D.Y. PATIL EDUCATION SOCIETY
[Deemed to be University], Kolhapur
Re-accredited by NAAC with 'A' Grade

D. Y. PATIL
MEDICAL COLLEGE
KOLHAPUR

SYLLABUS FOR

MBBS PHASE - III/II

According to NMC'S Competency Based
Medical Education (CBME) Curriculum)

D. Y. PATIL EDUCATION SOCIETY, KOLHAPUR

(DEEMED TO BE UNIVERSITY)

D. Y. PATIL MEDICAL COLLEGE, KOLHAPUR

Syllabus For

MBBS - III / II

(According to NMC'S Competency Based
Medical Education (CBME) Curriculum)

Year of Implementation : 2022-23
Year of Examination : 2023-24

(According to NMC'S Competency Based Medical Education (CBME) Curriculum)

General Medicine and Allied Specialties

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

GOAL:

- The broad goal of the teaching of undergraduate students in General Medicine is to produce graduates capable of delivering efficient first contact medical care.

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.

2.Graduate Attributes: Planning Patient Care and problem solving abilities

PO 2:

Demonstrate ability to apply this knowledge to the practice of medicine in routine, emergency and disaster situations.

Demonstrate ability to appraise and assimilate scientific evidence into their own ongoing learning, research, and patient care.

Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences.

3. Graduate Attributes: Professional excellence & Ethics

PO 3:

Demonstrate commitment to the highest standards of professional responsibility towards patient, colleagues, society, growth of medical professional and adhere to universally accepted code of ethics.

Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate Attributes: Communication Skills.

PO 4:

Demonstrate ability to communicate effectively, respectfully, non-judgemental, empathetic manner with patients, their families and colleagues that will improve patient satisfaction ,health care and encourages participation and shared decision-making.

Demonstrate the ability to listen clearly, inform, communicate and educate patients &/ caregivers for the promotion of health, diagnosis of disease and the treatment of illness; advocate for disease prevention, wellness and the promotion of healthy lifestyles including a focus on population health

5. Graduate attributes: Leader & Member of the health care team & System

PO 5:

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members in a manner to maximize the health delivery potential of the team, considering various roles, responsibilities and competencies of the other health professionals.

Identify the self- potential, functioning ability as a team leader in primary and secondary health care settings, utilize various indicators of the health care system and to promote appropriate, low cost, ethical, fair and qualitative health delivery.

6. Graduate attributes: Life long learner

PO 6:

Demonstrate ability to acquire new knowledge, skills and reflect upon their experience to enhance personal and professional growth and apply the information in the care of the patient.

Demonstrate self-motivation and awareness to their own limitations.

Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.

7. Graduate attributes: Research Aptitude

PO7:

Demonstrate an attitude of inquiry/search/investigation ,scientific and objective effort to uncover facts**.**

8. Graduate attributes: Societal Responsibilities

PO8 :

Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Course Outcomes :

CO1: To describe clinical features of diseases of various aetiology affecting all systems in the adult and geriatric population.

CO2: To apply the basic sciences knowledge in understanding and managing common diseases.

CO3: To describe the investigations to be undertaken at various levels like OPD, Ward, ICU etc. and choose them appropriately depending on the clinical features and epidemiologic principles.

CO4: To describe the pharmaco-therapeutics of various diseases and complications.

CO5: To describe and discuss the health issues related to environmental and ecological factors.

CO6: To describe and discuss the methods and mechanisms of rehabilitation following diseases.

CO7: To describe and discuss the issues related to palliative and terminal care.

CO8: To incorporate the national and international guidelines related to various diseases in day-to-day practice and teaching.

CO9: To describe and discuss the social and economic aspects of illnesses, outbreaks and epidemics.

CO10: To analyse the observations of disease patterns in patients and community and make suggestions for improvement in management and prevention.

CO11: To describe and discuss the National Health Programs.

CO12: To analyse and critique the publications related to various aspects of illnesses and evidence-based medicine.

CO13: To describe and discuss the various levels of prevention in communicable and non - communicable diseases.

CO14: To describe and discuss various legislations related to organ transplant, brain death, informed consent, human rights etc.

CO15: Be updated on recent advances in internal medicine.

OBJECTIVES:

The departmental objectives, syllabus and skills to be developed in the department of General Medicine during undergraduate medical education are presented herewith. These are prepared taking into consideration of various aspects and institutional goals given below:

1. A medical student after graduation may have different avenues of his/her professional career and may work either as a first contact physician in a private, semi-private or public sector or may take up further specialization in General Medicine or other specialties.
2. He may have to work in different settings such as rural, semi-urban or urban which may have deficient or compromised facilities.
3. These are based on the various health services research data in our community.
4. These are also based on following institutional goals in general;

At the end of the teaching/ training the undergraduate will be able to:

- Diagnose and manage common health problems of the individual and the community appropriate to his/her position as a member of the health team at primary, secondary and tertiary levels.

- Be competent to practice curative, preventive, promotive and rehabilitative medicine and understand the concepts of primary health care.
  Understand the importance and implementation of the National Health programmes in the context of national priorities.
  Understand the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude required for professional responsibilities.
- Develop the ability for continued self-learning with a scientific attitude of mind and acquire further expertise in any chosen area of medicine.

KNOWLEDGE

At the end of the course, the student shall be able to:

1. Diagnose common clinical disorders with special reference to infectious diseases, nutritional disorders, tropical and environmental diseases;
2. Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interactions, indications and contra-indications;
3. Propose diagnostic and investigative procedures and ability to interpret them;
4. Provide first level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required;
5. Recognize geriatric disorders and their management.

B. SKILLS

At the end of the course, the student shall be able to:

1. develop clinical skills (history taking, clinical examination and other instruments of examination to diagnose various common medical disorders and emergencies;
2. refer a patient to secondary and/or tertiary level of health care after having instituted primary care;
3. perform simple routine investigations like hemogram, stool, urine, sputum and biological fluid examinations;
4. assist the common bedside investigative procedures like pleural tap, lumber puncture, bone marrow aspiration/ biopsy and liver biopsy. A course of systematic instruction in the principles and practice of medicine, including medical disease of infancy;
   a. Lecture - demonstrations, seminars and conferences in clinical medicine during the 3 years shall run concurrently with other clinical subjects.;
   b. Instructions in comprehensive medical care;
   c. Instructions in applied anatomy and physiology and pathology throughout the period of clinical studies;
   d. Instructions in dietetics, nutrition and principles of nursing Medical and in simple ward procedure e.g., should be imparted during clinical concurrently.

In addition to the skills referred above in items (1) to (10), he shall have observed/assisted/performed the following:

Attitude:

a. The teaching and training in clinical medicine must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.
b. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes.
c. Students should develop behavioral skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- profession

Human values, and Ethical practice

- Adopt ethical principles in all aspects of his clinical practice. Professional honesty and integrity are to be fostered. Medical care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- Develop communication skills, in particular the skill to explain various options available in management
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues and specialist in the field when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion

Learner -Doctor Programme (clinical clerkship)

Phase II

- History taking
- General Examination
- Local Examination with demonstration of signs.
- Psychomotor Skills
- AETCOM of Phase II

Phase III/ I

- All of Phase II plus
- Psychomotor Skills
- Differential diagnosis
- Investigations
- AETCOM of Phase III Part I

Phase III/ II

- All of Phase III Part I plus
- Psychomotor Skills
- Management
- Counselling
- AETCOM Phase III/ Part II

-There shall be end post exam at the end of 1st, 2nd and 3rd clinical posting which will be added to internal assessment for practical's.

-At the end of 4th clinical posting of 4 weeks there will be only formative assessment.

