case of oedema • Investigations • Management both in adults and in children. • Evaluation and management of oedema during pregnancy • Role of surgery in selective cases of oedema	• Internal Medicine • General Surgery • Obstetrics and Gynaecology • Paediatrics

Chest pain	At the end of the session, students will be able to • mention causes of chest pain • outline the systematic approach to most of the common causes of chest pain (History and clinical exam) • interpret the findings in terms of diseases, possible causes, and plan of investigations • make emergency decision regarding management • plan treatment	• Causes of chest pain • Systematic approach to chest pain • Clinical features of chest pain • DDs of chest pain • Lab diagnosis of chest pain • Treatment of chest pain	• Internal Medicine • Respiratory Medicine • General Surgery • Obstetrics and Gynaecology • Cardiology
Acute respiratory distress	At the end of the session, students will be able to • mention the causes • outline the systematic approach to most of the common causes of respiratory distress (history and clinical exam) • outline the plan of investigations • interpret the findings to reach the cause and to exclude differential diagnosis • plan treatment approach	• Causes • Systematic approach • Clinical features • Lab diagnosis • Treatment	• Internal Medicine • General Surgery • Obstetrics and Gynaecology • Cardiology • Respiratory Medicine
Diabetes Mellitus (DM)	At the end of the session, students will be able to: • define DM • classify DM • describe brief pathophysiology • state presenting features • mention short-term and long-term complications. • outline laboratory diagnosis • mention WHO guideline • manage DM in different clinical settings (in pregnancy, children, in kidney disease)	• Definition of DM • Classification of DM • Pathophysiology of DM • C/F of DM • Complications of DM • Lab. diagnosis of DM • Management of DM (including special situations)	• Internal Medicine • General Surgery • Obstetrics and Gynaecology • Endocrinology • Skin and VD
Jaundice	At the end of the session, students will be able to • define jaundice	• Definition • Causes • Classification	• Internal Medicine • General Surgery • Obstetrics and Gynaecology

	• classify jaundice • explain the pathophysiology of different type of jaundice • outline systematic approach to differentiate different types of jaundice • plan relevant investigations • outline treatment approaches.	• Pathophysiology • C/F • Diffential diagnosis • Lab.investigations • Treatment	• Gastroenterology • Paediatrics
Diarrhoea and vomiting	At the end of the session, students will be able to • define diarrhea • mention causes • describe pathogenesis • classify dehydration • assess dehydration • describe clinical presentation and consequences • plan investigations and interpretation • outline management • mention preventive measures	• Vomiting and causes • Diarrheal disease- • Acute watery diarrhea • Persistent diarrhea • Dysentery • Assess dehydration and appropriate management • Composition of ORS , cholera saline • Complications • Prevention	• Paediatrics • Internal Medicine • General Surgery • Obstetrics and Gynaecology
Nutrition	At the end of the session, students will be able to • define IYCF • define nutrition • mention common nutritional problems • define malnutrition • classify malnutrition • explain growth chart • assess malnutrition • mention principles of management • describe vitamin deficiency • describe briefly the micronutrient deficiency • define obesity and malnutrition	• Nutrition • IYCF • Definition • Common • nutritional • problems • Malnutrition • definition • classification • Growth chart • Assessment of malnutrition • Principals of • Management • Vitamin • Deficiency- common vit deficiency like A, D, K. • Micronutrients • Deficiency- iron deficiency anemia	• Paediatrics • Internal Medicine • General Surgery • Obstetrics and Gynaecology

		• Obesity- definition, BMI, cause, clinical presentation, Investigations and interpretation • Complications	
Paediatric Emergency	At the end of the session, students will be able to • mention the type of poisoning • outline management of drowning, burn, dog bite, snake bite & status epilepticus • mention the preventive measures	• Poisoning ✓ common house ✓ hold poisoning, ✓ kerosene poisoning, ✓ OPC poisoning, ✓ drug poisoning • Drowning • Burn • Dog bite • Snake bite • Status epilepticus	• Paediatrics • Internal Medicine • General Surgery • Obstetrics and Gynaecology
Headache	At the end of the session, students will be able to: • define headache • mention the types of headache • perform the history taking of headache • state the clinical features of headache • mention the symptoms of headache related to intracranial causes • explain the symptoms of headache due to ophthalmic or ENT causes	• Definition of headache • Epidemiology of headache • Common causes of headache • Types of headache • Tension headache • Migraine • Differential diagnosis of headache • Management of headache	• Psychiatry • Internal Medicine • Neurology • Eye • ENT
Anxiety	At the end of the session students will be able to: • define anxiety • classify anxiety disorders • state the clinical features of anxiety disorder • diagnose GAD • mention the organic causes of anxiety • manage a case of anxiety disorder	• Definition of anxiety, anxiety disorder • Neurotransmitter involve in anxiety • Epidemiology of GAD • Signs and symptoms of anxiety disorders • Treatment of Anxiety disorder • Postpartum blue anxiety	• Psychiatry • Internal Medicine • Paediatrics • Obstetrics and Gynaecology
Depression	At the end of the session, students will be able to • define depression	• Definition of depression & depressive disorder • Neurotransmitter involves in depression	• Psychiatry • Internal Medicine • Pediatrics

	• classify depressive disorder • state the clinical features of depressive disorder • diagnose depressive disorder • mention the organic causes of depression • manage a case of depressive disorder	• Epidemiology of depressive disorder • Sign symptoms of depressive disorder • Treatment of depressive disorder • Postpartum blue depression in children	• Obstetrics and Gynaecology
Psychosis	At the end of the session, students will be able to • define psychosis • classify psychotic disorder • state the clinical features of psychotic disorder • diagnose schizophrenia • diagnose bipolar disorder • manage a case of schizophrenia • manage a case of bipolar disorder • state the prognosis of psychotic disorder	• Definition of psychosis, Hallucination, delusion • Classification of psychosis • Neurotransmitter involve in psychosis • Epidemiology of schizophrenia • Epidemiology of bipolar disorder • Sign symptoms of psychosis • ICU psychosis • Postpartum psychosis • Diagnostic criteria of schizophrenia • Diagnostic criteria of bipolar disorder • Treatment of schizophrenia • Treatment of bipolar disorder	• Psychiatry • Internal Medicine • Obstetrics and Gynaecology
Delirium & Dementia	At the end of the session, students will be able to • define delirium & dementia • mention the causes of delirium & dementia • classify dementia • state the clinical features of delirium & dementia • diagnose a case of delirium & dementia • manage a case of delirium & dementia • state the prognosis of dementia	• Definition of delirium • Definition of dementia • Causes of delirium • Causes of dementia • Classification of dementia • Clinical feature of delirium • Clinical feature of dementia • Diagnosis of delirium • Diagnosis of dementia • Management of delirium • Management of dementia • Prognosis of dementia	• Psychiatry • Internal Medicine • Neurology
Drug reaction	At the end of the session, students will be able to • define drug reaction • explain the pathogenesis of drug reaction	• Definition of drug reaction • Types of drug reaction • Pathogenesis of drug reaction • Clinical features of drug reaction	• Department of Skin & VD • Internal Medicine • Paediatrics • General Surgery

	• state the clinical features of drug reaction • differentiate drug reaction from other diseases • outline the investigations of drug reaction • outline the management of drug reactions	• Differential diagnosis of drug reaction • Investigation of drug reaction • Management of drug reaction	• Obstetrics and Gynaecology • Pharmacology • Pathology
Generalized pruritus	At the end of the session, students will be able to • define pruritus • mention the causes of generalized pruritus • mention the pathway of pruritus • explain pathophysiology of pruritus • outline the investigation of pruritus • outline the general and specific management of pruritus	• Definition of pruritus • Pathway of pruritus • Causes of pruritus • Pathophysiology of pruritus • Differential diagnosis • Investigation of pruritus • Management of pruritus	• Department of Skin & VD • Internal Medicine • Paediatrics • General Surgery • Obstetrics and Gynaecology
Purpura	At the end of the session, students will be able to • define purpura and related terms • mention the causes of purpura • explain the pathogenesis of purpura • mention the types of purpura • mention the investigation of purpura • describe the management of purpura	• Definition of purpura • Types of purpura • Pathogenesis of purpura • Investigation of purpura • Management of purpura	• Department of Skin & VD • Internal Medicine, • Haematology, • Paediatrics, • General Surgery, • Pathology
STI	At the end of the session, students will be able to • define STI and related terms • classify STI • clinical features of STI • mention the laboratory investigation of STI • differentiate STI from other diseases • describe the management of STI • outline prevention and control measures	• Definition of STI • Classification of STI • Clinical features of STI • Laboratory investigations of STI • Differential diagnosis of STI • Management of STI • Prevention and control of STI	• Department of Skin & VD • Internal Medicine • General Surgery • Microbiology • Community Medicine
Low Back Pain	At the end of session. students will be able to:	• Definition of Low Back Pain	• Internal Medicine

	• define Low Back Pain • mention different types of Low Back Pain • describe the pathogenesis of Low Back Pain • enumerate the clinical features • list the required laboratory investigations • management with prevention.	• Types of Low Back Pain • Clinical stages of Low Back Pain • Pathophysiology • Clinical feature • Complication • Indication of operative and non-operative treatment	• Pathology • Pharmacology • Physical Medicine • Radiology • Orthopedics
Joint Pain	At the end of session, students will be able to • explain the etiopathogenesis of the disease. • mention the causes of joint pain • list the types of arthritis • outline the management of the disease according to the causes	• Types of arthritis • Stages of all types of arthritis • Complications • Conservative vs surgical treatment	• Internal medicine • Anatomy • Pathology • Pharmacology • Physical Medicine
Osteoporosis	At the end of session, students will be able to • mention basic physiology of the bone and pathology of osteoporosis • explain the consequences of osteoporosis • describe social and economic burden in the society • outline the management with a protocol of prevention	• Causes and types of Osteoporosis • Pathophysiology of osteoporosis • Complication • Drug used for Preventions	• Internal medicine • Physiology • Pathology • Pharmacology • Endocrinology • Radiology • Obstetrics & Gynaecology
Acute abdomen	At the end of the session, students will be able to • define acute abdomen • list the common causes of acute abdomen • mention the surgical, medical & gynecological causes of acute abdomen • state the specific management protocol of acute abdomen	• Definition of acute abdomen • Causes and examples of acute abdomen • Surgical causes of acute abdomen • Medical causes of acute abdomen • Gynecological causes of acute abdomen • Specific management of acute abdomen	• Internal Medicine • General Surgery • Obstetrics and Gynaecology • Paediatrics
Thrombophlebitis/ plebothrombosis	At the end of the session, students will be able to • define thrombophlebitis	• Definition of thrombophlebitis & phlebothrombosis	• Internal Medicine • General Surgery • Obstetrics and Gynaecology

	• define phlebothrombosis • mention the etiology of thrombophlebitis & phlebothrombosis • explain the pathogenesis of thrombophlebitis & phlebothrombosis • state the clinical features of thrombophlebitis & phlebothrombosis • differentiate between thrombophlebitis & phlebothrombosis • state the name of procoagulant & anticoagulant • mention the complications of thrombophlebitis & phlebothrombosis • outline the management of thrombophlebitis & phlebothrombosis • state the measures of physiotherapy for prevention of thrombophlebitis & phlebothrombosis	• Aetiology of thrombophlebitis & phlebothrombosis • Pathology of thrombophlebitis & phlebothrombosis • Clinical features of thrombophlebitis & phlebothrombosis • Names procoagulant & anticoagulant • Complications of thrombophlebitis & phlebothrombosis • Management of thrombophlebitis & phlebothrombosis • Preventive measures	• Pathology
Sepsis	At the end of the session, students will be able to • define sepsis, MODS, SIRS, bacteremia, pyemia, septic shock • mention the etiology of sepsis • explain the pathophysiology of sepsis • state the clinical features of sepsis • differentiate the stages of sepsis • state the investigations for sepsis • outline the general management of sepsis • assess the need of HDU and ICU support in sepsis • state the fate of sepsis	• Definition-MODS, SIRS, bacteremia, pyemia, septic shock • Etiology of sepsis • Pathophysiology of sepsis • Clinical features of sepsis • Investigations of sepsis • General management of sepsis • Fate of sepsis	• Internal Medicine, • General Surgery, • Obstetrics and Gynaecology • Pathology • Pharmacology
Infection Prevention & Control	At the end of the session, students will be able to define sterilization • state the concept of disinfection • mention universal precaution of infection prevention & control	• Concept of sterilization • Concept of disinfection • Universal precaution • Hospital acquired infection • Cross infection • Infection control in emerging diseases	• Internal Medicine, • General Surgery • Obstetrics and Gynaecology • Pathology • Microbiology • Anaesthesiology