GENERAL MEDICINE									
Topic: Heart Failure		**Number of competencies: (30)**				**Number of procedures that require certification: (01)**			
IM1.1	Describe and discuss the epidemiology, pathogenesis clinical evolution and course of common causes of heart disease including: rheumatic/ valvular, ischemic, hypertrophic inflammatory	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.2	Describe and discuss the genetic basis of some forms of heart failure	K	KH	N	Lecture, Small group discussion	Written		Pathology, Physiology	
IM1.3	Describe and discuss the aetiology microbiology pathogenies and clinical evolution of rheumatic fever, criteria, degree of rheumatic activity and rheumatic valvular heart disease and its complications including infective endocarditis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology, Microbiology	
IM1.4	Stage heart failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.5	Describe ,discuss and differentiate the processes involved in R Vs L heart failure, systolic vs diastolic failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.6	Describe and discuss the compensatory mechanisms involved in heart failure including cardiac remodelling and neurohormonal adaptations	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.7	Enumerate, describe and discuss the factors that exacerbate heart , , , , dietary factors drugs etc.	K	KH	Y	Lecture,Small group	Written/ Viva voce		Pathology, Physiology	
IM1.8	Describe and discuss the pathogenesis and development of common arrythmias involved in heart failure particularly atrialfibrillation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.9	Describe and discuss the clinical presentation and features, diagnosis, recognition and management of acute rheumatic fever	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM1.10	Elicit document and present an appropriate history that will establish the diagnosis, cause and severity of heart failure including: presenting complaints, precipitating and exacerbating factors, risk factors exercise tolerance, changes in sleep patterns, features suggestive of infective endocarditis	S	SH	Y	Bedside clinic	Skill assessment			
IM1.11	Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and estimate its severity including: measurement of pulse, blood pressure and respiratory rate, jugular venous forms and pulses, peripheral pulses, conjunctiva and fundus, lung, cardiac examination including palpation and auscultation with identification of heart sounds and murmurs, abdominal distension and splenic palpation	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM1.12	Demonstrate peripheral pulse, volume, character, quality and variation in various causes of heart failure	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM1.13	Measure the blood pressure accurately, recognise and discuss alterations in blood pressure in valvular heart disease and other causes of heart failure and cardiac tamponade	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM1.14	Demonstrate and measure jugular venous distension	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM1.15	Identify and describe the timing, pitch quality conduction and significance of precordial murmurs and their variations	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM1.16	Generate a differential diagnosis based on the clinical presentation and prioritise it based on the most likely diagnosis	K	KH	Y	Bedside clinic, Small group discussion	Skill assessment			
IM1.17	Order and interpret diagnostic testing based on the clinical diagnosis including 12 lead ECG, Chest radiograph, blood cultures	K	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM1.18	Perform and interpret a 12 lead ECG	S	P	Y	Bedside clinic, DOAP session	Skill assessment	3		
IM1.19	Enumerate the indications for and describe the findings of heart failure with the following conditions including: 2D echocardiography, brain natriuretic peptide, exercise testing, nuclear medicine testing and coronary angiogram	S	KH	N	Lecture, Small group discussion, Bedside clinic	Skill assessment		Radiodiagnosis	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM1.20	Determine the severity of valvular heart disease based on the clinical and laboratory and imaging features and determine the levelof intervention required including surgery	C	SH	Y	Small group discussion, Lecture, Bedside clinic	Written/ Skill assessment			
IM1.21	Describe and discuss and identify the clinical features of acute and subacute endocarditis, echocardiographic findings, blood culture and sensitivity and therapy	K	KH/SH	Y	Bedside clinic, Small group discussion, Lecture	Skill assessment			
IM1.22	Assist and demonstrate the proper technique in collecting specimen for blood culture	S	SH	Y	DOAP session	Skill assessment		Microbiology	
IM1.23	Describe, prescribe and communicate non pharmacologic management of heart failure including sodium restriction, physical activity and limitations	S/C	SH	Y	Lecture, Small group discussion	Skill assessment			
IM1.24	Describe and discuss the pharmacology of drugs including indications, contraindications in the management of heart failure including diuretics, ACE inhibitors, Beta blockers, aldosterone antagonists and cardiac glycosides	K	KH	Y	Lecture, Small group discussion	Viva voce/written		Pharmacology	
IM1.25	Enumerate the indications for valvuloplasty, valvotomy, coronary revascularization and cardiac transplantation	K	KH	Y	Lecture, Small group discussion, Bedside clinic	Viva voce/written			
IM1.26	Develop document and present a management plan for patients with heart failure based on type of failure, underlying aetiology	S	SH	Y	Bedside clinic, Skill assessment, Small group discussion	Bedside clinic/ Skill assessment/written			
IM1.27	Describe and discuss the role of penicillin prophylaxis in the prevention of rheumatic heart disease	K	KH	Y	Bedside clinic, Small group discussion	Written		Microbiology, Pharmacology	
IM1.28	Enumerate the causes of adult presentations of congenital heart disease and describe the distinguishing features between cyanotic and acyanotic heart disease	K	KH	Y	Bedside clinic, Small group discussion	Bedside clinic/ Skill assessment/written			
IM1.29	Elicit document and present an appropriate history, demonstrate correctly general examination, relevant clinical findings and formulate document and present a management plan for an adult patient presenting with a common form of congenital heart disease	K	KH	Y	Bedside clinic,Small group discussion	Skill assessment/ written			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM1.30	Administer an intramuscular injection with an appropriate explanation to the patient	S	SH	Y	Bedside clinic, Skill assessment	Log book documentation of completion		Pharmacology	
Topic:	**Acute Myocardial Infarction/ IHD**	**Number of competencies: (24)**				**Number of procedures that require certification : (02)**			
IM2.1	Discuss and describe the epidemiology, antecedents and risk factors for atherosclerosis and ischemic heart disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology, Community Medicine	
IM2.2	Discuss the aetiology of risk factors both modifiable and non modifiable of atherosclerosis and IHD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM2.3	Discuss and describe the lipid cycle and the role of dyslipidemia inthe pathogenesis of atherosclerosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	
IM2.4	Discuss and describe the pathogenesis natural history, evolution and complications of atherosclerosis and IHD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM2.5	Define the various acute coronary syndromes and describe their evolution, natural history and outcomes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM2.6	Elicit document and present an appropriate history that includes onset evolution, presentation risk factors, family history, comorbid conditions, complications, medication, history of atherosclerosis, IHD and coronary syndromes	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM2.7	Perform, demonstrate and document a physical examination including a vascular and cardiac examination that is appropriate for the clinical presentation	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM2.8	Generate document and present a differential diagnosis based on the clinical presentation and prioritise based on “cannot miss”, mostlikely diagnosis and severity	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM2.9	Distinguish and differentiate between stable and unstable angina and AMI based on the clinical presentation	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM2.10	Order, perform and interpret an ECG	S	P	Y	Bedside clinic, DOAP session	Skill assessment	3		

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM2.11	Order and interpret a Chest X-ray and markers of acute myocardial infarction	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM2.12	Choose and interpret a lipid profile and identify the desirable lipid profile in the clinical context	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Biochemistry	
IM2.13	Discuss and enumerate the indications for and findings on echocardiogram, stress testing and coronary angiogram	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM2.14	Discuss and describe the indications for admission to a coronary care unit and supportive therapy for a patient with acute coronary syndrome	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM2.15	Discuss and describe the medications used in patients with an acute coronary syndrome based on the clinical presentation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM2.16	Discuss and describe the indications for acute thrombolysis, PTCAand CABG	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM2.17	Discuss and describe the indications and methods of cardiac rehabilitation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM2.18	Discuss and describe the indications, formulations, doses, side effects and monitoring for drugs used in the management of dyslipidemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology, Biochemistry	
IM2.19	Discuss and describe the pathogenesis, recognition and management of complications of acute coronary syndromes including arrhythmias, shock, LV dysfunction, papillary muscle rupture and pericarditis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM2.20	Discuss and describe the assessment and relief of pain in acute coronary syndromes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM2.21	Observe and participate in a controlled environment an ACLS program	S	KH	N	DOAP session	NA			
IM2.22	Perform and demonstrate in a mannequin BLS	S	P	Y	DOAP session	Skill assessment	1		