	• define hospital acquired infection • describe the cross infection • describe infection control in emerging diseases • mention prevention of hospital infections	• Prevention of hospital infection	• Critical care Medicine
Shock	At the end of the session; students will be able to • define shock • state the types of shock • explain the pathogenesis of shock • list the clinical features of shock • state the complications of shock • outline the general management of shock • state the indications of HDU and ICU	• Definition of shock • Types of shock • Pathogenesis of shock • Clinical features of shock • Complications of shock • General management of shock	• Internal Medicine, • General Surgery • Obstetrics and Gynaecology • Pathology • Anaesthesiology • Critical care Medicine
Fluid & Electrolytes	At the end of the session, students will be able to • state the daily input/output of fluids and electrolytes • mention the normal level of common electrolytes • define hypo and hypernatraemia • list the causes of hypo and hypernatraemia • mention the clinical feature of hypo and hypernatraemia • outline the treatment of hypo and hypernatraemia • define hypo and hyperkalaemia • state the causes of hypo and hyperkalaemia • mention the clinical feature of hypo and hyperkalaemia • outline the treatment of hypo and hyperkalaemia • define hypo and hypercalcaemia • state the causes of hypo and hypercalcaemia	• Daily input/output • Normal level of common electrolytes • Definition of hypo and hypernatraemia, • Causes of hypo and hypernatraemia • Clinical features of hypo and hypernatraemia • Treatment of hypo and hypernatraemia • Definition of hypo and hyperkalaemia, • Causes of hypo and hyperkalaemia • Clinical features of hypo and hyperkalaemia • Treatment of hypo and hyperkalaemia • Definition of hypo and hypercalcaemia , • Cuses of hypo and hypercalcaemia • Clinical features of hypo and hypercalcamia • Treatment of hypo and hypercalcaemia	• Internal Medicine, • General Surgery • Obstetrics and Gynaecology • Pathology • Anaesthesiology • Critical care Medicine • Biochemistry • Physiology

	• mention the clinical feature of hypo and hypercalcaemia • state the treatment of hypo and hypercalcaemia		
Burn	At the end of the session students will be able to • define burn • state clinical feature of burn according to depth • explain the pathogenesis of burn • state the complications of burn • mention the assessment criteria of surface area of burn • state the assessment criteria of fluid requirement of burn • outline the general management of burn • state the compartmental syndrome and fasciotomy • define contracture • state the prevention of contracture • mention the reconstructive measures of contracture	• Definition of burn • Clinical features of burn according to depth • Pathogenesis of burn • Complications of burn • Surface area assessment of burn • Fluid requirement assessment of burn • General management of burn • Compartmental syndrome and fasciotomy • Contracture, prevention and reconstructive measures	• General Surgery • Plastic Surgery, • Paediatrics, • Anaesthesiology • Critical care Medicine
Per rectal bleeding	At the end of the session students will be able to • define per rectal bleeding • state the types of per rectal bleeding • list the causes of per rectal bleeding • mention the clinical features of per rectal bleeding • state the investigation protocol of per rectal bleeding • outline the management of per rectal bleeding	• Definition of per rectal bleeding • Types of per rectal bleeding • Causes of per rectal bleeding • Clinical features of per rectal bleeding • Investigation protocol of per rectal bleeding • Management of per rectal bleeding	• Internal Medicine, • General Surgery • Obstetrics and Gynaecology • Paediatric surgery
Vertigo	At the end of session students will be able to • define vertigo • classify vertigo	• Definition of vertigo • Classification of vertigo • Anatomy & physiology of balance	• Otolaryngology • Internal medicine • Ophthalmology

	• explain anatomy & physiology of balance • describe pathophysiology of vertigo • explain causes of vertigo • state sign & symptoms of vertigo • mention the investigations of vertigo • describe the management of vertigo • state rehabilitation procedure of patient with chronic vertigo	• Pathophysiology of vertigo • Causes of vertigo • Symptoms & signs of vertigo • Investigation of vertigo • Management of vertigo • Rehabilitation of chronic vertigo	• Orthopedics • Anatomy • Physiology
Congenital Anomalies	At the end of session students will be able to • define congenital anomalies / birth defects • classify congenital anomalies • mention the causes and risk factors of congenital anomalies • state the screening of congenital anomalies • list the common congenital anomalies • state epidemiology of common congenital anomalies • outline manage congenital anomalies • explain prevention of congenital anomalies • describe rehabilitation of a patients with congenital anomalies	• Definition of congenital anomalies / birth defects • Classification of congenital anomalies • Causes & risk factors of congenital anomalies • Screening of congenital anomalies • Epidemiology of congenital anomalies • Common congenital anomalies • Management of congenital anomalies • Prevention of congenital anomalies • Rehabilitation of patients with congenital anomalies	• Paediatrics • Orthopedics • Cardiology • Plastic surgery • Otolaryngology • Anatomy
Wound Infection	At the end of session students will be able to • define wound infection, surgical site infection & nosocomial infection • mention the causes and risk factors of wound infection and nosocomial infection • describe the pathophysiology of wound infection • list the clinical features of wound infection • describe the management of wound infection • explain prevention of wound infection and nosocomial infection	• Definition of wound infection, surgical site infection & nosocomial infection • Causes and risk factors of wound infection and nosocomial infection • Pathophysiology of wound infection • Clinical features of wound infection • Management of wound infection • Prevention of wound infection and nosocomial infection • Consequences of untreated wound infection	• Surgery • Obstetrics & Gynecology • Otolaryngology • Pathology • Microbiology

	• state the consequences of untreated wound infection		
Urinary Tract Infection (UTI)	At the end of the session students will be able to • define UTI • enumerate the micro-organisms responsible for UTI • explain the signs and symptoms of UTI • enumerate different investigations for UTI • explain the effects of pregnancy (hormonal) on UTI • explain the complications of UTI especially on pregnancy and foetus • list the drugs used for treatment of UTI • mention appropriate referral criteria for UTI	• Definition of UTI • Micro-organisms responsible for UTI • Signs and symptoms of UTI • Investigations for UTI • Effects of pregnancy (hormonal) on UTI • Complications of UTI on pregnancy and foetus • Drugs used for treatment of UTI • Criteria of referral for UTI	• Internal medicine • Nephrology • Obstetrics & Gynecology • Microbiology • Pharmacology
Abnormal uterine bleeding (AUB)	At the end of the session students will be able to • define different types abnormal uterine bleeding (AUB) • explain the causes and pathophysiology of AUB • state the clinical features of AUB • mention the investigations for AUB • name the differential diagnosis of different causes AUB • outline the management approach of the cases of AUB	• Definition of different types AUB (like- menorrhagia, polymenorrhoea, oligomenorrhoea, amenorrhoea etc.) • Causes & pathophysiology of AUB • Clinical features of AUB • Investigations for AUB • Differential diagnosis of different causes AUB (like- hypothalamic pituitary dysfunction, ovarian dysfunction, thyroid dysfunction, diabetes mellitus, haemoginopathies, thrombocytopenia & dengue) • Management approach of the cases of AUB	• Obstetrics & Gynecology • Internal medicine • Endocrinology • Haematology
Convulsion	At the end of the session students will be able to • define convulsion • state the magnitude & patient profiles of convulsion • mention the causes of convulsion	• Definition of convulsion • Magnitude & patient profiles of convulsion • Causes of convulsion • Clinical features convulsion • D/Ds of different causes of convulsion (like- Head Injury, Brain Abscess, Brain	• Paediatrics • Obstetrics & Gynecology • Internal medicine • Neuro-medicine • Surgery • Neuro-surgery

	• list the clinical features convulsion • mention D/Ds of different types of convulsion • list the investigations for convulsion • outline the treatment of convulsion • state the prevention of convulsion • state complications of convulsion	Tumour, Tuberculosis, Epilepsy, Sepsis, Poisoning, Eclampsia) • Investigations for convulsion • Treatment of convulsion • Prevention of convulsion • Complications of convulsion	
Abdominal Lump	At the end of the session students will be able to • define abdominal lump • mention the causes of different forms of abdominal lump • state the magnitude & patient profiles of abdominal lump • mention the clinical presentation abdominal lump • mention the investigations for abdominal lump • explain differential diagnosis of different form of abdominal lump • outline treatment of abdominal lump • explain follow up of abdominal lump	• Definition of abdominal lump • Causes of abdominal lump (Different forms of abdominal lump like - GIT lumps, Lymphoma, Mesenteric Cyst, Enlarged liver, Enlarged Spleen, Fibroid Uterus, Benign Ovarian Tumor, Malignant Ovarian Tumor & TO mass) • Magnitude & patient profiles of abdominal lump • Clinical presentation abdominal lump • Investigations for abdominal lump • Differential diagnosis of different form of abdominal lump • Treatment of abdominal lump • Follow up of abdominal lump	• Obstetrics & Gynecology • Surgery • Internal medicine • Oncologist
Anaemia	At the end of session students will be able to • define anaemia • classify anaemia • list common causes of anaemia in Bangladesh • explain clinical approaches (history taking, physical examination & investigations)) a patient with anaemia • describe treatment of anaemia • state management of anaemia before surgery • outline management of anaemia during pregnancy • mention prevention of anaemia	• Definition of anaemia • Classification of anaemia • Common causes of anaemia in Bangladesh • Approach (history taking, clinical examination and lab investigation) towards an anaemic patient • Treatment of anaemia • Management of anaemia before surgery • Management of anaemia during pregnancy • Prevention of anaemia	• Internal medicine • Hematology • Obstetrics & Gynecology • Surgery

Unconsciousness	At the end of session students will be able to • define unconsciousness • mention the level of unconsciousness. • list the causes of unconsciousness. • explain clinical approaches (history taking, physical examination & investigations)) towards an unconsciousness patient • outline emergency management of an unconscious patient. • describe general management of unconscious patient • mention indications emergency surgery for unconscious patient • mention emergency obstetrics care for unconscious patient.	• Definition of unconsciousness • Level of unconsciousness (including Glasgow Coma Scale) • Approach to an unconscious patient (history taking, clinical examination, lab investigation and bedside investigation) • Responsibility of an emergency medical officer (ABC) • General management of unconscious patient • Indications emergency surgery for unconscious patient • Emergency obstetric care for unconscious patient.	• Internal Medicine • Neuro-medicine • Surgery • Obstetrics & Gynecology

Medicine & Allied Subjects Departmental Integrated Teaching - Phase-IV

- Medicine and Allied subjects of phase IV will organize the departmental integrated teaching
- Teachers will be the speakers in each session.
- Participation of the students of phase IV should be ensured.
- Each student has to submit summary of the integrated teaching topics of the medicine & allied subjects (Internal Medicine, Paediatrics, Skin & VD and Psychiatry) to the respective department and collect after verification by concerned teacher. At the end of all integrated teaching topics, a student has to submit all the summary of the topics to the respective department for formative marks.
- Schedule of the departmental integrated teaching session will be set by the department in coordination with the phase IV committee.
- Total number of topics is 10.
- Each session will be for at least 2 hours.