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM2.23	Describe and discuss the indications for nitrates, anti platelet agents, gpIIb IIIa inhibitors, beta blockers, ACE inhibitors etc in the management of coronary syndromes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM2.24	Counsel and communicate to patients with empathy lifestyle changes in atherosclerosis / post coronary syndromes	C/A	SH	Y	DOAP session	Skill assessment		AETCOM	
Topic: Pneumonia		**Number of competencies: (19)**				**Number of procedures that require certification: (NIL)**			
IM3.1	Define, discuss, describe and distinguish community acquired pneumonia, nosocomial pneumonia and aspiration pneumonia	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Human Anatomy, Pathology, Microbiology	
IM3.2	Discuss and describe the aetiologies of various kinds of pneumonia and their microbiology depending on the setting and immune statusof the host	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Microbiology	
IM3.3	Discuss and describe the pathogenesis, presentation, natural history and complications of pneumonia	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Microbiology	
IM3.4	Elicit document and present an appropriate history including the evolution, risk factors including immune status and occupational risk	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM3.5	Perform, document and demonstrate a physical examination including general examination and appropriate examination of the lungs that establishes the diagnosis, complications and severity of disease	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM3.6	Generate document and present a differential diagnosis based on the clinical features, and prioritise the diagnosis based on the presentation	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM3.7	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X ray PA view, Mantoux, sputumgram stain, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing and ABG	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Radiodiagnosis, Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM3.8	Demonstrate in a mannequin and interpret results of an arterial blood gas examination	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM3.9	Demonstrate in a mannequin and interpret results of a pleural fluid aspiration	S	SH	Y	DOAP session	Skill assessment			
IM3.10	Demonstrate the correct technique in a mannequin and interpret results of a blood culture	S	SH	Y	DOAP session	Skill assessment		Microbiology	
IM3.11	Describe and enumerate the indications for further testing including HRCT, Viral cultures, PCR and specialised testing	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Radiodiagnosis, Microbiology	
IM3.12	Select, describe and prescribe based on the most likely aetiology,an appropriate empirical antimicrobial based on the pharmacologyand antimicrobial spectrum	S	SH	Y	Bed side clinic, DOAP session	Skill Assessment/ Written/ Viva voce		Pharmacology, Microbiology	
IM3.13	Select, describe and prescribe based on culture and sensitivity appropriate empaling antimicrobial based on the pharmacology and antimicrobial spectrum.	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Written/ Viva voce		Pharmacology, Microbiology	
IM3.14	Perform and interpret a sputum gram stain and AFB	S	P	Y	DOAP session	Skill assessment		Microbiology	
IM3.15	Describe and enumerate the indications for hospitalisation in patients with pneumonia	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			
IM3.16	Describe and enumerate the indications for isolation and barrier nursing in patients with pneumonia	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			
IM3.17	Describe and discuss the supportive therapy in patients with pneumonia including oxygen use and indications for ventilation	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			
IM3.18	Communicate and counsel patient on family on the diagnosis and therapy of pneumonia	C/A	SH	Y	DOAP session	Skill assessment			
IM3.19	Discuss, describe, enumerate the indications and communicate to patients on pneumococcal and influenza vaccines	S/C	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Microbiology	
Topic: Fever and febrile syndromes		**Number of competencies: (26)**				**Number of procedures that require certification : (NIL)**			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM4.1	Describe and discuss the febrile response and the influence of host immune status, risk factors and comorbidities on the febrile response	K	K	Y	Lecture, Small group discussion	Written		Microbiology	
IM4.2	Describe and discuss the influence of special populations on thefebrile response including: the elderly, immune suppression, malignancy and neutropenia, HIV and travel	K	K	Y	Lecture, Small group discussion	Written		Microbiology	
IM4.3	Discuss and describe the common causes, pathophysiology and manifestations of fever in various regions in India including bacterial, parasitic and viral causes (e.g.Dengue, Chikungunya, Typhus)	K	K	Y	Lecture, Small group discussion	Written		Microbiology, Community Medicine	
IM4.4	Describe and discuss the pathophysiology and manifestations of inflammatory causes of fever	K	KH	Y	Lecture, Small group discussion	Written		Microbiology	
IM4.5	Describe and discuss the pathophysiology and manifestations of malignant causes of fever including hematologic and lymph node malignancies	K	KH	Y	Lecture, Small group discussion	Written		Pathology, Microbiology	
IM4.6	Discuss and describe the pathophysiology and manifestations of malaria	K	KH	Y	Lecture, Small group discussion	Written		Microbiology	
IM4.7	Discuss and describe the pathophysiology and manifestations of the sepsis syndrome	K	K	Y	Lecture, Small group discussion	Written			
IM4.8	Discuss and describe the pathophysiology, aetiology and clinical manifestations of fever of unknown origin (FUO) including in a normal host, neutropenic host, nosocomial host and a host with HIVdisease	K	K	Y	Lecture, Small group discussion	Written		Microbiology	
IM4.9	Elicit document and present a medical history that helps delineate the aetiology of fever that includes the evolution and pattern of fever, associated symptoms, immune status, comorbidities, risk factors, exposure through occupation, travel and environment and medication use	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM4.10	Perform a systematic examination that establishes the diagnosis and severity of presentation that includes: general skin mucosal andlymph node examination, chest and abdominal examination (including examination of the liver and spleen)	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM4.11	Generate a differential diagnosis and prioritise based on clinical features that help distinguish between infective, inflammatory, malignant and rheumatologic causes	K	SH	Y	Bedside clinic, DOAP session	Written/ Viva voce			
IM4.12	Order and interpret diagnostic tests based on the differential diagnosis including: CBC with differential, peripheral smear, urinary analysis with sediment, Chest X ray, blood and urine cultures, sputum gram stain and cultures, sputum AFB and cultures, CSF analysis, pleural and body fluid analysis, stool routine and culture and QBC	K	SH	Y	Bedside clinic, Skill assessment	Skill assessment		Pathology, Microbiology	
IM4.13	Perform and interpret a sputum gram stain	S	SH	Y	DOAP session	Log book/ documentation		Microbiology	
IM4.14	Perform and interpret a sputum AFB	S	SH	Y	DOAP session	Log book/ documentation		Microbiology	
IM4.15	Perform and interpret a malarial smear	S	SH	Y	DOAP session	Log book/ documentation/ Skill assessment		Microbiology	
IM4.16	Enumerate the indications and describe the findings in tests of inflammation and specific rheumatologic tests, serologic testing for pathogens including HIV, bone marrow aspiration and biopsy	K	KH	N	Lecture, Small group discussion	Written		Pathology	
IM4.17	Observe and assist in the performance of a bone marrow aspiration and biopsy in a simulated environment	S	SH	N	Skills lab	Log book/ documentation/ DOAP session		Pathology	
IM4.18	Enumerate the indications for use of imaging in the diagnosis of febrile syndromes	K	KH	N	Lecture, Small group discussion	Written/ Viva voce			
IM4.19	Assist in the collection of blood and wound cultures	S	SH	Y	DOAP session	Log book/ documentation		Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM4.20	Interpret a PPD (Mantoux)	S	SH	Y	DOAP session	Log book/ documentation		Microbiology	
IM4.21	Develop and present an appropriate diagnostic plan based on the clinical presentation, most likely diagnosis in a prioritised and cost effective manner	K	KH	Y	Bedside clinic, Skill assessment	Skill assessment			
IM4.22	Describe and discuss the pharmacology, indications, adverse reactions, interactions of antimalarial drugs and basis of resistance	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM4.23	Prescribe drugs for malaria based on the species identified, prevalence of drug resistance and national programs	S	SH	Y	Small group discussion	Skill assessment		Microbiology, Pharmacology	
IM4.24	Develop an appropriate empiric treatment plan based on the patient's clinical and immune status pending definitive diagnosis	C	SH	Y	DOAP session	Skill assessment			
IM4.25	Communicate to the patient and family the diagnosis and treatment	C	SH	Y	DOAP session	Skill assessment		AETCOM	
IM4.26	Counsel the patient on malarial prevention	C	SH	Y	DOAP session	Skill assessment		Microbiology, Pharmacology	
Topic: Liver disease		**Number of competencies: (18)**				**Number of procedures that require certification : (NIL)**			
IM5.1	Describe and discuss the physiologic and biochemical basis of hyperbilirubinemia	K	K	Y	Lecture, Small group discussion	Written/Viva voce		Pathology, Physiology	
IM5.2	Describe and discuss the aetiology and pathophysiology of liver injury	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM5.3	Describe and discuss the pathologic changes in various forms of liver disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM5.4	Describe and discuss the epidemiology, microbiology, immunologyand clinical evolution of infective (viral) hepatitis	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	
IM5.5	Describe and discuss the pathophysiology and clinical evolution of alcoholic liver disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM5.6	Describe and discuss the pathophysiology, clinical evolution and complications of cirrhosis and portal hypertension including ascites, spontaneous bacterial peritonitis, hepatorenal syndrome and hepatic encephalopathy	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM5.7	Enumerate and describe the causes and pathophysiology of drug induced liver injury	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Pharmacology	
IM5.8	Describe and discuss the pathophysiology, clinical evolution and complications cholelithiasis and cholecystitis	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
IM5.9	Elicit document and present a medical history that helps delineate the aetiology of the current presentation and includes clinical presentation, risk factors, drug use, sexual history, vaccination history and family history	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM5.10	Perform a systematic examination that establishes the diagnosis and severity that includes nutritional status, mental status, jaundice, abdominal distension ascites, features of portosystemic hypertension and hepatic encephalopathy	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM5.11	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology for the presenting symptom	K	KH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM5.12	Choose and interpret appropriate diagnostic tests including: CBC, bilirubin, function tests, Hepatitis serology and ascitic fluid examination in patient with liver diseases.	S	KH	Y	Bedside clinic, DOAP session	Skill assessment		Pathology	
IM5.13	Enumerate the indications for ultrasound and other imaging studies including MRCP and ERCP and describe the findings in liver disease	K	K	Y	Bedside clinic,Small group discussion	Viva voce/ Written		Radiodiagnosis	General Surgery
IM5.14	Outline a diagnostic approach to liver disease based on hyperbilirubinemia, liver function changes and hepatitis serology	S	SH	Y	Bedside clinic,Small group discussion	Viva voce/ Written		Pathology, Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM5.15	Assist in the performance and interpret the findings of an ascitic fluid analysis	S	KH	Y	DOAP session	documentation in log book			
IM5.16	Describe and discuss the management of hepatitis, cirrhosis, portal hypertension, ascites spontaneous, bacterial peritonitis and hepatic encephalopathy	K	KH	Y	Written, Small group discussion	Skill assessment/ Written/ Viva voce		Pharmacology	General Surgery
IM5.17	Enumerate the indications, precautions and counsel patients on vaccination for hepatitis	K/C	SH	Y	Written, Small group discussion	Written/ Viva voce		Microbiology	
IM5.18	Enumerate the indications for hepatic transplantation	K	K	Y	Written, Small group discussion	Written/ Viva voce			General Surgery
Topic: HIV		**Number of competencies: (23)**				**Number of procedures that require certification : (NIL)**			
IM6.1	Describe and discuss the symptoms and signs of acute HIV seroconversion	K	KH	Y	Lecture, Small group discussion	Short note/ Viva voce		Microbiology	
IM6.2	Define and classify HIV AIDS based on the CDC criteria	K	KH	Y	Lecture, Small group discussion	Short notes/ Viva voce		Microbiology	
IM6.3	Describe and discuss the relationship between CDC count and therisk of opportunistic infections	K	KH	Y	Lecture, Small group discussion	Short notes/ Viva voce		Microbiology	
IM6.4	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related opportunistic infections	K	KH	Y	Lecture, Small group discussion	Short notes/ Viva voce		Microbiology	
IM6.5	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related malignancies	K	KH	Y	Lecture, Small group discussion	Short notes/ Viva voce		Pathology, Microbiology	
IM6.6	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related skin and oral lesions	K	KH	Y	Lecture, Small group discussion	Short notes/ Viva voce		Pathology, Microbiology	
IM6.7	Elicit document and present a medical history that helps delineate the aetiology of the current presentation and includes risk factors forHIV, mode of infection, other sexually transmitted diseases, risks for opportunistic infections and nutritional status	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM6.8	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology for the presenting symptom	S	SH	Y	Bedside clinic, DOAP session, Small group discussion	Skill assessment			
IM6.9	Choose and interpret appropriate diagnostic tests to diagnose and classify the severity of HIV-AIDS including specific tests of HIV, CDC	K	KH	Y	Bedside clinic, DOAP session, Small group discussion	Written/ Skill assessment		Pathology, Microbiology	
IM6.10	Choose and interpret appropriate diagnostic tests to diagnose opportunistic infections including CBC, sputum examination and cultures, blood cultures, stool analysis, CSF analysis and Chest radiographs	S	KH	Y	Bedside clinic, DOAP session, Small group discussion	Written/ Skill assessment			
IM6.11	Enumerate the indications and describe the findings for CT of the chest and brain and MRI	K	K	N	Small group discussion, Lecture, Bedside clinic	Written/ Viva voce		Radiodiagnosis	
IM6.12	Enumerate the indications for and interpret the results of: pulse oximetry, ABG, Chest Radiograph	K	KH	Y	Bedside clinic, DOAP session, Small group discussion	Written/ Skill assessment			
IM6.13	Describe and enumerate the indications and side effects of drugsfor bacterial, viral and other types of diarrhea	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology, Microbiology	
IM6.14	Perform and interpret AFB sputum	S	P	Y	DOAP session	Skill assessment		Microbiology	
IM6.15	Demonstrate in a model the correct technique to perform a lumbar puncture	S	SH	Y	Simulation	Skill assessment		Microbiology	
IM6.16	Discuss and describe the principles of HAART, the classes of antiretrovirals used, adverse reactions and interactions	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology, Pharmacology	
IM6.17	Discuss and describe the principles and regimens used in post exposure prophylaxis	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology, Pharmacology	
IM6.18	Enumerate the indications and discuss prophylactic drugs used to prevent HIV related opportunistic infections	K/C	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM6.19	Counsel patients on prevention of HIV transmission	C	SH	Y	DOAP session	Skills assessment		AETCOM	
IM6.20	Communicate diagnosis, treatment plan and subsequent follow up plan to patients	C	SH	Y	DOAP session	Skills assessment		AETCOM	
IM6.21	Communicate with patients on the importance of medication adherence	C	SH	Y	DOAP session	Skills assessment		AETCOM	
IM6.22	Demonstrate understanding of ethical and legal issues regarding patient confidentiality and disclosure in patients with HIV	K/A	SH	Y	DOAP session, Small group discussion	Viva voce/ Written/ Skill Assessment		AETCOM	
IM6.23	Demonstrate a non-judgemental attitude to patients with HIV and to their lifestyles	A	SH	Y	Small group discussion	observation by teacher		AETCOM	
Topic: Rheumatologic problems		**Number of competencies: (27)**				**Number of procedures that require certification: (NIL)**			
IM7.1	Describe the pathophysiology of autoimmune disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM7.2	Describe the genetic basis of autoimmune disease	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM7.3	Classify cause of joint pain based on the pathophysiology	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM7.4	Develop a systematic clinical approach to joint pain based on the pathophysiology	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM7.5	Describe and discriminate acute, subacute and chronic causes of joint pain	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM7.6	Discriminate, describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM7.7	Discriminate, describe and discuss distinguishing articular from periarticular complaints	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM7.8	Determine the potential causes of join pain based on the presenting features of joint involvement	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM7.9	Describe the common signs and symptoms of articular and periarticular diseases	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM7.10	Describe the systemic manifestations of rheumatologic disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM7.11	Elicit document and present a medical history that will differentiate the aetiologies of disease	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM7.12	Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			Orthopedics
IM7.13	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	K/S	KH	Y	Bedside clinic, Small group discussion	Skill assessment/ Written			
IM7.14	Describe the appropriate diagnostic work up based on the presumed aetiology	K	KH	Y	Bedside clinic, Small group discussion	Skill assessment/ Written			
IM7.15	Enumerate the indications for and interpret the results of : CBC, anti-CCP, RA, ANA, DNA and other tests of autoimmunity	K	SH	Y	Bedside clinic, Small group discussion	Skill assessment/ Written		Pathology	
IM7.16	Enumerate the indications for arthrocentesis	K	K	Y	Small group discussion, Lecture	Written/ Viva voce			Orthopedics
IM7.17	Enumerate the indications and interpret plain radiographs of joints	K	SH	Y	Bedside clinic, Small group discussion	Skill assessment/ Written		Radiodiagnosis	Orthopedics
IM7.18	Communicate diagnosis, treatment plan and subsequent follow up plan to patients	C	SH	Y	DOAP session	Skill assessment/ Written			
IM7.19	Develop an appropriate treatment plan for patients with rheumatologic diseases	K	KH	Y	Bedside clinic, Small group discussion	Skill assessment/ Written			
IM7.20	Select, prescribe and communicate appropriate medications for relief of joint pain	K/C	SH	Y	DOAP session	Skill assessment/ Written		Pharmacology	Orthopedics
IM7.21	Select, prescribe and communicate preventive therapy for crystalline arthropathies	K/C	SH	Y	DOAP session	Skill assessment/ Written		Pharmacology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM7.22	Select, prescribe and communicate treatment option for systemic rheumatologic conditions	K/C	SH	Y	DOAP session	Skill assessment/ Written		Pharmacology	
IM7.23	Describe the basis for biologic and disease modifying therapy in rheumatologic diseases	K	KH	Y	Bedside clinic, Small group discussion	Skill assessment/ Written		Pharmacology	
IM7.24	Communicate and incorporate patient preferences in the choice of therapy	C/A	SH	Y	DOAP session	Skill assessment		AETCOM	
IM7.25	Develop and communicate appropriate follow up and monitoring plans for patients with rheumatologic conditions	C	SH	Y	DOAP session	Skill assessment			
IM7.26	Demonstrate an understanding of the impact of rheumatologic conditions on quality of life, well being, work and family	A	SH	Y	DOAP session	Skill assessment			
IM7.27	Determine the need for specialist consultation	K	K	Y	Small group discussion, Lecture	Viva voce			
Topic: Hypertension		**Number of competencies: (20)**				**Number of procedures that require certification: (NIL)**			
IM8.1	Describe and discuss the epidemiology, aetiology and the prevalence of primary and secondary hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM8.2	Describe and discuss the pathophysiology of hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM8.3	Describe and discuss the genetic basis of hypertension	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.4	Define and classify hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.5	Describe and discuss the differences between primary and secondary hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.6	Define, describe and discuss and recognise hypertensive urgencyand emergency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM8.7	Describe and discuss the clinical manifestations of the various aetiologies of secondary causes of hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.8	Describe, discuss and identify target organ damage due to hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.9	Elicit document and present a medical history that includes: duration and levels, symptoms, comorbidities, lifestyle, risk factors, family history, psychosocial and environmental factors, dietary assessment, previous and concomitant therapy	K	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM8.10	Perform a systematic examination that includes : an accurate measurement of blood pressure, fundus examination, examinationof vasculature and heart	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM8.11	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM8.12	Describe the appropriate diagnostic work up based on the presumed aetiology	K	KH	Y	Small group discussion	Skill assessment/ Written/ Viva voce			
IM8.13	Enumerate the indications for and interpret the results of : CBC, Urine routine, BUN, Cr, Electrolytes, Uric acid, ECG	K	KH	Y	Small group discussion	Skill assessment/ Written/ Viva voce			
IM8.14	Develop an appropriate treatment plan for essential hypertension	K	KH	Y	Small group discussion	Written/ Viva voce		Pharmacology	
IM8.15	Recognise, prioritise and manage hypertensive emergencies	S	SH	Y	DOAP session	Skill assessment/ Written		Pharmacology	
IM8.16	Develop and communicate to the patient lifestyle modification including weight reduction, moderation of alcohol intake, physical activity and sodium intake	C	SH	Y	DOAP session	Skill assessment			
IM8.17	Perform and interpret a 12 lead ECG	S	P	Y	DOAP session	documentation in log book/ skills station			
IM8.18	Incorporate patient preferences in the management of HTN	A/C	SH	Y	DOAP session	Skill assessment			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM8.19	Demonstrate understanding of the impact of Hypertension on quality of life, well being, work and family	A	SH	Y	Bedside clinic, DOAP session	observation by faculty			
IM8.20	Determine the need for specialist consultation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Anemia		**Number of competencies: (21)**				**Number of procedures that require certification : (NIL)**			
IM9.1	Define, describe and classify anemia based on red blood cell sizeand reticulocyte count	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM9.2	Describe and discuss the morphological characteristics, aetiology and prevalence of each of the causes of anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM9.3	Elicit document and present a medical history that includes symptoms, risk factors including GI bleeding, prior history, medications, menstrual history, and family history	S	SH	Y	Bed side clinic, DOAP session	Skill assessment			
IM9.4	Perform a systematic examination that includes : general examination for pallor, oral examination, DOAP session of hyper dynamic circulation, lymph node and splenic examination	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM9.5	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Written		Pathology	
IM9.6	Describe the appropriate diagnostic work up based on the presumed aetiology	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Written		Pathology	
IM9.7	Describe and discuss the meaning and utility of various componentsof the hemogram	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.8	Describe and discuss the various tests for iron deficiency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.9	Order and interpret tests for anemia including hemogram, red cell indices, reticulocyte count, iron studies, B12 and folate	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Written		Pathology	
IM9.10	Describe, perform and interpret a peripheral smear and stool occult blood	S	SH	P	Bedside clinic, DOAP session	Skill assessment/ Written		Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM9.11	Describe the indications and interpret the results of a bone marrow aspirations and biopsy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.12	Describe, develop a diagnostic plan to determine the aetiology of anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.13	Prescribe replacement therapy with iron, B12, folate	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Written		Pharmacology	
IM9.14	Describe the national programs for anemia prevention	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology, Community Medicine	
IM9.15	Communicate the diagnosis and the treatment appropriately to patients	C	SH	Y	DOAP session	Skill assessment			
IM9.16	Incorporate patient preferences in the management of anemia	C	SH	Y	DOAP session	Skill assessment			
IM9.17	Describe the indications for blood transfusion and the appropriate use of blood components	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.18	Describe the precautions required necessary when performing a blood transfusion	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
IM9.19	Assist in a blood transfusion	S	SH	Y	Bedside clinic	document in log book			
IM9.20	Communicate and counsel patients with methods to prevent nutritional anemia	C	SH	Y	DOAP session	Skill assessment			
IM9.21	Determine the need for specialist consultation	K	KH	Y	Lecture, Small group discussion	Written			
Topic: Acute Kidney Injury and Chronic renal failure		**Number of competencies: (31)**				**Number of procedures that require certification: (NIL)**			
IM10.1	Define, describe and differentiate between acute and chronic renal failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.2	Classify, describe and differentiate the pathophysiologic causes of acute renal failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM10.3	Describe the pathophysiology and causes of pre renal ARF, renaland post renal ARF	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.4	Describe the evolution, natural history and treatment of ARF	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.5	Describe and discuss the aetiology of CRF	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.6	Stage Chronic Kidney Disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.7	Describe and discuss the pathophysiology and clinical findings of uraemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.8	Classify, describe and discuss the significance of proteinuria in CKD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.9	Describe and discuss the pathophysiology of anemia and hyperparathyroidism in CKD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.10	Describe and discuss the association between CKD glycemia and hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.11	Describe and discuss the relationship between CAD risk factors and CKD and in dialysis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.12	Elicit document and present a medical history that will differentiate the aetiologies of disease, distinguish acute and chronic disease, identify predisposing conditions, nephrotoxic drugs and systemic causes	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM10.13	Perform a systematic examination that establishes the diagnosis and severity including determination of volume status, presence of edema and heart failure, features of uraemia and associated systemic disease	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM10.14	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	K	KH	Y	DOAP session, Small group discussion	Skill assessment/ Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM10.15	Describe the appropriate diagnostic work up based on the presumed aetiology	K	SH	Y	DOAP session, Small group discussion	Skill assessment/ Written/ Viva voce			
IM10.16	Enumerate the indications for and interpret the results of : renal function tests, calcium, phosphorus, PTH, urine electrolytes, osmolality, Anion gap	K	KH	Y	DOAP session, Small group discussion	Skill assessment/ Written/ Viva voce		Pathology	
IM10.17	Describe and calculate indices of renal function based on available laboratories including FENa (Fractional Excretion of Sodium) and CrCl (Creatinine Clearance)	S	SH	Y	DOAP session, Small group discussion	Skill assessment/ Written/ Viva voce		Pathology	
IM10.18	Identify the ECG findings in hyperkalemia	S	SH	Y	DOAP session, Small group discussion	Skill assessment/ Written/ Viva voce			
IM10.19	Enumerate the indications and describe the findings in renal ultrasound	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Radiodiagnosis	
IM10.20	Describe and discuss the indications to perform arterial blood gas analysis: interpret the data	S	P	Y	DOAP session	documentation in log book			
IM10.21	Describe and discuss the indications for and insert a peripheral intravenous catheter	S	P	Y	DOAP session, Bedside clinic	documentation in logbook			
IM10.22	Describe and discuss the indications, demonstrate in a model and assist in the insertion of a central venous or a dialysis catheter	S	SH	N	DOAP session	Skill assessment with model			
IM10.23	Communicate diagnosis treatment plan and subsequent follow up plan to patients	C	SH	Y	DOAP session	Skill assessment			
IM10.24	Counsel patients on a renal diet	K	SH	Y	DOAP session	Skill assessment			
IM10.25	Identify and describe the priorities in the management of ARF including diet, volume management, alteration in doses of drugs, monitoring and indications for dialysis	K/C	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM10.26	Describe and discuss supportive therapy in CKD including diet, anti hypertensives, glycemic therapy, dyslipidemia, anemia, hyperkalemia, hyperphosphatemia and secondary hyperparathyroidism	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM10.27	Describe and discuss the indications for renal dialysis	C/A	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM10.28	Describe and discuss the indications for renal replacement therapy	C	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM10.29	Describe discuss and communicate the ethical and legal issues involved in renal replacement therapy	C/A	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM10.30	Recognise the impact of CKD on patient's quality of life well being work and family	A	K	Y	Lecture, Small group discussion, Bedside clinic	observation by faculty			
IM10.31	Incorporate patient preferences in to the care of CKD	A/C	KH	Y	Lecture, Small group discussion, Bedside clinic	observation by faculty			
Topic: Diabetes Mellitus		**Number of competencies: (24)**				**Number of procedures that require certification : (02)**			
IM11.1	Define and classify diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM11.2	Describe and discuss the epidemiology and pathogenesis and risk factors and clinical evolution of type 1 diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM11.3	Describe and discuss the epidemiology and pathogenesis and risk factors economic impact and clinical evolution of type 2 diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM11.4	Describe and discuss the genetic background and the influence ofthe environment on diabetes	K	KH	N	Lecture, Small group discussion	Written/ Viva voce			
IM11.5	Describe and discuss the pathogenesis and temporal evolution of microvascular and macrovascular complications of diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM11.6	Describe and discuss the pathogenesis and precipitating factors, recognition and management of diabetic emergencies	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM11.7	Elicit document and present a medical history that will differentiate the aetiologies of diabetes including risk factors, precipitating factors, lifestyle, nutritional history, family history, medication history, co-morbidities and target organ disease	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM11.8	Perform a systematic examination that establishes the diagnosis and severity that includes skin, peripheral pulses, blood pressure measurement, fundus examination, detailed examination of the foot (pulses, nervous and deformities and injuries)	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM11.9	Describe and recognise the clinical features of patients who present with a diabetic emergency	K	KH	Y	Small group discussion, Lecture	Written/ Viva voce			
IM11.10	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	K	KH	Y	Small group discussion, Lecture	Written/ Viva voce			
IM11.11	Order and interpret laboratory tests to diagnose diabetes and its complications including: glucoses, glucose tolerance test, glycosylated hemoglobin, urinary micro albumin, ECG, electrolytes, ABG, ketones, renal function tests and lipid profile	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Pathology	
IM11.12	Perform and interpret a capillary blood glucose test	S	P	Y	Bedside clinic, DOAP session	Skill assessment	2	Pathology, Biochemistry	
IM11.13	Perform and interpret a urinary ketone estimation with a dipstick	S	P	Y	Bedside clinic, DOAP session	Skill assessment	2	Pathology, Biochemistry	
IM11.14	Recognise the presentation of hypoglycaemia and outline the principles on its therapy	K	KH	Y	Small Group discussion, Lecture	Written/ Viva voce			
IM11.15	Recognise the presentation of diabetic emergencies and outline the principles of therapy	K	KH	Y	Small Group discussion, Lecture	Written/ Viva voce			
IM11.16	Discuss and describe the pharmacologic therapies for diabetes their indications, contraindications, adverse reactions and interactions	K	KH	Y	Small Group discussion, Lecture	Written/ Viva voce		Pharmacology	
IM11.17	Outline a therapeutic approach to therapy of T2Diabetes based on presentation, severity and complications in a cost effective manner	K	KH	Y	Small Group discussion, Lecture	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM11.18	Describe and discuss the pharmacology, indications, adverse reactions and interactions of drugs used in the prevention and treatment of target organ damage and complications of Type II Diabetes including neuropathy, nephropathy, retinopathy, hypertension, dyslipidemia and cardiovascular disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM11.19	Demonstrate and counsel patients on the correct technique to administer insulin	S/C	SH	Y	DOAP session	Skill assessment		Pharmacology	
IM11.20	Demonstrate to and counsel patients on the correct technique of self monitoring of blood glucoses	S/C	SH	Y	DOAP session	Skill assessment			
IM11.21	Recognise the importance of patient preference while selecting therapy for diabetes	A	KH	Y	DOAP session	faculty observation			
IM11.22	Enumerate the causes of hypoglycaemia and describe the counter hormone response and the initial approach and treatment	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM11.23	Describe the precipitating causes, pathophysiology, recognition, clinical features, diagnosis, stabilisation and management of diabetic ketoacidosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM11.24	Describe the precipitating causes, pathophysiology, recognition, clinical features, diagnosis, stabilisation and management of Hyperosmolar non ketotic state	K	KH	N	Lecture, Small group discussion	Written/ Viva voce			
Topic: Thyroid dysfunction		**Number of competencies: (15)**				**Number of procedures that require certification : (NIL)**			
IM12.1	Describe the epidemiology and pathogenesis of hypothyroidism and hyperthyroidism including the influence of iodine deficiency and autoimmunity in the pathogenesis of thyroid disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM12.2	Describe and discuss the genetic basis of some forms of thyroid dysfunction	K	K	N	Lecture, Small group discussion	Written/ Viva voce			
IM12.3	Describe and discuss the physiology of the hypothalamopituitary - thyroid axis, principles of thyroid function testing and alterations in physiologic function	K	K	Y	Lecture, Small group discussion	Short notes		Pathology, Physiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM12.4	Describe and discuss the principles of radio iodine uptake in the diagnosis of thyroid disorders	K	KH	Y	Lecture, Small group discussion	Short notes/ Viva voce			
IM12.5	Elicit document and present an appropriate history that will establish the diagnosis cause of thyroid dysfunction and its severity	S	SH	Y	Bedside clinic	Skill assessment/ Short case			
IM12.6	Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and severity including systemic signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of the thyroid and lymph nodes and cardiovascular findings	S	SH	Y	Bed side clinic, DOAP session	Skill assessment			General Surgery
IM12.7	Demonstrate the correct technique to palpate the thyroid	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			General Surgery
IM12.8	Generate a differential diagnosis based on the clinical presentation and prioritise it based on the most likely diagnosis	K	KH	Y	Bedside clinic, small group discussion	Short case			General Surgery
IM12.9	Order and interpret diagnostic testing based on the clinical diagnosis including CBC, thyroid function tests and ECG and radioiodine uptake and scan	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			General Surgery
IM12.10	Identify atrial fibrillation, pericardial effusion and bradycardia on ECG	S	SH	Y	Bedside clinic, lab	Skill assessment			General Surgery
IM12.11	Interpret thyroid function tests in hypo and hyperthyroidism	S	SH	Y	Bedside clinic, lab	Skill assessment			General Surgery
IM12.12	Describe and discuss the iodisation programs of the government of India	K	KH	Y	Lecture, Bedside clinic	Short note		Community Medicine	
IM12.13	Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs	K	KH	Y	Lecture, Small group discussion	Viva voce/ Short note		Pharmacology	General Surgery
IM12.14	Write and communicate to the patient appropriately a prescription for thyroxine based on age, sex, and clinical and biochemical status	S/C	SH	Y	Skill assessment	Skill assessment		Pharmacology	
IM12.15	Describe and discuss the indications of thionamide therapy, radio iodine therapy and surgery in the management of thyrotoxicosis	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Pharmacology	General Surgery

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
Topic: Common malignancies		**Number of competencies: (19)**				**Number of procedures that require certification : (NIL)**			
IM13.1	Describe the clinical epidemiology and inherited & modifiable risk factors for common malignancies in India	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Biochemistry	
IM13.2	Describe the genetic basis of selected cancers	K	K	N	Lecture, Small group discussion	Short note/ Viva voce		Pathology	
IM13.3	Describe the relationship between infection and cancers	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Microbiology	
IM13.4	Describe the natural history, presentation, course, complications and cause of death for common cancers	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	
IM13.5	Describe the common issues encountered in patients at the end of life and principles of management	K	K	N	Lecture, Small group discussion	Short note/ Viva voce			
IM13.6	Describe and distinguish the difference between curative and palliative care in patients with cancer	K	K	N	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology	
IM13.7	Elicit document and present a history that will help establish the aetiology of cancer and includes the appropriate risk factors, duration and evolution	S	K	Y	Bedside clinic	Skill assessment/ Short case			General Surgery
IM13.8	Perform and demonstrate a physical examination that includes an appropriate general and local examination that excludes the diagnosis, extent spread and complications of cancer	S	SH	Y	Bedside clinic	Skill assessment/ short case			General Surgery
IM13.9	Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	S	K	Y	Bedside clinic	Skill assessment/ Short case		Human Anatomy	General Surgery
IM13.10	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	S	K	Y	Bedside clinic	Skill assessment/ Short case			General Surgery
IM13.11	Order and interpret diagnostic testing based on the clinical diagnosis including CBC and stool occult blood and prostate specific antigen	S	K	Y	Bedside clinic	Skill assessment/ Short case			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM13.12	Describe the indications and interpret the results of Chest X Ray, mammogram, skin and tissue biopsies and tumor markers used in common cancers	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Radiodiagnosis	
IM13.13	Describe and assess pain and suffering objectively in a patient with cancer	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Pharmacology	General Surgery
IM13.14	Describe the indications for surgery, radiation and chemotherapy for common malignancies	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Pharmacology	General Surgery
IM13.15	Describe the need, tests involved, their utility in the prevention of common malignancies	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Pathology	
IM13.16	Demonstrate an understanding and needs and preferences of patients when choosing curative and palliative therapy	A/C	KH	Y	Bedside clinic, small group discussion	Short note/ Viva voce		AETCOM	
IM13.17	Describe and enumerate the indications, use, side effects of narcotics in pain alleviation in patients with cancer	K	KH	Y	Bedside clinic,Small group discussion	Short note/ Viva voce		Pharmacology	Anesthesiology
IM13.18	Describe and discuss the ethical and the medico legal issues involved in end of life care	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		AETCOM	
IM13.19	Describe the therapies used in alleviating suffering in patients at the end of life	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		AETCOM	
Topic: Obesity		**Number of competencies: (15)**				**Number of procedures that require certification: (NIL)**			
IM14.1	Define and measure obesity as it relates to the Indian population	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			
IM14.2	Describe and discuss the aetiology of obesity including modifiable and non-modifiable risk factors and secondary causes	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	
IM14.3	Describe and discuss the monogenic forms of obesity	K	K	N	Lecture, Small group discussion	Short note/ Viva voce		Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM14.4	Describe and discuss the impact of environmental factors including eating habits, food, work, environment and physical activity on the incidence of obesity	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Community Medicine	
IM14.5	Describe and discuss the natural history of obesity and its complications	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	
IM14.6	Elicit and document and present an appropriate history that includes the natural history, dietary history, modifiable risk factors, family history, clues for secondary causes and motivation to lose weight	S	SH	Y	Bedside clinic, Skills lab	Skill assessment			
IM14.7	Perform, document and demonstrate a physical examination basedon the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities	S	SH	Y	Bedside clinic, Skills lab	Skill assessment			
IM14.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	S	SH	Y	Bedside clinic,Skills lab	Skill assessment/ Short note/ Viva voce			
IM14.9	Order and interpret diagnostic tests based on the clinical diagnosis including blood glucose, lipids, thyroid function tests etc.	S	SH	Y	Bedside clinic, Skills lab, Small group discussion	Skill assessment/ Short note/ Viva voce			
IM14.10	Describe the indications and interpret the results of tests for secondary causes of obesity	K	KH	Y	Bedside clinic, Skills lab, Small group discussion	Skill assessment/ Short note/ Viva voce			
IM14.11	Communicate and counsel patient on behavioural, dietary and lifestyle modifications	C	SH	Y	Bedside clinic, Skills lab	Skill assessment			
IM14.12	Demonstrate an understanding of patient's inability to adhere to lifestyle instructions and counsel them in a non - judgemental way	A/C	SH	Y	Bedside clinic, Skills lab	Skill assessment			
IM14.13	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for obesity	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology	
IM14.14	Describe and enumerate the indications and side effects of bariatric surgery	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM14.15	Describe and enumerate and educate patients, health care workers and the public on measures to prevent obesity and promote a healthy lifestyle	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			
Topic: GI bleeding		**Number of competencies: (18)**				**Number of procedures that require certification : (NIL)**			
IM15.1	Enumerate, describe and discuss the aetiology of upper and lowerGI bleeding	K	KH	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM15.2	Enumerate, describe and discuss the evaluation and steps involvedin stabilizing a patient who presents with acute volume loss and GI bleed	S	SH	Y	DOAP session, Small group discussion, Lecture	Written/ Viva voce/ Skill assessment		Pathology	General Surgery
IM15.3	Describe and discuss the physiologic effects of acute blood and volume loss	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Physiology	General Surgery
IM15.4	Elicit and document and present an appropriate history that identifies the route of bleeding, quantity, grade, volume loss, duration, etiology, comorbid illnesses and risk factors	S	SH	Y	Bedside clinic	Skill assessment			General Surgery
IM15.5	Perform, demonstrate and document a physical examination basedon the history that includes general examination, volume assessment and appropriate abdominal examination	S	SH	Y	Bedside clinic, Skills lab	Skill assessment			General Surgery
IM15.6	Distinguish between upper and lower gastrointestinal bleeding based on the clinical features	S	KH	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
IM15.7	Demonstrate the correct technique to perform an anal and rectal examination in a mannequin or equivalent	S	SH	Y	DOAP session	Skill assessment			General Surgery
IM15.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	S	SH	Y	Bedside clinic, Skills lab	Skill assessment/ Short note/ Viva voce			General Surgery
IM15.9	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, PT and PTT, stool examination, occult blood, liver function tests, H.pylori test.	S	SH	Y	Bedside clinic, DOAP session, Small group discussion	Skill assessment/ Short note/ Viva voce		Pathology	General Surgery