Topic	Learning Objective	Core Contents	Other Discipline Involved
Heart Failure	At the end of the session students will be able to • define heart failure • classify heart failure • mention causes of heart failure • explain the pathophysiology of heart failure • state the clinical features • plan Investigations • outline management • mention complications	• Definition • Classification • Etiology • Pathophysiology • History and physical examination (clinical feature) • Investigation • Management • Complications	• Medicine • Cardiology • Paediatrics • Pharmacology • Pathology
Congenital Heart Disease	At the end of the session students will be able to • classify congenital heart diseases • mention the causes, pathogenesis and pathology of congenital heart diseases • state the clinical features • plan necessary investigations • outline management plan • evaluate role of surgery	• Classification • Aetiology • Pathogenesis & Pathology • Clinical features • Investigations • Management	• Medicine • Cardiology • Paediatrics
Bronchial Asthma	At the end of the session students will be able to • define Asthma • mention pathophysiology	• Definition • Pathophysiology • Clinical features	• Medicine • Respiratory Medicine • Paediatrics

	• state clinical features • outline diagnosis measures of Bronchial asthma • outline management plan • outline diagnosis & management of acute severe asthma.	• Diagnosis • Management • Acute severe asthma	• Cardiology • Dermatology • Psychiatry
Liver Abscess	At the end of the session students will be able to • define Liver Abscess • mention causes • describe pathophysiology of Liver Abscess • mention clinical features • plan Investigations • outline management of a case • outline plan to manage complications	• Definition • Causes • Pathophysiology • Clinical features • Investigations • Management • Complications	• Medicine • Gastroenterology/Hepatology • Paediatrics • Microbiology
Malabsorption syndrome	At the end of the session students will be able to • define malabsorption • explain pathophysiology • mention eitiology • state clinical features • outline investigation of a case • plan management of malabsorption syndrome	• Definition • Pathophysiology • Clinical features in adults & in children • Investigations • Management of malabsorption both in adults and in children.	• Medicine • Gastroenterology • Paediatrics
Irritable bowel syndrome(IBS)	At the end of the session students will be able to define IBS • describe pathophysiology • mention clinical features • outline investigation of a case • plan management	• Definition of IBS • Pathophysiology • Clinical features • Investigations • Management of IBS	• Medicine • Gastroenterology • Psychiatry
Psoriasis	At the end of the session students will be able to • define psoriasis • classify psoriasis • mention the causes and aggravating factors of psoriasis • explain the pathogenesis of psoriasis • mention the pathology of psoriasis • describe the clinical features of psoriasis	• Definition of psoriasis • Classification of psoriasis • Aetio-pathogenesis of psoriasis • Pathology of psoriasis • Clinical features of psoriasis • Differential diagnosis of psoriasis • Laboratory investigations of psoriasis • Management of psoriasis	• Department of Skin & VD • Immunology & Microbiology • Pathology • Rheumatology • Medicine • Psychiatry

	• differentiate psoriasis from other mimicking diseases • mention the laboratory investigations of psoriasis • describe the management of psoriasis including special situations (pregnancy, children, kidney and liver diseases) • mention the complications and their managements	• Complications of psoriasis	
Leprosy	At the end of the session students will be able to • define leprosy • mention the epidemiology of leprosy • classify leprosy • mention the clinical features of leprosy • mention the laboratory investigations of leprosy • differentiate leprosy from other mimicking diseases • describe the management of leprosy • mention the management of complications of leprosy • mention the prevention and control measures of leprosy	• Definition of leprosy • Epidemiology of leprosy • Classification of leprosy • Pathology of leprosy • Clinical features of leprosy • Differential diagnosis of leprosy • Laboratory investigation of leprosy • Management of leprosy • Complications of leprosy • Prevention and control of leprosy • Patient Education	• Department of Skin & VD • Medicine • Neuromedicine, • Community Medicine, • Microbiology, • Orthopedics
Autism spectrum disorder (ASD)	At the end of the session students will be able to • define ASD • classify ASD • explain pathophysiology • mention the epidemiology of ASD • state the aetiology of ASD • mention the presentation of ASD • list the clinical features of somatoform disorder • mention the differential diagnosis of ASD • differentiate the DDs of ASD	• Definition of ASD • Classification of ASD • Pathophysiology • History and physical examination • Epidemiology of ASD • Aetiology of ASD • Clinical feature of ASD • Differential diagnosis of ASD • Difference between DDs • Management of ASD • Prognosis of ASD	• Department of Psychiatry • Paediatrics • Neuromedicine • Medicine

	• outline the management of a case of ASD • plan counseling • state the prognosis of ASD	• Counselling	
Somatoform disorder	At the end of the session students will be able to • define somatoform disorder • mention the epidemiology of somatoform disorder • classify somatoform disorder • enumerate the aetiology of somatoform disorder • state the clinical features of somatoform disorder • mention the differential diagnosis • differentiate the different somatoform disorders • diagnose somatoform disorder • mention the management of a case of somatoform disorder	• Definition of somatoform disorder • Epidemiology of somatoform disorder • Classification of somatoform disorder • Aetiology of somatoform disorder • Clinical feature of somatoform disorder • Differential diagnosis of somatoform disorder • Different type of somatoform disorder • Management of somatoform disorders • Counseling	• Department of Psychiatry, • Medicine, • Neuromedicine • Physical medicine

Distribution of teaching-learning hours

Subject	Lecture (hours)				Small group teaching(hours)	Departmental integrated teaching of Medicine & Allied Subjects (hours)	Phase IV common integrated teaching (hours)	Clinical/Bedside teaching (weeks)			Total weeks	Block posting (weeks)	Formative examination (days)		Summative examination (days)	
	2nd Phase	3rd Phase	4th Phase	Total	PBL, practical demonstration, instrumental demonstration, skill lab, tutorial & etc.			2nd Phase	3rd Phase	4th Phase			Preparatory leave-10 days	Exam time-15days	Preparatory leave-10 days	Exam time-30days
Internal Medicine	24	25	90	139	199 hours	(10 topics ×2 hours) = 20 hours	(42 topics × 3 hours) = 126 hours	14	06+ 2 (OPD)	12	34	04 wks.				
Psychiatry	02	-	18	20				-	02	03	05					
Dermatology	-	-	17	17				-	02	03	05					
Paediatrics	04	20	22	46				04	-	06	10					
Transfusion Medicine	-	03	-	03				01	-	-	0 1					
Physical Medicine	-	-	04	04				02	-	-	02					
Nuclear Medicine	-	-	02	02				-	-	-	-					
Emergency	-	-	-	-				-	02	-	02					
Total	30	48	153	231	199	20	126	20	14	24	59	04 wks	25 days		40 days	
Grand total	450 hours						126 hours	63 wks					65 days			
Time for integrated teaching, examination preparatory leave and formative & summative assessment is common for all subjects of the phase																

Teaching-learning methods, teaching aids and evaluation

Teaching Methods				Teaching aids	In course evaluation
Large group	**Small group**	**Self learning**	**Others**		
• Lecture • Integrated teaching	• Bed side clinical teaching in ward, emergency room, OPD • Clinical teaching in CCU/ ICU. • Clinical case presentation. • Demonstration of Xray, CT scan, MRI, ECG, instruments, photos, data etc. • Practice in a medical skill centre • Practical demonstration • Writing case problem • Practical skills (Video)	Self-directed learning, assignment, self test /assessment	Integrated teaching with other department	Laptop, computer, OHP/ multimedia presentation, slide projectors, video, slide, dummy (manikins), model, real patients, attendants, simulation, charts, Others e.g. ECG machine, X-ray, photographs, black board, white board, flow chart, X-rays, ECG reports, samples, audio, instrument, photographs Reading materials o Modules &national guidelines on different childhood /adult illnesses o Study guide o Books, journals	• Item examination • Card final • Term examination

Related Equipment:

Stethoscope, BP Machine, Hammer, Fluid bags, Blood bags, I.V sets & cannula, Transfusion sets, Feeding tubes (Ryles tube, Catheter, airway, X-rays, ECG, Appliances, Water seal drainage bottle ESR tube. LP needle, BM needle, Tongue depressor, etc. face mask, nonrebreather (NRB) mask, nasal cannula, pulse oximeter, DOTs medicine strip (for TB, leprosy), glass slide, wood's lamp, ORS packet, micro burette, manikin, Thermometer, ORS packet, MUAC tap (Paediatrics and adult

Lecture topics and hours of internal medicine

- Total lecture in Phase II, III and IV 139 hours (Phase II – 24 hours and duration of each lecture topic will be one hour.

Phase II

- Communication skill and behavioral science will be taken by the department of Psychiatry.

Sl no	Topic	Total hours
1	Doctor-patient relationship	24 hours
2	Medical Ethics, patient safety	
3	Communication skills	
4	Behavioral science	
5	Approach to Common symptoms of disease (ACSD)- General concept of pain and chest pain.	
6	ACSD- Abdominal pain	
7	ACSD-Fever	
8	ACSD- Dyspnoea	
9	ACSD-Cough, expectoration, and haemoptysis	
10	ACSD - Anorexia, nausea and vomiting, weight loss and weight gain	
11	ACSD- Haematemesis, malaena and haematochezia	
12	ACSD- Diarrhea, dysentery and constipation	
13	ACSD- Oedema and ascites	
14	ACSD- Jaundice	
15	ACSD-Enlargement of lymphnodes	
16	ACSD- Enlargement of liver and spleen	
17	ACSD- Syncope and seizure	
18	ACSD- Fainting and palpitation	
19	ACSD- Headache and vertigo	
20	ACSD- Paralysis, movement disorder, and disorder of gait	
21	ACSD- Coma and other disturbance of consciousness	
22	ACSD- Common urinary symptoms including anuria, oliguria, nocturia, polyuria, incontinence & enuresis	
23	ACSD- Anaemia and bleeding	
24	ACSD- Joint pain, neck pain and backache	

Phase III

Sl no	Topic	Total hours
1	Nutrients and vitamin deficiency	25 hours
2	Obesity	
3	Disorder related to temperature	
4	Health hazards due to climate change	
5	Approach to infectious disease- diagnostic and therapeutic principles	
6	General principles and rational use of antibiotics	
7	Enteric fever	
8	Acute diarrhoeal disorder, cholera and food poisoning	
9	Amoebiasis, giardiasis and helminthic diseases	
10	Influenza, COVID-19, MARS and SARS	
11	Malaria	
12	Kala-azar	
13	Filariasis	
14	HIV and infections in immunocompromised condition	
15	Dengue	
16	Chicken pox, herpes simplex and herpes zoster	
17	Brucellosis, anthrax	
18	Tetanus and rabies	
19	Anaemia	
20	Leukaemia	
21	Lymphoma	
22	Multiple myeloma	
23	Bleeding disorders	
24	Coagulation disorders	
25	Transfusion medicine	

Phase IV

Sl no	Topic	Total hours
1	Applied anatomy, physiology & investigations for respiratory system	
2	Pneumonia	
3	Pulmonary Tuberculosis	
4	Extra-pulmonary Tuberculosis	
5	Bronchial asthma & pulmonary eosinophilia	
6	Chronic obstructive lung diseases and cor pulmonale	
7	Lung abscess and bronchiectasis	
8	Pleural effusion, empyema and pneumothorax	
9	Acute and chronic respiratory failure	
10	Neoplasm of the lung	
11	Applied anatomy, physiology and investigations of cardiovascular system	
12	Ischaemic heart disease- angina pectoris, myocardial infarction & sudden cardiac death	
13	Common cardiac arrhythmias	
14	Hypertension	
15	Heart failure – acute and chronic	
16	Rheumatic fever	
17	Valvular diseases of the heart	
18	Infective endocarditis	
19	Congenital heart diseases	
20	Acute and chronic pericarditis, pericardial effusion & cardiac tamponade	
21	Applied anatomy, physiology and investigations of GIT & Hepato-biliary system	
22	Peptic ulcer disease and non-ulcer dyspepsia	
23	Malabsorption syndrome	
24	Irritable bowel syndrome	
25	Inflammatory bowel disease	
26	Carcinoma of stomach & colon	
27	Acute viral hepatitis	
28	Chronic liver diseases and its Complications	
29	Acute and chronic pancreatitis	
30	Hepatocellular carcinoma	
31	Acute glomerulonephritis	