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM15.10	Enumerate the indications for endoscopy, colonoscopy and other imaging procedures in the investigation of Upper GI bleeding	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Surgery
IM15.11	Develop, document and present a treatment plan that includes fluid resuscitation, blood and blood component transfusion, and specific therapy for arresting blood loss	S	KH	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM15.12	Enumerate the indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM15.13	Observe cross matching and blood / blood component transfusion	S	SH	Y	Bedside clinic	Short note/ Viva voce/ Skill assessment		Pathology	General Surgery
IM15.14	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy of pressors used in the treatment of Upper GI bleed	K	K	Y	Lecture, Small group discussion	Short note/Viva voce		Pharmacology	General Surgery
IM15.15	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy of acid peptic disease including Helicobacter pylori	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology, Microbiology	General Surgery
IM15.16	Enumerate the indications for endoscopic interventions and Surgery	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
IM15.17	Determine appropriate level of specialist consultation	S	K	Y	Small group discussion				General Surgery
IM15.18	Counsel the family and patient in an empathetic non-judgmental manner on the diagnosis and therapeutic options	S	SH	Y	DOAP session	Skill assessment			General Surgery
Topic: Diarrheal disorder		**Number of competencies: (17)**				**Number of procedures that require certification : (NIL)**			
IM16.1	Describe and discuss the aetiology of acute and chronic diarrhea including infectious and non infectious causes	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Microbiology	
IM16.2	Describe and discuss the acute systemic consequences of diarrhea including its impact on fluid balance	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM16.3	Describe and discuss the chronic effects of diarrhea including malabsorption	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			
IM16.4	Elicit and document and present an appropriate history that includes the natural history, dietary history, travel , sexual history and other concomitant illnesses	S	SH	Y	Bedside clinic, Skills lab	Skill assessment		Microbiology, Pathology	
IM16.5	Perform, document and demonstrate a physical examination basedon the history that includes general examination, including an appropriate abdominal examination	S	SH	Y	Bedside clinic, Skills lab	Skill assessment			
IM16.6	Distinguish between diarrhea and dysentery based on clinical features	S	KH	Y	Lecture, Small group discussion	Short note/ Viva voce			
IM16.7	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	S	SH	Y	Bedside clinic, Skills lab	Skill assessment/ short note/ Viva voce			
IM16.8	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, and stool examination	S	SH	Y	Bedside clinic, Skills lab, Small group discussion	Skill assessment/ Short note/ Viva voce		Microbiology, Pathology	
IM16.9	Identify common parasitic causes of diarrhea under the microscopein a stool specimen	S	SH	Y	DOAP session	Skill assessment		Microbiology	
IM16.10	Identify vibrio cholera in a hanging drop specimen	S	SH	Y	DOAP session	Skill Assessment		Microbiology	
IM16.11	Enumerate the indications for stool cultures and blood cultures in patients with acute diarrhea	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology	
IM16.12	Enumerate and discuss the indications for further investigations including antibodies, colonoscopy, diagnostic imaging and biopsy in the diagnosis of chronic diarrhea	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	General Surgery
IM16.13	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for parasitic causes of diarrhea	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology, Microbiology	
IM16.14	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for bacterial and viral diarrhea	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology, Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM16.15	Distinguish based on the clinical presentation Crohn's disease from Ulcerative Colitis	S	SH	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM16.16	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy including immunotherapy	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology	
IM16.17	Describe and enumerate the indications for surgery in inflammatory bowel disease	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
Topic: Headache		**Number of competencies: (14)**				**Number of procedures that require certification : (NIL)**			
IM17.1	Define and classify headache and describe the presenting features, precipitating factors, aggravating and relieving factors of various kinds of headache	K	KH	Y	Lecture, Small group discussion	Short note/ Viva voce		Human Anatomy	
IM17.2	Elicit and document and present an appropriate history including aura, precipitating aggravating and relieving factors, associated symptoms that help identify the cause of headaches	S	SH	Y	Bedside clinic, Small group discussion	Bedside clinic/ Skill assessment			
IM17.3	Classify migraine and describe the distinguishing features between classical and non classical forms of migraine	K	KH	Y	Bedside clinic, Small group discussion	Bedside clinic/ Skill assessment			
IM17.4	Perform and demonstrate a general neurologic examination and a focused examination for signs of intracranial tension including neck signs of meningitis	S	SH	Y	Bedside clinic, Small group discussion	Bedside clinic/ Skill assessment			
IM17.5	Generate document and present a differential diagnosis based on the clinical features, and prioritise the diagnosis based on the presentation	S	SH	Y	Bedside clinic,Small group discussion	Bedside clinic/ skill assessment			
IM17.6	Choose and interpret diagnostic testing based on the clinical diagnosis including imaging	S	SH	Y	Lecture, Small group discussion, Bedside clinic	Skill Assessment			
IM17.7	Enumerate the indications and describe the findings in the CSF in patients with meningitis	K	K	Y	Small group discussion, Bedside clinic	Skill Assessment		Microbiology, Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM17.8	Demonstrate in a mannequin or equivalent the correct technique for performing a lumbar puncture	S	SH	Y	DOAP session	Skill assessment		Microbiology, Pathology	
IM17.9	Interpret the CSF findings when presented with various parametersof CSF fluid analysis	S	SH	Y	Small group discussion, Bedside clinic	Skill assessment		Microbiology, Pathology	
IM17.10	Enumerate the indications for emergency care admission and immediate supportive care in patients with headache	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			
IM17.11	Describe the indications, pharmacology, dose, side effects of abortive therapy in migraine	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM17.12	Describe the indications, pharmacology, dose, side effects of prophylactic therapy in migraine	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM17.13	Describe the pharmacology, dose, adverse reactions and regimensof drugs used in the treatment of bacterial, tubercular and viral meningitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM17.14	Counsel patients with migraine and tension headache on lifestyle changes and need for prophylactic therapy	A/C	SH	N	DOAP session	Skill Assessment		Pharmacology	Psychiatry
Topic: Cerebrovascular accident		**Number of competencies: (17)**				**Number of procedures that require certification : (NIL)**			
IM18.1	Describe the functional and the vascular anatomy of the brain	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
IM18.2	Classify cerebrovascular accidents and describe the aetiology, predisposing genetic and risk factors pathogenesis of hemorrhagic and non hemorrhagic stroke	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM18.3	Elicit and document and present an appropriate history including onset, progression, precipitating and aggravating relieving factors, associated symptoms that help identify the cause of the cerebrovascular accident	S	SH	Y	Bedside clinic	Skill assessment		Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM18.4	Identify the nature of the cerebrovascular accident based on the temporal evolution and resolution of the illness	K	KH	Y	Bedside clinic, Small group discussion	Skill Assessment			
IM18.5	Perform, demonstrate & document physical examination that includes general and a detailed neurologic examination as appropriate, based on the history	S	SH	Y	Bedside clinic, DOAP session	Skill Assessment			
IM18.6	Distinguish the lesion based on upper vs lower motor neuron, side, site and most probable nature of the lesion	K/S	SH	Y	Bedside clinic, DOAP session	Skill Assessment		Physiology	
IM18.7	Describe the clinical features and distinguish, based on clinical examination, the various disorders of speech	K/S	SH	N	Bedside clinic, DOAP session	Skill Assessment		Physiology	
IM18.8	Describe and distinguish, based on the clinical presentation, the types of bladder dysfunction seen in CNS disease	K	KH	Y	Small group discussion, Bedside clinic	Written/ Viva voce		Physiology	
IM18.9	Choose and interpret the appropriate diagnostic and imaging testthat will delineate the anatomy and underlying cause of the lesion	S	KH	Y	Bedside clinic, DOAP session, Small group discussion	Written/ Viva voce/ Skill assessment		Radiodiagnosis	
IM18.10	Choose and interpret the appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA)	S	SH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM18.11	Describe the initial supportive management of a patient presenting with a cerebrovascular accident (CVA)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM18.12	Enumerate the indications for and describe acute therapy of non hemorrhagic stroke including the use of thrombolytic agents	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM18.13	Enumerate the indications for and describe the role of anti platelet agents in non hemorrhagic stroke	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM18.14	Describe the initial management of a hemorrhagic stroke	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM18.15	Enumerate the indications for surgery in a hemorrhagic stroke	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			General Surgery