32	Nephrotic syndrome	90 hours
33	UTI/ Pyelonephritis	
34	ARF/Acute Kidney Injury	
35	Chronic Kidney Disease	
36	Renal manifestations of systemic diseases	
37	Adult polycystic kidney disease	
38	Concept of neurological diagnosis including investigations	
39	Headache	
40	Meningitis: viral, bacterial, tubercular, and encephalitis	
41	Cerebrovascular diseases	
42	Disorder of cranial nerves and peripheral neuropathy	
43	Extrapyramidal diseases	
44	Myasthenia gravis	
45	Epilepsy	
46	Common compressive and non-compressive spinal cord syndromes	
47	Disorders due to sodium imbalance	
48	Disorders due to potassium imbalance	
49	Disorders of acid-base balance	
50	Diabetes mellitus I (Diagnosis, Classification, pathogenesis, clinical features, investigations, management)	
51	Diabetes mellitus II (Acute and chronic metabolic complications of DM except diabetic ketoacidosis & hypoglycaemia, management of DM in special situations)	
52	Thyrotoxicosis	
53	Hypothyroidism.	
54	Cushing's syndrome and Addison's disease	
55	Hypo and hyperparathyroidism	
56	Calcium and vitamin– D related disorders	
57	Acromegaly and Sheehan's syndrome	
58	Rheumatoid arthritis	
59	Ankylosing spondylitis and other spondyloarthropathies.	
60	Systemic lupus erythematosus	
61	Systemic sclerosis	
62	Gout	
63	Degenerative joint diseases	
64	Osteoporosis	

65	Initial evaluation of the patient with poisoning and general principles of management	
66	Organophosphorus compounds poisoning/Herbicide or paraquat poisoning	
67	Household poisoning	
68	Sedatives, hypnotics & other drugs overdose/poisoning	
69	Methanol poisoning	
70	Snakebite/ Envenomation	
71	Diagnosis and management of comatose patient	
72	Cardiac arrest – ALS, BLS	
73	Acute pulmonary oedema and severe acute asthma	
74	Hypertensive emergencies	
75	Diabetic ketoacidosis and hypoglycaemia	
76	Upper GI bleeding and hepatic coma	
77	General principles of treating the elderly/senior citizen	
78	Health problems of the elderly	
79	Geriatric Giants – acute confusional state, falls, incontinence and frailty.	
80	Rehabilitation and physical medicine.	
81	General concept of genetic diseases and management of genetic disorder	
82	Chromosomal disorder (Down syndrome, Turner syndrome, Klinefelter syndrome)	
83	Immunologic deficiency diseases	
84	Autoimmunity, allergy & hypersensitivity and immunogenetics & transplantation	
85	Immunosuppressive drugs	
86	General principles of diagnosis of neoplastic diseases	
87	General principles of management of neoplastic diseases	
88	Palliative care	
89	Global warming & health hazards	
90	Environmental disease & heat illness	

Hour distribution for Clinical/Bedside teaching in Medicine & Allied subjects (2nd, 3rd & 4th phases)

Subject	Clinical/Bedside & Ambulatory care teaching (in hours)						Total hours (in three phases)	Total weeks {(2nd phase wks + 3rd phase wks + 4th phase wks = Total three phases wks) × (6 days × 4 or 2 hours)}
	2nd phase		3rd phase		4th phase			
	Indoor clinical/ bedside teaching & Ambulatory care teaching		Indoor clinical/ bedside teaching & Ambulatory care teaching		Indoor clinical/ bedside teaching & Ambulatory care teaching			
	Morning	Evening	Morning	Evening	Morning	Evening		
	Indoor/ OPD/ Emergency/ Out reached center	Indoor/ Emergency	Indoor/ OPD/ Emergency/ Out reached center	Indoor/ Emergency	Indoor/ OPD/ Emergency/ Out reached center	Indoor/ Emergency		
	20 weeks		14 weeks		22 weeks			
Internal Medicine	168 h (14w)	168 h (14w)	96 h (8w)	96 h (8w)	144 h (12w)	144 h (12w)	816 h	{14+(6+2)+12}= **34 w**× (6 days × 4 hrs)
Psychiatry	-	-	24 h (2w)	24 h (2w)	24 h (2w)	24 h (2w)	96 h	(0+2+2)= **04 w**× (6 days × 4 hrs)
Dermatology	-	-	24 h (2w)	24 h (2w)	24 h (2w)	24 h (2w)	96 h	(0+2+2)= **04 w**× (6 days × 4 hrs)
Paediatrics	48 h (4w)	48 h (4w)	-	-	72 h (6w)	72 h (6w)	240 h	(4+0+6)= **10 w** × (6 days × 4 hrs)
Psychical Medicine	24 h (2w)	-	-	-	-	-	24 h	(2+0+0)= **02 w** × (6days × 2hrs)
Emergency	-	-	24 h (2w)	24 h (2w)	-	-	48 h	(0+2+0)= **02 w** × (6days × 4hrs)
Total	**240 hrs**	**216 hrs**	**168 hrs**	**168 hrs**	**264 hrs**	**264 hrs**	**1320 hrs**	**56 weeks**

Small Group Teaching

Tutorial

- Symptom analysis
- Interpretation of different clinical findings
- Collection of different clinical samples
- Interpretation of results of laboratory investigations

Problem based learning

- The main key behind problem based learning is that the learning is easier when facts are learned in a relevant and meaningful context.
- Students are presented with a case study of a patient with a problem, discuss the case to determine the explanation of the problem and know only a small amount about the problem from their previous knowledge and decide what more they have to learn, divide the learning objectives up among the group, research their assignments, then reassemble to put what they have learned together to solve the problem

Practical & instrumental demonstration

- Different clinical procedures eg., lumbar puncture, bone marrow aspiration, tourniquet test, IV canulation, injection (intramuscular, subcutaneous & intravenous), nasogastric tube insertion, urinary catheterization, etc.

Skill lab

- Basic life support, intubation, demonstration of different clinical procedures, etc

Distribution of small group teaching in Medicine and allied subject

Phase II		**Phase III**		**Phase IV**	
Category	**Hours**	**Category**	**Hours**	**Category**	**Hours**
Tutorial	25	Tutorial	15	Tutorial	50
Problem based learning	15	Problem based learning	15	Problem based learning	20
Practical demonstration & instrumental demonstration	10	Practical demonstration & instrumental demonstration	10	Practical demonstration & instrumental demonstration	20
Skill lab (Basic life support)	5	Skill lab	5	Skill lab (Procedures)	9
Total	**55**		**45**		**99**

Clinical teaching in internal medicine – contents, common clinical procedures and skills in Phase II, III and IV

- Each student will submit a complete case history per week of placement in every assignment in medicine.
- Each student will be able to get certain number of beds, they will write down their history, physical examination, follow-up, observe the management and follow-up including counselling.
- Ward duty will be 4 hours in each day, 2 hours in morning (9.30 am to 11.30 am) and 2 hours in evening (7.00 pm to 9.00 pm)
- Teachers for supervising the evening duties must be available.

Learning objectives	Contents	Teaching hours
The students should be able to • use a humane approach during history taking and performing a physical examination. • examine all organs/systems in adults and children including neonates. • arrive at a logical working diagnosis after clinical examination (General & Systemic) • order appropriate investigations keeping in mind their relevance (need based) and cost effectiveness • plan and institute a line of treatment which is need based, cost effective and appropriate for common ailments taking into consideration ❖ patients ❖ disease ❖ socio-economic status ❖ institutional / government guidelines • recognize situations which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment • assess and manage fluid / electrolyte and acid-base balance • interpret abnormal biochemical laboratory values of common diseases. • interpret skiagram of common diseases. • identify irrational prescriptions and explain their irrationality. • interpret serological tests eg, VDRL, ASO, Widal, HIV, Rheumatoid factor. • demonstrate interpersonal and communication skills befitting a physician in order to discuss the illness and its outcome with patient and family	**Clinical Methods in the Practice of Medicine** CORE : • History Taking • Physical Examination • Investigations • Diagnosis • Principles of treatment • Interpersonal skills • Communication skills • Doctor - Patient relationship • Ethical Behaviour • Patient's Safety • Referral services • Medical Certificate • Common Clinical Procedures ❖ Injections ❖ IV infusion and transfusion ❖ FIRST AID ❖ Intubation ❖ CPR ❖ Hyperpyrexia ❖ ECG ❖ Skin Sensitivity Test	W-14 weeks (3rd year) W – 6 weeks (4th year) W –12 weeks (5th year) OPD-2 weeks

• write a complete case record with all necessary details • write a proper discharge summary with all relevant information • write an appropriate referral note to secondary or tertiary centres or to the physicians with all necessary details • assess the need for and issue proper medical certificates to patients for various purposes • record and interpret an ECG and be able to identify common abnormalities like myocardial infarction, arrhythmias • start I.V. line and infusion • perform venous cut down • give intradermal / SC / IM / IV / injections • insert and manage a C.V.P. line • conduct CPR • introduce a nasogastric tube • manage hyperpyrexia	**Procedural skill** CORE • Lumbar puncture • Bone marrow aspiration • Thoracocentesis / paracentesis • Oxygen Therapy • Oropharygeal suction • Shock management • Brochodilator inhalation technique, nebulization • Urethral Catheterisation Additional • Administration of Enema • Postural drainage • Dialysis • Electro convulsive therapy	
Attitude : The student should • develop a proper attitude towards patients, colleagues and the staff. • demonstrate empathy and humane approach towards patients, relatives and attendants. • maintain ethical behaviour in all aspects of medical practice. • develop a holistic attitude towards medicine taking in social and cultural factors in each case • obtain informed consent for any examination / procedure • appreciate patients right to privacy • adopt universal precautions for self protection against HIV and hepatitis and counsel patients • be motivated to perform skin sensitivity tests for drugs and serum	Attitudes to be supervised by clinical teachers.	