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM18.16	Enumerate the indications describe and observe the multidisciplinary rehabilitation of patients with a CVA	S	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Physical Medicine & Rehabilitation
IM18.17	Counsel patient and family about the diagnosis and therapy in an empathetic manner	A/C	SH	Y	DOAP session	Skill assessment			
Topic: Movement disorders		**Number of competencies: (09)**				**Number of procedures that require certification : (NIL)**			
IM19.1	Describe the functional anatomy of the locomotor system of the brain	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Physiology	
IM19.2	Classify movement disorders of the brain based on distribution, rhythm, repetition, exacerbating and relieving factors	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM19.3	Elicit and document and present an appropriate history including onset, progression precipitating and aggravating relieving factors, associated symptoms that help identify the cause of the movement disorders	S	SH	Y	Bedside clinic	Skill assessment			
IM19.4	Perform, demonstrate and document a physical examination that includes a general examination and a detailed neurologic examination using standard movement rating scales	S	SH	Y	Bedside clinic	Skill assessment			
IM19.5	Generate document and present a differential diagnosis and prioritise based on the history and physical examination	S	SH	Y	Bedside clinic	Skill assessment			
IM19.6	Make a clinical diagnosis regarding on the anatomical location, nature and cause of the lesion based on the clinical presentation and findings	S	SH	Y	Bedside clinic	Skill assessment			
IM19.7	Choose and interpret diagnostic and imaging tests in the diagnosisof movement disorders	S	SH	Y	Bedside clinic, Small group session	Skill assessment/ Written/ Viva voce		Radiodiagnosis	
IM19.8	Discuss and describe the pharmacology, dose, side effects and interactions used in the drug therapy of Parkinson's syndrome	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM19.9	Enumerate the indications for use of surgery and botulinum toxin in the treatment of movement disorders	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	General Surgery

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
Topic: Envenomation		**Number of competencies: (09)**				**Number of procedures that require certification : (NIL)**			
IM20.1	Enumerate the local poisonous snakes and describe the distinguishing marks of each	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Forensic Medicine, Pharmacology	
IM20.2	Describe, demonstrate in a volunteer or a mannequin and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field	S	SH	Y	DOAP session	Skill assessment/ Written/ Viva voce		Forensic Medicine	
IM20.3	Describe the initial approach to the stabilisation of the patient who presents with snake bite	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Forensic Medicine	
IM20.4	Elicit and document and present an appropriate history, the circumstance, time, kind of snake, evolution of symptoms in a patient with snake bite	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Forensic Medicine	
IM20.5	Perform a systematic examination, document and present a physical examination that includes general examination, local examination, appropriate cardiac and neurologic examination	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM20.6	Choose and interpret the appropriate diagnostic testing in patients with snake bites	S	SH	Y	Small group discussion	Written/ Viva voce			
IM20.7	Enumerate the indications and describe the pharmacology, dose, adverse reactions, hypersensitivity reactions of anti snake venom	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM20.8	Describe the diagnosis, initial approach stabilisation and therapy of scorpion envenomation	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM20.9	Describe the diagnosis initial approach stabilisation and therapy of bee sting allergy	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
Topic: Poisoning		**Number of competencies: (08)**				**Number of procedures that require certification : (NIL)**			
IM21.1	Describe the initial approach to the stabilisation of the patient who presents with poisoning	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM21.2	Enumerate the common plant poisons seen in your area and describe their toxicology, clinical features, prognosis and specificapproach to detoxification	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Forensic Medicine, Pharmacology	
IM21.3	Enumerate the common corrosives used in your area and describe their toxicology, clinical features, prognosis and approach to therapy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Forensic Medicine, Pharmacology	
IM21.4	Enumerate the commonly observed drug overdose in your area and describe their toxicology, clinical features, prognosis and approach to therapy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Forensic Medicine, Pharmacology	
IM21.5	Observe and describe the functions and role of a poison center in suspected poisoning	S	KH	Y	DOAP session	document in log book		Forensic Medicine, Pharmacology	
IM21.6	Describe the medico legal aspects of suspected suicidal or homicidal poisoning and demonstrate the correct procedure to writea medico legal report on a suspected poisoning	S	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		Forensic Medicine, Pharmacology	
IM21.7	Counsel family members of a patient with suspected poisoning about the clinical and medico legal aspects with empathy	A/C	SH	Y	DOAP session	Skill assessment		Forensic Medicine, Pharmacology	
IM21.8	Enumerate the indications for psychiatric consultation and describe the precautions to be taken in a patient with suspected suicidal ideation / gesture	K	KH	Y	DOAP session	Skill assessment		Forensic Medicine, Psychiatry	
Topic: Mineral, Fluid Electrolyte and Acid base Disorder		**Number of competencies: (13)**				**Number of procedures that require certification : (NIL)**			
IM22.1	Enumerate the causes of hypercalcemia and distinguish the features of PTH vs non PTH mediatedhypercalcemia	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM22.2	Describe the aetiology, clinical manifestations, diagnosis and clinical approach to primary hyperparathyroidism	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	General Surgery
IM22.3	Describe the approach to the management of hypercalcemia	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	
IM22.4	Enumerate the components and describe the genetic basis of the multiple endocrine neoplasia syndrome	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM22.5	Enumerate the causes and describe the clinical features and the correct approach to the diagnosis and management of the patient with hyponatremia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM22.6	Enumerate the causes and describe the clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hyponatremia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM22.7	Enumerate the causes and describe the clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hypokalemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM22.8	Enumerate the causes and describe the clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hyperkalemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM22.9	Enumerate the causes and describe the clinical and laboratory features of metabolic acidosis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology	
IM22.10	Enumerate the causes of describe the clinical and laboratory features of metabolic alkalosis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology	
IM22.11	Enumerate the causes and describe the clinical and laboratory features of respiratory acidosis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology	
IM22.12	Enumerate the causes and describe the clinical and laboratory features of respiratory alkalosis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology	
IM22.13	Identify the underlying acid based disorder based on an ABG report and clinical situation	S	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology	
Topic: Nutritional and Vitamin Deficiencies		**Number of competencies: (05)**				**Number of procedures that require certification: (NIL)**			
IM23.1	Discuss and describe the methods of nutritional assessment in an adult and calculation of caloric requirements during illnesses	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	Pediatrics
IM23.2	Discuss and describe the causes and consequences of protein caloric malnutrition in the hospital	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	Pediatrics