Details of clinical teaching in Phase II (1st round) with teaching hours

Learning objectives	Contents	Teaching hours
The student will be able to ▪ narrate the role of ward duties in learning clinical medicine. ▪ develop interpersonal and communication skills befitting a physician in order to discuss illness and its outcome with patient and family ▪ elicit different components of history and understand its importance – particulars of the patient, the presenting symptoms, the history of the present illness, H/O previous illness, Family history, Personal & Social history, Drug history, & allergy, menstrual history (in female) ▪ record and analyze symptoms of presentation **History taking** The student will be able to ask patients about : ▪ cough- nature, relation with chest pain, time of the day, any particular condition aggravates or relieves: ▪ shortness of breath- onset, duration, relation with exertion, episodic or not, etc. ▪ haemoptysis- amount, is it rusty or fresh blood ▪ sputum- amount, colour, odour, associated with wheezing. The student will be able to ask patients about symptoms mentioned in contents in detail e.g. site, nature, aggravating or relieving factor of chest pain. The student will be able to elicit informations related to the symptoms of presentation e.g. frequency of bowel, nature of stool, amount, blood in stool, tenesmus etc. if complaining of diarrhoea.	Introduction to clinical ward duties and approach to a patient • Art of Medicine • Doctor patient relationship • Different component of history • Symptom analysis in relation to diseases of different systems **Respiratory System** • Shortness of breath • Haemoptysis • Cough • Sputum • Chest pain • Fever **CVS** • Palpitation • Chest pain • Leg oedema • Shortness of breath **GIT** • Abdominal pain • Haematemesis and melaena • Loss of appetite • Diarrhoea & constipation • Haematochezia	**14 weeks**

	• Nausea, vomiting • Weight loss • Difficulty in swallowing	
The student will be able to ask patients about ▪ H/O vaccination, transfusion ▪ Chronology of development of symptoms with different parameters.	**Hepatobiliary** • Jaundice • Abdominal swelling • Impaired consciousness	
	Rheumatology • Multiple joint pain • Monoarticular joint pain	
The student will be able to: ▪ ask the patient about the symptoms e.g. seizure – duration, interval between attack, any injury during attack, sphincter disturbance, aura, ▪ define fit, syncope, hemiplegia, monoplegia, paraplegia etc.	**Nervous System** • Loss of consciousness • Fit or convulsion • Syncope • Paralysis • Headache • Vertigo	
The student will be able to ▪ ask the patients about the presenting symptom ▪ define – oliguria, anuria, polyuria, dysuria	**Urinary System** • Puffiness of face • Oliguria & anuria, Polyuria • Dysuria • Incontinence • Nocturnal enuresis • Loin pain • Pus per urethra	
The student will be able to ▪ take relevant history, related to disorders of endocrine system	**Endocrine System** • Swelling of neck • Weight gain	

The students will be able to ▪ take relevant history, related to disorders of haemopoetic system The student will be able to ▪ take detail history about fever and different tropical & infection diseases, animal bite diseases, animal bite like snakebite, dog bite. The student will be able to ▪ perform general physical examination and observe record and interpret findings. The student will be able to	• Weight loss **Haemopoetic system** • Pallor • Bleeding **Other** • Tropical and infections diseases **General examination** • Appearance & facies • Built • Nutrition • Hydration status • Decubitus • Anthropometric measurement • Anaemia, Jaundice, Cyanosis • Clubbing, Koilonychia, leukonychia • Oedema, Dehydration, Pulse, BP, Temperature, Respiration • JVP • Lymph node • Thyroid, salivary gland • Skin, Hair, Nail • Skin (Petichae, purpura, ecchymosis, bruise, haematoma, rashes), pigmentation etc • Hair distribution • Nail • Breast • Eye – Proptosis **Systemic examination**	

▪ record pulse e.g. radial pulse and peripheral pulse and observe Jugular Venous Pressure ▪ record Blood Pressure ▪ inspect chest shape, symmetry, movement, type of breathing ▪ palpate apex beat, trachea, thrill ▪ percuss cardiac outline, liver dullness and areas of resonance ▪ auscultate the heart sounds, murmur, pericardial rub	**CVS** • Pulse, BP, JVP • Pericardium • Inspection • Palpation • Percussion • Auscultation of heart • Auscultation of lung base • Related G/E of CVS e.g. clubbing, cyanosis, oedema.	
The student will be able to ▪ inspect the chest, palpate trachea, chest for expansion, vocal fremitus ▪ percuss the lungs. ▪ auscultate for breath sounds, rhonchi, crepitations, pleural rub.	**Respiratory System** • Respiration rate /Type • Inspection • Palpation • Percussion, Auscultation • Examination of sputum • Lung function test • Pleural fluid aspiration	
The student will be able to ▪ assess levels of consciousness ▪ identify the facial expression ▪ examine cranial nerves • Students will be able to: ▪ examine motor system ▪ examine sensory system ▪ observe different types of gait ▪ elicit signs of meningeal irritation ▪ perform SLR test ▪ observe lumbar puncture ▪ examine Fundus by ophthalmoscope	**Nervous System** • Higher mental function ✓ Co-operation ✓ Appearance ✓ Level of consciousness ✓ GCS ✓ Memory ✓ Speech ✓ Orientation of time, space, person ✓ Hallucination, Delusion, Illusion • Cranial nerves. (1^{st} -12^{th}) • Motor function • Sensory function • Gait • Signs of meningeal irritation • Examination of peripheral nerves	

	• Involuntary movement • CSF Study • Ophthalmoscopy	
The student will be able to ▪ assess joints and muscles by inspection, palpation ▪ test range of movement ▪ test muscle around joints ▪ assess posture	**Rheumatology** • Joints - (Look & feel) • Inspection • Palpation • Movement	
The student will be able to ▪ inspect oral cavity, orpharynx. ▪ palpate abdomen e.g. Liver, spleen, kidney ▪ demonstrate fluid thrill, shifting dullness ▪ perform PR examination ▪ observe aspiration of peritoneal fluid	**GIT** • Inspection of oral cavity & oropharynx • Abdomen Inspection / Palpation • Test for ascites • Percussion/ auscultation • Per-rectal examination • Examination of stool, vomitus, groin, genitalia, perianal region • Aspiration of peritoneal fluid	
The student will be able to ▪ detect general signs of renal disease ▪ perform bimanual palpation of kidney, renal tenderness ▪ examination of genitalia ▪ examine urine for sugar, albumin	**Urinary system** • Kidneys • Bladder • Urethral orifice • Urine analysis	
The student will be able to do certain minor procedures e.g. blood film, ESR, Hb%, urine – albumin & sugar, stool ME., 20 minutes whole blood clotting time, torniquet test	**Haemopoetic system** **Tropical and infectious illness**	

Details of clinical teaching in Phase III (2nd round) with teaching hours

Learning objectives	Contents	Teaching hours
Continue to develop skills in history taking & physical examination. The student will be able to ● interpret the findings in terms of diseases, possible causes, make a differential diagnosis & plan investigation.	**Approach to Sign & Symptom** **GIT & HBS** • Ascites • Hepatosplenomegaly • Oral ulcer • Abdominal swelling • Abdominal pain • Vomiting &diarroehea • Haematemesis, melaena • Jaundice **CVS** • Respiratory distress • Chest pain • Jugular Venous Pulse (JVP) • Hypertension • Abnormal heart sound & murmur • Puls **Respiratory System** • Haemoptysis • Cough • Pleural effusion • Pneumothorax • Collapse, Consolidation, Fibrosis • Breath sound • Sputum analysis **Urinary System** Approach to patient with • Oliguria, polyuria, anuria • Anasarca • Urine analysis **Nervous System** • Unconscious patient	6 weeks

The student will be able to • be acquainted with instruments commonly used for medical procedures and observe the doctors performing the procedures.	• Hemiplegia, monoplegia, paraplegia • Upper Motor Neuron Lesion (UML) • Lower Motor Neuron Lesion (LML) • Cerebellar sign • Extrapyramidali sign • Involuntary movement • Vertigo & Headache **Haematology** Approach to patient with • Bleeding disorder • Anaemia • Lymphadenopathy • Rheumatology • Approach to patient with • Polyarthritis • Oligoarthritis Clinical skills • Lumbar puncture • Bone marrow aspiration • Aspiration of serous fluid/ synovial fluid • Ryles tube • Catheterization • I/V fluid, IV Canula • Stomach wash	

Details of clinical teaching in Phase IV (3rd round) with teaching hours

Learning objectives	Contents	Teaching hours
The student will be able to • take detailed history from a patient • carry out detailed general and systemic clinical examination • present long cases on different body system including ❖ Respiratory System ❖ Cardiovascular System ❖ Gastro-intestinal System ❖ Endocrine System ❖ Urinary System ❖ Haematology system ❖ Nervous System ❖ Rheumatology ❖ Infections • plan appropriate investigations • plan appropriate treatment of common medical conditions The student will be able to: • evaluate the patients by follow up and monitoring • assist in managing critically ill patients • interpret various common investigation reports – ECG, X-rays, Biochemical tests, etc. • assist doctors in counselling patients and their families about treatment, follow up and prevention.	Review of history taking & clinical examinations (3rd year, 4th year) **Case discussion** **Long cases** **Respiratory System** • COPD • Bronchogenic carcinoma • Pneumonia **CVS** • CCF • CHD • IHD • VHD • Rheumatic heart disease • Hypertension • Pericardial diseases **GIT** • Haematemesis&mealena • PUD • V. Hepatitis • CLD • Carcinoma of Liver • Pancreatitis • Heapatic failure **Endocrine** • Hyperthyroidism • Hypothyroidism • DM	12 weeks

The student will be able to • demonstrate in-depth skills, in history taking, clinical examination, diagnosis and management of NS diseases & infectious diseases.	**Rheumatology** • Rheumatoid arthritis • Seronegative arthritis • Osteoarthritis • Gout **Urinary** • Glomerulonephritis • Nephrotic Syndrome • Acute Kidney Injury • Chronic Kidney Disease • Urinary Tract Infection **Haematology** • Anaemia • Leukaemia • Bleeding diathesis **Nervous System** • CVD • Multiple Sclerosis • Myasthenia Gravis • Parkinsonism • Peripheral neuropathy • GBS • Cranial neuropathy **Infection** • Enteric fever • Malaria • Kala Azar • Filariasis • Amoeabiasis • Tetanus • Rabies • Poisoning • Snake bite • Tuberculosis • Diarroehea & dysentery • Shock • Dengue	

The student will be able to • present short cases on different body system	**Short Cases** • Hepatomegaly or Splenomegaly or both • Pleural effusion • Pneumothorax • Consolidation • Collapse • Fibrosis • Hemiplegia • Paraplegia • Facial nerve palsy (UMN + LMN) • Ascites • Lymphadenopathy • Thyroid • Examination of knee • Examination of precordium • Auscultation of lung	
The student will be able to • demonstrate certain skills • carry out certain procedures e.g. lumbar puncture under supervision, IM injection, IV injection, Infusion	**Clinical skills** • Bone Marrow aspiration • Aspiration of serous fluid ❖ Pleural ❖ Peritoneal ❖ Pericardial • Foley's catheterization • Intercostal tube • I/V canula • Lumbar puncture • Venesection • CP	
The student will be able to • interpret routine examination findings for Blood, Stool, Urine • interpret FBS, GTT and HbA1C • interpret certain specific laboratory tests e.g. Liver Function Tests etc.	**Interpretation of Laboratory Data** **General** • Blood for R/E • Urine for R/E • Stool for R/E • FBS / GTT **Specific** • Liver function test (LFT)	

	• Thyroid function test (TFT) • Kidney function test • Pulmonary function tests (PFT) • Test for malabsorption • Test for rheumatology • Test for neurology • Cardiac function test • Haematological test • Test for certain infectious diseases, e.g. Widal test.	
The student will be able to • interpret common radiological findings on plain skiagrams of chest, skull, sinuses, neck, abdomen, pelvis, upper and lower extremities	**Radiology** • X-ray chest • X-ray ❖ Bones ❖ Skull ❖ Joints • X-ray abdomen	
The student will be able to • interpret findings on certain contrast X-rays e.g. Barium Meal etc.	• Contrast X-rays ❖ Barium Meal ❖ Barium Follow through ❖ Barium Enema ❖ ERCP ❖ Myelogram ❖ IVU • USG • CT & MRI	
The student will be able to • establish a good-student patient relationship • communicate with patients in understanding manner	• Communication Skills	
• observe and assist in terminal care		
• observe in care of death & dying patient	• Terminal Care • Care of death and dying	

Card I of Internal medicine (1st round placement – 3rd year)

Name: ----------

Roll No.: ---------- Batch: ----------

Medicine Unit: ----------

Professor: ----------

Duration of Placement (1st Round) from ---------- to ----------

Sl no	Item	Date	Signature of teacher in morning	Signature of teacher in evening	Marks	Signature of teacher
1.	Procedure of history taking and writing, and questions related to elaboration of different systems					
	Item examination					
2.	General examination and questions related to general examination					
	Item examination					
3.	Systemic examination of the Alimentary system and related questions					

	Item examination					
4.	Systemic examination of the Respiratory system and related questions					
	Item examination					
5	Systemic examination of the Cardiovascular system and related questions					
	Item examination					
6	Systemic examination of the Renal system and related questions					
	Item examination					
7	Systemic examination of the Nervous system and related questions					
	Item examination					
8						

	Examination of the haemopoietic system and related questions					
	Item examination					
9						
	Examination of the musculoskeletal system and related questions					
	Item examination					
10	Miscellaneous e.g., examination of the hands, lower limbs, neck etc.					
	Item examination					
11	Teaching learning on basic concept of behavioral science with the expectation of demonstration by learners in all systems (mandatory to pass)					
	Item examination					

Total attendance: ---------- days, out of ---------- days

Marks obtained in card final examination: ----------

Comment: ----------

-

Professor

Department of Medicine

Registrar

Department of Medicine

Card II of Internal medicine (2nd round placement – 4th year)

Name: ----------

Roll No.: ---------- Batch: ----------

Medicine Unit: ----------

Professor: ----------

Duration of Placement (1st Round) from ---------- to ----------

Sl no	Item	Date	Signature of teacher in morning	Signature of teacher in evening	Marks	Signature of teacher
1.	Review of clinical methods (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
2.	Respiratory diseases (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
3.	Cardiovascular diseases (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
4.	Alimentary & Hepatobiliary disorders (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
5	Renal diseases (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
6						

	Endocrine disorders (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
7	Haemopoietic disorders (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
8	Diseases of Nervous system (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
9	Infectious diseases (interpret the findings in terms of diseases, possible causes, to make a differential diagnosis & plan investigations)					
	Item examination					
10	Common Laboratory investigations					
	Item examination					
11	Basic knowledge on X-ray & ECG					
	Item examination					

Total attendance: ---------- days, out of ---------- days

Marks obtained in card final examination: ----------

Comment: ----------

-

Professor

Department of Medicine

Registrar

Department of Medicine

Card III of Internal medicine (3rd round placement – 5th year)

Name: ----------

Roll No.: ---------- Batch: ----------

Medicine Unit: ----------

Professor: ----------

Duration of Placement (1st Round) from ---------- to ----------

Sl no	Item	Date	Signature of teacher in morning	Signature of teacher in evening	Marks	Signature of teacher
1.	Respiratory diseases					
	Item examination					
2.	Cardiovascular diseases					
	Item examination					
3.	Alimentary & hepatobiliary disorders					

	Item examination					
4.	Renal diseases					
	Item examination					
5	Endocrine disorders					
	Item examination					
6	Bones, joints & connective tissue diseases					
	Item examination					
7	Diseases of nervous system					
	Item examination					
8	Haemopoietic disorders					

	Item examination					
9						
	Interpretation of X-ray					
	Item examination					
10	Interpretation of ECG					
	Item examination					
11	Instrumental uses in clinical practice					
	Item examination					
12	Interpretation of laboratory investigations					
	Item examination					

Total attendance: ---------- days, out of ---------- days

Marks obtained in card final examination: ----------

Comment: ----------

-

Professor

Department of Medicine

Registrar

Department of Medicine

OPD Logbook

Name: ---------- Roll no: ---------- Phase: ---------- Batch: ----------

Date	Patient's name	Registration no	Important symptoms & signs	Diagnosis	Signature

Card of Physical Medicine and Rehabilitation (1st round – 3rd year)

No.	Item	Marks obtained	Signature of teacher
1	Definition, Historical aspects, background, spectrum of Physical Medicine & visit in Physical Medicine ward		
2	Various modalities of Physical therapy		
3	Management and rehabilitation of Neck Pain & Back Pain		
4	Management and rehabilitation soft tissue metabolism		
5	Management and rehabilitation of painful conditions of upper & lower limbs		
6	Management and rehabilitation of stroke and other Neurological conditions		
7	Management and rehabilitation of spinal cord injuries		
8	Management and rehabilitation of arthritis and allied conditions		
9	Management and rehabilitation of non-surgical orthopaedic & post operative complication		
10	Management and rehabilitation of cerebral palsy and other paediatric neurological conditions		

Card for Skin & Venereal Diseases (2nd & 3rd round placement – 4th & 5th year)

No.	Item	Marks obtained	Signature of teacher
1	Procedure of dermatological history taking and writing		
2	Examination of the integumentary system (skin, hair, nail & mucosa)		
3	Symptomatology of skin (generalized & localized pruritus)		
4	Symptomatology of skin (generalized & localized pigmentation)		
5	Maculo-papular lesions (Scabies, Pediculosis, Eczema)		
6	Scaly lesions (Psoriasis, SD, Dermatophytosis, Pityriais, Rosea)		
7	Pyogenic lesions (Impetigo centagiosa, Bullus impetigo, SSSS)		
8	Vesicobullous lesions (Herpes, Pemphigus, Pemphigoid, STS)		
9	Acne		
10	TB, Leprosy		
11	Drug reactions & urticaria		
12	Urethral/vaginal discharge (Gonorrhoea & NGU)		
13	Genital ulcer (Syphilis & Chancroid)		
14	AIDS		

Card for Psychiatry (2nd & 3rd round placement – 4th & 5th year)

No.	Item	Marks obtained	Signature of teacher
1	History taking		
2	Mental State Examination		
3	Symptomatology		
4	Schizophrenia		
5	Mood Disorder – Mania		
6	Mood Disorder Depression - Suicide & DSH		
7	Anxiety Disorders (GAD, phobic disorders, OCD, panic disorder, PTSD, ASD)		
8	Somatoform Disorder (Somatization, Hypochondriasis, body dysmorphic disorders, chronic pain)		
9	Delirium – Dementia		
10	Childhood Psychiatric Disorders including Autism		
11	Substance Abuse Disorder & Alcoholism		
12	Psychotherapy & ECT		
13	History taking		

Lecture topics of physical medicine and rehabilitation

- Total of 5 lectures will be taken in phase II.
- Duration of each lecture topic will be one hour.

Number	Topic	Total hours
1	Historical aspect, spectrum of physical medicine & rehabilitation	**5 hours**
2	Principles of management and rehabilitation of musculoskeletal disorders ❖ Rheumatoid arthritis ❖ Low back pain ❖ Degenerative joint disease	
3	Principles of management and rehabilitation of neurological disorders ❖ Stroke ❖ Cerebral palsy ❖ Other common neurological disorders	
4	Rehabilitative management of cardiopulmonary conditions	
5	Rehabilitative management of orthopedic conditions and sports injury	

Clinical placement of physical medicine and rehabilitation

Learning objectives	Contents	Teaching hours
Students will be able to • outline the role and importance of Physical Medicine & Rehabilitation • identify the various modalities of Physical Medicine & Rehabilitation management • plan to apply physical therapy for certain clinical conditions	• Introduction to Physical Medicine & Rehabilitation ❖ History ❖ Background ❖ Spectrum ❖ Visit to Physical Medicine & Rehabilitation Ward • Modalities of Physical Therapy • Management and Rehabilitation of ❖ Neck pain & Back pain ❖ Soft tissue Rheumatism ❖ Painful Conditions of upper & lower extremities ❖ Neurological conditions including Stroke ❖ Spinal cord injuries ❖ Arthritis & allied conditions ❖ Orthopaedic conditions ❖ Cerebral palsy ❖ Non-surgical & post-operative complications ❖ Cardiopulmonary rehabilitations	2 hours 2 hours 12 hours

Block posting

- There will be 4 weeks block posting in medicine and allied subjects after the 4th phase clinical placement.
- Break up
  - ❖ Internal medicine – 12 days
  - ❖ Paediatrics - 6 days
  - ❖ Psychiatry - 3 days
  - ❖ Dermatology – 3 days
- It is a preparation to step into internship training. It is a full-time training
- Working hours
  - ❖ 09.00 am – 02.30 pm (Compulsory for all)
  - ❖ 2:30 pm - 4:00 pm (Break)
  - ❖ 02.30 pm – 08.30 pm (Compulsory for all)
- The duties of the students during block posting will include:
  - ❖ small group teaching
  - ❖ ward round
  - ❖ roster duty during morning and evening hours
- Every student will have a separate logbook for his attendance, performance etc.
- Logbook has to be attached with the formative assessment.

Block posting

Logbook for morning placement

Date	Ward round			Small group teaching	
	Patient's name & reg. no	Diagnosis	Signature of supervisor	Topic	Signature of supervisor
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				
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	2.				
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				

Logbook for evening placement

Date	Ward round			Small group teaching	
	Patient's name & reg. no	Diagnosis	Signature of supervisor	Topic	Signature of supervisor
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				
	1.				
	2.				
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	1.				
	2.				
	1.				
	2.				

NB:

3. 2 beds have to be distributed to each student and he/she will follow up and present these cases (history presentation, plan investigations and management plan) during ward round
4. Small group teaching should include long case discussion, short case practice, data interpretation, pictorial diagnosis, ECG, X-ray & other imaging discussion

4th phase / Final phase (Indoor Placement)

Duration: 6 weeks

Morning			Evening	
Week 1	**Topic**	**Teacher**	**Topic**	**Facilitator**
Day 1	History taking		History taking and writing	Registrar
Day 2	IMCI (review)		IMCI (video demonstration upto Cough and difficult breathing)	
Day 3	Cough and difficult breathing (pneumonia, Bronchiolitis)		General Examination	
Day 4	Cough and difficult breathing (recurrent wheeze-childhood asthma0		Respiratory System Examination	
Day 5	Diarrhea(AWD, Dysentery, persistent diarrhea)		General Examination	
Day 6	Case presentation and discussion Short case 1.Assessment of Cough and difficult breathing according to IMC 2.Assessment of diarrhea according to IMCI		IMCI (practice upto Cough and difficult breathing)	
Week 2				
Day 1	Approach to a child with Bleeding disorder (ITP, Haemophilia)		Instruments	
Day 2	Approach to a child with Pallor (IDD, Aplastic anaemia)		X-rays	
Day 3	Approach to a child with Fever(Enteric Fever, Dengue Fever)		Photograph	
Day 4	Approach to a child with Prolonged Fever (Tuberculosis, malaria, kala azar)		Data interpretation	
Day 5	Accidental poisoning (Kerosene, OPC)		IMCI (video and case demonstration upto diiarrhea	

Day 6	Case presentation and discussion Long case –Tuberculosis, kalaazar Short case- Petechie, purpura, ecchymosis Pallor		IMCI (video and case demonstration upto Fever)	
Week 3				
Day 1	Malnutrition		Anthropometry	
Day 2	Malnutrition		Anthropometry	
Day 3	Approach to a child with Hepatosplenomegaly (hereditary haemolytic anaemia)		Abdomen Examination	
Day 4	Approach to a child with Feverand Hepatosplenomegaly (Leukaemia, lymphoma)		Abdomen Examination	
Day 5	Approach to a child with Lymphadenopathy (Tuberculosis, leukaemia, lymphoma)		General Examination	
Day 6	Case presentation and discussion Long case – Hereditery haemolytic anaemia, Acute leukaemia Short case- Anthropometry (MUAC, WHZ/WLZ, OFC) Lymphadenopathy Examination of Abdomen (Hepatosplenomegaly)		X-rays, instruments, photograph	
Week 4				
Day 1	Approach to a child with Scanty micturition (Nephrotic Syndrome, AGN, Acute renal failure)		Cardiovascular System Examination	
Day 2	Approach to a child with Scanty micturition (Nephrotic Syndrome, AGN, Acute renal failure)		Cardiovascular System Examination	
Day 3	Approach a child with joint pain and swelling (Acute Rheumatic Fever, JIA)		Cranial nerve examination	

Day 4	Approach a child with Congenetal Heart disease with heart failure (ASD,VSD,PDA,TOF)		Motor and Sensory examination	
Day 5	Outdoor (EPI, Lactation management centre)		Abdomen Examination	
Day 6	Case presentation and discussion Long case – Nephrotic Syndrome Short case- General examination (Cyanosis, clubbing, BP, oedema) Examination of precoddium (murmur)' Examination of Abdomen - Ascites		General Examination	
Week 5				
Day 1	PNA with Neonatal resuscitation		Practice on neonatal resuscitation on manikin	
Day 2	Preterm, LBW		Practice on neonatal resuscitation on manikin Practice on neonatal resuscitation on manikin Practice on neonatal resuscitation on manikin	
Day 3	Neonatal Jaundice		Breast feeding- video demonstration	
Day 4	Neonatal sepsis and seizzure		Examination of Newborn	
Day 5	IYCF (Breast feeding- video demonstration, chart demonstration)		X-rays, instruments, photograph	
Day 6	LBW, Neonatal Jaundice Post natal ward visit		X-rays, instruments, photograph	
Week 6				
Day 1	Approach a child with convulsion (Febrile convulsion, meningitis, encephalitis)		Developmental assessment	
Day 2	Approach a child with (GBS, Transverse myelitis)		Cranial nerve examination	

Day 3	Approach achild with developmental Delay (CP,Hypothyroid,Down Syndrome)		Motor and Sensory examination	
Day 4	Instrument, X- Ray, Picture		Practice on Clinical examination	
Day 5	OSCE		Self directed learning	
Day 6	Feedback		Self directed learning	

Block placement
5th year/4th phase
Duration- 10 days

Day	Topic	Teacher	Topic	Facilitator
Day 1	Respiratory system		History taking and writing	
Day 2	Gastroenterology and nutrition		General Examination Anthropometry	
Day 3	Cardiovascular system		Cardiovascular System Examination Respiratory System examination	
Day 4	Neurology		Cranial nerve examination Motor and Sensory examination	
Day 5	Nephrology		Abdomen examination	
Day 6	Haematology		Review and Practice on IMCI	
Day 7	Infectious diseases and immunization		Review and Practice on IMCI	
Day 8	Neonatology		X-rays, instruments, photograph, data interpretation	
Day 9	Endocrinology and genetics		X-rays, instruments, photograph, data interpretation	

Formative Assessment and Mark Distribution

1. Term Final:
   - 3rd year/ 2nd phase : No term Final
   - 4th year/ 3rd phase : 2 term Final
   - 5th year/ 4th phase : 2 term Final

   Requisite for Term final : ≥ 75% attendance in lecture class
2. OSCE : 3rd year/ 2nd phase (At the end of clinical placement)
   5th year / 4th phase (At the end of clinical placement)

   Requisite for OSCE : ≥ 75% attendance in clinical class
3. Post block assessment : (At the end of block posting)
   Written, OSCE(5 clinical + 5 practical), oral

Mark distribution: Total Mark (5)

1. Term Final : Completion of at least 3 term final (2)

   Completion of at least 2 term final (1)
2. OSCE : Pass in both OSCE (2)

   Pass in one OSCE (1)
3. Post block assessment : pass (1)

Assessment in Medicine and Allied subjects and prerequisite for appearing at the different examinations

- **Formative/In course**
  - ❖ Item
  - ❖ Card
  - ❖ Term examination
- **Summative assessment** – Final professional examination

Item

- All items mentioned in the card of medicine and allied subjects have to be completed.

Card

- There are 3 cards in internal medicine and one card for each psychiatry, dermatology, and physical medicine and rehabilitation.

Term examination

- There will be 3 term examinations in medicine & allied subjects.
- Term examination will be lecture-based and written.
- There will be 50 multiple choice questions (MCQ) {25 Multiple True False (MTF) and 25 Single Based Answer (SBA)}
- Each MCQ will carry 1 mark.
  - ❖ 1st term examination
    - Students have to appear 1st term examination at the end of phase II part of the course.
  - ❖ 2nd term examination
    - Students have to appear 2nd term examination at the end of phase III part of the course.
  - ❖ 3rd term examination
    - Students have to appear 3rd term examination at the end of phase IV part of the course.

Final professional examination

- ❖ Students have to appear final professional examination at the end of block posting.

Prerequisite for appearing card, term examination and final professional examination

Assessment	Prerequisite
Card	• All items must be completed. • 75% attendance in ward placement
Term examination	• Card of the respective phase must be completed (60% marks obtained). • 75% attendance both in lecture, ward placement and small group teaching • Every student must pass all subjects of 1st professional examination at least 6 months before the 1st term examination.
Final professional examination	• All cards completed (60% marks obtained). • All term examinations completed (60% marks obtained) • 75% attendance in lecture, ward placement, small group teaching, integrated teaching (both phase IV and departmental), generic topics on humanities and block posting • Obtaining at least 12 formative marks out of 20

.

Final professional examination

Written examination

Paper	Topics	Components	Marks	Total
Paper I (Internal Medicine)	Cardiology, Respiratory medicine, Nephrology, Clinical biochemistry & metabolic medicine, endocrinology & diabetes mellitus, Gastroenterology, Hepatology, Haematology & transfusion medicine, Rheumatology, Nutritional factors in disease, Acute medicine & critical illness Clinical immunology, pain and palliative care, and Neurology	MCQ (MTF+SBA) • 10 MTF • 10 SBA	10+10=20	100
		• SAQ • SEQ	50 20	
		Marks from formative assessment	10	
Paper II (Internal medicine, Dermatology, Psychiatry & Paediatrics)	Psychiatry, Dermatology & Venereal disease, Poisoning & envenomation, Infections, Geriatrics, Genetics, and Paediatrics	MCQ (MTF+SBA) • MTF (1 from internal medicine + 2 from psychiatry+2 from Dermatology+ 5 from paediatrics) • SBA (1 from internal medicine + 2 from psychiatry + 2 from Dermatology + 5 from paediatrics)	10+10=20	100
		• SAQ ❖ Dermatology & Psychiatry (25) ❖ Paediatrics (28) • SEQ (Internal Medicine + Paediatrics)	25+28=53 10+7=17	
		Marks from formative assessment	10	

Paper I

- Contents from Internal medicine (Cardiology, Respiratory medicine, Nephrology, Clinical biochemistry & metabolic medicine, Endocrinology & diabetes mellitus, Gastroenterology, Hepatology, Haematology & transfusion medicine, Rheumatology, Nutritional factors in disease, Acute medicine & critical illness Clinical immunology, Pain and palliative care, and Neurology)

SAQ and SEQ

- There will be two groups (A & B)
- The number in each group will be 35.
- In each group, there will be 6 SAQs and 1 SEQ.
- 5 marks will be allocated for each SAQ.
- A student has to answer any 5 SAQs among six SAQs
- There will be no option for SEQ
- 10 marks will be allocated for each SEQ.
- 2 hours and 30 minutes will be allocated for SAQ and SEQ part of paper I examination.

MCQ

- 20 marks will be allocated for MCQ.
- Among MCQ, there will be 10 MTF questions and 10 SBA.
- Each MTF question will contain a stem and 5 branches. Each branch will be either true or false.
- 0.2 mark will be allocated for each branch. So, there will be 0.2x5=1 mark for each MTF question
- Each SBA will contain a stem, a lead-in and 5 options.
- 1 mark will be allocated for each SBA.
- OMR sheet should be provided for MCQ part of examination covering both true false and SBA answer.
- 30 minutes time will be allocated for MCQ part of examination.

Paper II

- Contents from Psychiatry, Dermatology & Venereal disease, Internal medicine (Poisoning & envenomation, Infections, Geriatrics, Genetics) and Paediatrics

SAQ and SEQ

- There will be three groups (A1, A2 and B).
- A1 and A2 will contain questions from Paediatrics and group B will contain questions from Medicine & allied subjects (Psychiatry, Dermatology & Venereal disease, Internal medicine - Poisoning & envenomation, Infections, Geriatrics, Genetics)
- 2 hours and 30 minutes will be allocated for SAQ and SEQ part of paper II examination.

Group A1

- Group A1 will carry 17.5 marks
- It will contain 6 SAQs and a student has to answer any 5 SAQs
- Each SAQ will carry 3.5 marks. So, 5 SAQs will carry (3.5x5=17.5 marks)

Group A2

- Group A2 will also carry 17.5 marks
- It will contain 4 SAQs and a student has to answer any 3 SAQs
- Each SAQ will carry 3.5 marks. So, 3 SAQs will carry (3.5x3=10.5 marks)
- This group will in addition contain a SEQ, which will carry 7 marks and there will be no alternative of this SEQ
- So, Group A2 will carry 10.5+7=17.5 marks

Group B

- In group B, there will be 6 SAQs from Dermatology and Psychiatry and 1 SEQ from Internal medicine.
- 5 marks will be allocated for each SAQ in group B & 10 marks will be allocated for SEQ in group B.
- A student has to answer any 5 SAQs among six SAQs and there will be no alternative of SEQ in this group
- So, total number of group B will be 5x5+10=35 marks

MCQ

- 20 marks will be allocated for MCQ.
- Among MCQ, there will be 10 MTF questions and 10 SBA.
- Distributions of 10 MTF questions are as follows
  - ❖ 1 from Internal medicine
  - ❖ 2 from Dermatology
  - ❖ 2 from Psychiatry
  - ❖ 5 from Paediatrics
- Each MTF question will contain a stem and 5 branches. Each branch will be either true or false.
- 0.2 mark will be allocated for each branch. So, there will be 0.2x5=1 mark for each MTF question
- Each SBA will contain a stem, a lead-in and 5 options.
- 1 mark will be allocated for each SBA.
- Distributions of 10 SBA are as follows
  - ❖ 1 from Internal medicine
  - ❖ 2 from Dermatology
  - ❖ 2 from Psychiatry
  - ❖ 5 from Paediatrics
- OMR sheet should be provided for MCQ part of examination covering both true false and SBA answer.
- 30 minutes time will be allocated for MCQ part of examination.

Answer script assessment of written examination (SAQ and SEQ)

- 5 examiners will examine five groups of 2 papers independently.

Paper	Group	Board	Day
I	A	Internal examiner of board A	1
	B	External examiner of board A	1
II	A1	Internal examiner of board A	2
	A2	External examiner of board A	2
	B	Internal examiner of board B	1

Example of SAQ, SEQ, SBA and MTF questions with instructions to question setter

Short Answer Questions (SAQs)

- Problem solving type of question should be preferred.
- A short history is given to the student, based on which questions are asked.
- Requires the student to apply what he/she has learned, in the context of a given situation.
- The format has questions closely resembling a series of short answer questions than an essay question.
- Integration of subjects: e.g. basic science and clinical science, biomedical science and ethics can be done
- Use of pre-determined marking scheme/key

Example of SAQ

A 50-year-old man presents in the emergency department with a history of severe central chest pain that radiates to the left arm and neck for the last 2 hours. His ECG reveals ST segment elevation in lead II, III and aVF.

a) What is the most likely diagnosis? (mark 1)

   Answer: Acute inferior MI

b) Which coronary artery is likely to be involved in this case? (mark – 1)

   Answer: Right coronary artery

c) Mention six physical signs that indicate impaired myocardial function in this case. (mark = 0.5x6=3)

   Answer: (any six)

i. Hypotension
ii. Narrow pulse pressure
iii. Raised JVP
iv. Diffuse apical impulse
v. Quiet first heart sound
vi. Third heart sound
vii. Bilateral basal crepitations/lung crepitations

Structured Essay Questions (SEQs)

- Instruction should be clear & specific.
- Exact limit should be set.
- Avoid:
  - ❖ What do you think?
  - ❖ What is your opinion?
  - ❖ Discuss?
- Instead use: - Enlist, Enumerate, Compare & contrast, State your reasons, Describe.
- Match the question to specific learning objective.
- Communicate clearly to the students what is expected.
- Use simple, clear, and straightforward language.
- In "Write briefly..." type of questions qualify how briefly into number of words or lines of standard paragraphs.
- Scoring system: Split the total marks allotted to each part of the question topic. May be indicated in the paper (e.g.,1+1+3+5).

Example of SEQ

Write an essay on acute coronary syndrome focusing on major risk factors, diagnostic tests, immediate complications, and immediate management. (2+2+3+3)

Single Based Answer (SBA)

Questions ought to preferably be addressed at the level of understanding the roots of the problem or the application of the knowledge using background science as opposed to easy recall.

An ideal SBA should have:

- a stem
- a lead in
- options

Stem: This should provide a single, well-defined problem, preferably in the form of a case study. Candidates should be able to respond to the stem without referring to the options.

Lead-in: This should be constructed in such a way that it builds on the information in the stem and poses a clear question. Candidates should be able to answer without looking at the options and should not be able to answer if the information in the stem is masked.

Options: These should include the following characteristics:

- roughly the same length
- on a continuum
- grammatically consistent
- plausible
- logically compatible

If necessary, arrange the choices in a logical sequence (e.g., in numerical, alphabetical, or anatomical order). All the distracters must be plausible or very close to the correct one. Five options should be chosen to construct SBA.

Example of SBA

Stem:

A 35-year-old man presents in the medicine outpatient department for evaluation of recurrent haemoptysis for the last ten years.

Lead-in:

What is the most likely diagnosis?

Options:

a) Bronchiectasis
b) Histoplasmosis
c) Lung cancer
d) Pulmonary tuberculosis
e) Lung abscess

Basic Rules for SBA Items:

- Each item should focus on an important concept, typically a common and/or important clinical problem.
- Try not to waste testing time with questions assessing knowledge of trivial facts.
- Focus on problems that would be encountered in real life.

- Avoid trivial, tricky or overly complex questions.
- Wherever possible, items should assess application of knowledge, rather than simple recall of an isolated fact.
- Clinical vignettes provide a good basis for a question. Begin with the presenting problem of a patient, followed by the history, physical findings, results of diagnostic studies, initial treatment, subsequent findings, etc.
- The lead-in must pose a clear question, and it should be possible to arrive at an answer with the options covered.
- To determine if the question is focused, cover up the options and see if the question is clear and if the examinees can pose an answer based only on the stem. i.e., perform the „cover test‟ If not, rewrite the stem and/or options.
- All “distractors‟ should be homogeneous.
- They should fall into the same category as the correct answer (e.g., all nerve supply, electrolytes, drugs).
- Avoid using “double options” (e.g., do W and X; do Y because of Z) unless all options are double options.
- All distractors should be plausible, grammatically consistent, logically compatible, and of the same (relative) length as the correct answer.
- Order the options in logical order (e.g. numeric), or in alphabetical order.
- Wherever possible AVOID:
  - ❖ “Which of the following statements is true/correct?”
  - ❖ “Each of the following statements is correct EXCEPT.”
  - ❖ “Which of the following is not a feature of?”
  - ❖ “Which of the following should not be done?”

Multiple True False type questions (MTF)

- There will be no negative marking in MTF.

Example of MTF question

Target cells are seen in

a) aplastic anaemia
b) chronic liver disease
c) disseminated intravascular coagulation
d) post splenectomy
e) thalassaemia

Key:

a) F b) T c) F d) T e) T

Objective Structured Clinical Examination (OSPE)

- OSPE must be central (same questions and at the same time in all the medical colleges under same university)

Station no.	Discipline	Marks	Time
1-6	Internal medicine	5x6=30	5x6=30 min
7	Skin & venereal disease	5	5 min
8	Psychiatry	5	5 min
9-10	Paediatrics	5x2=10	5x2=10 min
Total		50	50 min

NB:

- Station 6 will be allocated for communication skill (observed station)
- Each station will carry 5 marks and 5 minutes will be allocated for each station

Station will be selected from following items

- Radiology – X-ray, CT scan, MRI
- ECG
- Prescription writing
- Laboratory data interpretation
- Clinical problem (diagnostic/therapeutic)
- Photograph/pictorial diagnosis
- Instrument or photo of instrument
- Growth chart/other charts
- Communication skill/history taking (observed)

OSPE script examination

Station	Board	Day
1,2	Internal examiner of board A	1
3,4	External examiner of board A	1
5	Internal Examiner of board B	1
6	External examiner of board B	1
7	Examiner from Skin & VD/examiner from internal medicine in absence	2
8	Examiner from Psychiatry/examiner from internal medicine in absence	2
9	Internal of Paediatrics (board A)	2
10	External of Paediatrics (board A)	2

Clinical, Oral & practical examination

Day	Board	Examiner	Oral	Practical		Clinical	Marks	Grand total
				Materials	Integrated teaching			
1	Board A	• 1examiner from internal medicine • 1 examiner from internal medicine	**30**	**7.5**	**10**	• 1 Long case =**20** Marks (IM) • 3 Short cases=30 Marks (IM)	**50**	**250**
	Board B	• I examiner from internal medicine • I examiner from Allied subjects	**30**	**7.5**				
2	Board A	• 1 examiner from Paediatrics • 1 examiner from Paediatrics	**30**	**7.5**			**40**	
	Board B	• 1 examiner from Skin & VD/Internal medicine • 1 examiner from Psychiatry/ Internal medicine	**30**	**7.5**		• 1 Long case =**20** Marks (Paediatrics) • 2 Short cases=20 Marks (1 from Paediatrics)+(1 from Skin & VD/ Psychiatry)		
			120	**30**	**10**		**90**	

NB:

- Head of the department of Medicine/senior most examiner of internal medicine of a centre will be the convener of the examination.
- Where there is availability of teachers of Dermatology & Psychiatry there must be one examiner from Dermatology and one from Psychiatry for Board-B.
- Allied subjects means- Cadiology, Neurology, Nephrology, Gatroenterology, Haematology, Hepatology, Rheumatology, Respiratory Medicine, Endocrinology etc.
- Examiner will be selected according to seniority.
- For each board during oral examination X-ray, ECG, photograph, lab data etc. are to be included and 7.5 marks are to be allotted for this purpose
- There will be no temerature Chart, slides, specimen in Practical Examination

- Pass marks 60% in each of written, oral and practical examinations. After aggregating obtained marks of 4 oral boards (comprising of SOE & Practical) students pass or fail will be finalized in oral section.
- There should not be any provision of honors mark
- 10 marks will be added from phase IV integrated teaching in the practical part of oral, clinical, and practical examination as follows

Department	Marks
Medicine	4
Paediatrics	2
Skin & VD	2
Psychiatry	2

Pass Marks:

Pass marks is 60%. Student shall have to pass written (SBA & MTF-MCQ +SEQ+ SAQ + formative), oral, practical and clinical examination separately.

Organization of clinical, practical and oral examination

Clinical examination

- Each candidate has to face one long case and three short cases of medicine on day 1 and one long case and one short case from paediatrics and one short case either from Skin & VD or from Psychiatry on day 2
- All cases presented in the examination hall are to be assessed in advance and selected by all the examiners. During the pre-examination meeting (08: 00 a.m. – 08:30 a.m.) the examiners should come to a decision about the history, clinical findings and possible diagnosis.
- On day 1, long case and short cases will be assessed by separate pairs of examiners
- On day 2, examiners of Paediatrics (Board A) will assess the long case and short case of Paediatrics and examiners of Board B will assess one long case from either Skin & VD or Psychiatry
- Long case
    - Each candidate has to complete his long case within 50 minutes including case note writing. A 10-minute interval will be provided after completing the long case before assessing the first candidate.
    - The candidates are assessed for their ability to obtain history and conduct appropriate physical examination in order to formulate diagnostic hypothesis; plan for further assessment; interpret findings obtained from history, physical and instrumental examinations and laboratory studies and testing; outline management protocols including patient education; assess prognosis and plan of follow-up.
    - The assessment time for the candidate is 16 minutes which has been divided as follows:
        - The candidate will present the case in 5 minutes. Each examiner has been allowed to assess the candidate for 5 minutes x 2 = 10 minutes. The last 1 minutes are to be kept for each examiners' comprehension and marking (5.00 +5.00+5.00+1=16 minutes).

- **Short case**

    - Candidates are to be examined in presence of the examiners for an asked-for-task.
    - The examiners are to observe the clinical methods and on completion of the asked-for-task, the candidates are to be cross-examined for relevant findings, along with the interpretation and correlation of their findings.
    - Assessment is to be made on clinical methods, understanding, applications and clinical decision-making.
    - The candidate should examine at least 3 cases on day 1 and total time allocated is 16 minutes (5x3 + 1 minute for marking = 16 minutes).
    - On the day 2, each candidate has to face one short case from Paediatrics within the allocated six minutes time (5 minutes for assessment and 1 minute for marking) and one short case from either Skin & VD or Psychiatry within the allocated six minutes time (5 minutes for assessment and 1 minute for marking)

- **Oral examination**
  - Oral examination should be Structured Oral Examination
  - Total time for Oral Examination is 10 minutes in each table of which 1 minute are to be kept for examiners' comprehension and marking (9+1)
  - Before the examination begins, each of the examiners is to have a prepared set of contents covering areas of the total content.
  - It is recommended to begin with simple and problem-based questions.
  - Each examiner is to cover half of the content areas in such a way that a near global assessment can be done.
  - Topics that were covered in the written examination & OSPE should be avoided in the oral examination

Moderation of questions for final professional examination

OSPE

- OSPE will be moderated by 4 moderators, 2 moderators from internal medicine will moderate station 1 to 8 (internal medicine & allied subjects' topic) and station 9 and 10 will be moderated by 2 moderators from Paediatrics.
- Moderation may be done in 02 consecutive days.

Written

- 2 moderators from internal medicine will moderate SAQ, SEQ, MCQ of paper I and SAQ, SEQ of group B of paper II and MCQ (internal medicine and allied subjects part) of paper II.
- 2 moderators from Paediatrics will moderate SAQ, SEQ of group A1 & A2 and Paediatrics MCQ part of paper II.
- Moderation may be done in 02 consecutive days.

NB: Checklist of SEQ & SAQ and answer key of OSPE must be supplied with the answer script to the examiner.

Formative Marks

Paper I

Component	**60-79%**	**≥80%**
Term I	1	2
Term II	1	2
Term III	1	2
Card I	0.75	1
Card II	0.75	1
Card III	0.75	1
Block posing assessment	0.75	1
TOTAL	**06**	**10**

Paper II

Component	**60-79%**	**≥80%**
Dermatology & VD card	1.25	2
Psychiatry card	1.25	2
Physical Medicine card	0.5	1
Paediatrics	3	5
Total	**06**	**10**

NB: At least 12 out of 20 marks need to be obtained in formative assessment to be eligible to appear at the final professional examination.

Provisional tabulation sheet

Medicine and Allied Subject

----------Medical College

Final Professional M.B.B.S. Examination of ..... 20... **Date:**

Roll	Oral & Practical				Integrated teaching	Total	Clinical				Total	OSPE	Grand total 160+90+50=300
	Day 1		Day 2				Day 1		Day 2				
	Board A 37.5	Board B 37.5	Board A 37.5	Board A 37.5	10	160	Long case 20	Short case 30	Long case 20	Short case 20	90	50	

Signature of the examiners

1,

2.

3.

4.

5.

6.

7.

8.

Internship

- After passing the final professional MBBS examination, students have to enroll in a one-year, logbook-based, mandatory rotatory internship programme.
- The internship programme will be more structured and supervised.
- After completing the MBBS course, a one-year supervised internship programme is compulsory to obtain permanent registration and engage in independent practice.
- MBBS graduates must join an internship within one month after passing the final professional MBBS examination. An exception can be considered based on the only valid personal medical ground upon approval of the principal of the respective medical college and the director of the medical college hospital.
- Within one year (12 months) of the internship period, 11 months at the respective medical college hospital, and one month at Upazila Health Complex (UHC)/field level
- The completion period of the internship will be two years after joining as an intern. i.e., it must be completed within two years from the starting date. An exception can be considered based on the only valid personal medical ground upon approval of the principal of the respective medical college and the director of the medical college hospital.