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM23.3	Discuss and describe the aetiology, causes, clinical manifestations, complications, diagnosis and management of common vitamin deficiencies	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	Pediatrics
IM23.4	Enumerate the indications for enteral and parenteral nutrition in critically ill patients	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	Pediatrics
IM23.5	Counsel and communicate to patients in a simulated environment with illness on an appropriate balanced diet	S	SH	Y	DOAP session	Skill assessment			
Topic: Geriatrics		**Number of competencies: (22)**				**Number of procedures that require certification : (NIL)**			
IM24.1	Describe and discuss the epidemiology, pathogenesis, clinical evolution, presentation and course of common diseases in theelderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM24.2	Perform multidimensional geriatric assessment that includes medical, psycho-social and functional components	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Psychiatry	
IM24.3	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of acute confusional states	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM24.4	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vascular events in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM24 5	Describe and discuss the aetiopathogenesis clinical presentation identification, functional changes, acute care, stabilization, management and rehabilitation of depression in the elderly	K	KH	Y	Lecture Small group discussion	Written/ Viva voce			Psychiatry
IM24.6	Describe and discuss the aetiopathogenesis causes, clinical presentation, difference in discussion presentation identification, functional changes, acute care, stabilization, management and rehabilitation of dementia in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			AETCOM

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM24.7	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of personality changes in the elderly	K	KH	N	Lecture, Small group discussion	Written/ Viva voce			Psychiatry
IM24.8	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of osteoporosis in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM24.9	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of CVA in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM24.10	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of COPD in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Respiratory Medicine
IM24.11	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Anesthesiology, General Surgery
IM24.12	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of degenerative joint disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM24.13	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of falls in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics, Physical Medicine & Rehabilitation
IM24.14	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of common fractures in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
IM24.15	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vision and visual loss in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Ophthalmology

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM24.16	Describe and discuss the principles of physical and social rehabilitation, functional assessment, role of physiotherapy and occupational therapy in the management of disability in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics, Physical Medicine & Rehabilitation
IM24.17	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of hearing loss in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			ENT
IM24.18	Describe the impact of the demographic changes in ageing on the population	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Community Medicine	
IM24.19	Enumerate and describe the social problems in the elderly including isolation, abuse, change in family structure and their impact on health.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Psychiatry
IM24.20	Enumerate and describe social interventions in the care of elderly including domiciliary discussion services, rehabilitation facilities, oldage homes and state interventions	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
IM24.21	Enumerate and describe ethical issues in the care of the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			AETCOM
IM24.22	Describe and discuss the aetiopathogenesis, clinical presentation, complications, assessment and management of nutritional disordersin the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	
Topic: Miscellaneous Infections		**Number of competencies: (13)**				**Number of procedures that require certification : (NIL)**			
IM25.1	Describe and discuss the response and the influence of host immune status, risk factors and comorbidities on zoonotic diseases(e.g. Leptospirosis, Rabies) and non-febrile infectious disease (e.g.Tetanus)	K	K	Y	Lecture, Small group discussion	Written		Microbiology, Community Medicine	
IM25.2	Discuss and describe the common causes, pathophysiology and manifestations of these diseases	K	K	Y	Lecture, Small group discussion	Written		Microbiology, Community Medicine	
IM25.3	Describe and discuss the pathophysiology and manifestations of these diseases	K	KH	Y	Lecture, Small group discussion	Written		Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM25.4	Elicit document and present a medical history that helps delineate the aetiology of these diseases that includes the evolution and pattern of symptoms, risk factors, exposure through occupation and travel	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Community Medicine	
IM25.5	Perform a systematic examination that establishes the diagnosisand severity of presentation that includes: general skin, mucosal and lymph node examination, chest and abdominal examination (including examination of the liver and spleen)	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM25.6	Generate a differential diagnosis and prioritise based on clinical features that help distinguish between infective, inflammatory, malignant and rheumatologic causes	K	SH	Y	Bedside clinic, DOAP session	Written/ Viva voce			
IM25.7	Order and interpret diagnostic tests based on the differential diagnosis including: CBC with differential, blood biochemistry, peripheral smear, urinary analysis with sediment, Chest X ray, blood and urine cultures, sputum gram stain and cultures, sputum AFB and cultures, CSF analysis, pleural and body fluid analysis, stool routine and culture and QBC	K	SH	Y	Bedside clinic, Skill assessment	Skill assessment		Pathology, Microbiology	
IM25.8	Enumerate the indications for use of newer techniques in the diagnosis of these infections	K	KH	N	Lecture, Small group discussion	Written/ Viva voce			
IM25.9	Assist in the collection of blood and other specimen cultures	S	SH	Y	DOAP session	Log book documentation		Microbiology	
IM25.10	Develop and present an appropriate diagnostic plan based on the clinical presentation, most likely diagnosis in a prioritised and cost effective manner	K	KH	Y	Bedside clinic, Skill assessment	Skill assessment			
IM25.11	Develop an appropriate empiric treatment plan based on the patient's clinical and immune status pending definitive diagnosis	C	SH	Y	DOAP session	Skill assessment		Microbiology, Pharmacology	
IM25.12	Communicate to the patient and family the diagnosis and treatmentof identified infection	C	SH	Y	DOAP session	Skill assessment		AETCOM	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM25.13	Counsel the patient and family on prevention of various infections due to environmental issues	C	SH	Y	DOAP session	Skill assessment		Community Medicine, General Medicine	
Topic: The role of the physician in the community		**Number of competencies: (49)**				**Number of procedures that require certification : (NIL)**			
IM26.1	Enumerate and describe professional qualities and roles of a physician	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.2	Describe and discuss the commitment to lifelong learning as an important part of physician growth	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.3	Describe and discuss the role of non maleficence as a guidingprinciple in patient care	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.4	Describe and discuss the role of autonomy and shared responsibilityas a guiding principle in patient care	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.5	Describe and discuss the role of beneficence of a guiding principlein patient care	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.6	Describe and discuss the role of a physician in health care system	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.7	Describe and discuss the role of justice as a guiding principle in patient care	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.8	Identify discuss medicolegal, socioeconomic and ethical issues asit pertains to organ donation	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.9	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as it pertains to rights, equity and justice in access to health care	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.10	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to confidentiality in patient care	K	KH	Y	Small group discussion	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM26.11	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to patient autonomy, patient rights and shared responsibility in health care	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.12	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to decision making in health care including advanced directives and surrogate decision making	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.13	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to decision making in emergency care including situations where patients do not have the capability or capacity to give consent	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.14	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to research in human subjects	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.15	Identify, discuss and defend, medicolegal,socio-cultural and ethical issues as they pertain to consent for surgical procedures	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.16	Identify, discuss and defend medicolegal, socio-cultural, professional and ethical issues as it pertains to the physicianpatient relationship (including fiduciary duty)	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.17	Identify, discuss physician's role and responsibility to society and the community that she/ he serves	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.18	Identify, discuss and defend medicolegal, socio-cultural, professional and ethical issues in physician- industry relationships	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.19	Demonstrate ability to work in a team of peers and superiors	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM26.20	Demonstrate ability to communicate to patients in a patient, respectful, non threatening, non judgemental and empathetic manner	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM26.21	Demonstrate respect to patient privacy	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM26.22	Demonstrate ability to maintain confidentiality in patient care	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			
IM26.23	Demonstrate a commitment to continued learning	S	SH	Y	Small group discussion	Skill assessment/ Viva voce			
IM26.24	Demonstrate respect in relationship with patients, fellow team members, superiors and other health care workers	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM26.25	Demonstrate responsibility and work ethics while working in the health care team	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM26.26	Demonstrate ability to maintain required documentation in healthcare (including correct use of medical records)	S	SH	Y	Small group discussion	Skill assessment/ Viva voce			
IM26.27	Demonstrate personal grooming that is adequate and appropriate for health care responsibilities	S	SH	Y	Small group discussion	Skill assessment			
IM26.28	Demonstrate adequate knowledge and use of information technology that permits appropriate patient care and continued learning	S	SH	Y	Small group discussion	Skill assessment/ Viva voce			
IM26.29	Communicate diagnostic and therapeutic opitons to patient and family in a simulated environment	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM26.30	Communicate care opitons to patient and family with a terminalillness in a simulated environment	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM26.31	Demonstrate awareness of limitations and seeks help and consultations appropriately	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM26.32	Demonstrate appropriate respect to colleagues in the profession	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.33	Demonstrate an understanding of the implications and the appropriate procedures and response to be followed in the event of medical errors	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.34	Identify conflicts of interest in patient care and professional relationships and describe the correct response to these conflicts	S	SH	Y	Small group discussion	Skill assessment/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM26.35	Demonstrate empathy in patient encounters	S	SH	Y	Bedside clinic, DOAP session	Skill assessment/ Viva voce			
IM26.36	Demonstrate ability to balance personal and professional priorities	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.37	Demonstrate ability to manage time appropriately	S	SH	Y	Small group discussion	Skill assessment/ Viva voce			
IM26.38	Demonstrate ability to form and function in appropriate professional networks	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.39	Demonstrate ability to pursue and seek career advancement	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.40	Demonstrate ability to follow risk management and medical error reduction practices where appropriate	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.41	Demonstrate ability to work in a mentoring relationship with junior colleagues	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.42	Demonstrate commitment to learning and scholarship	S	SH	N	Small group discussion	Skill assessment/ Viva voce			
IM26.43	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as they pertain to in vitro fertilisation donor insemination and surrogate motherhood	K	KH	N	Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
IM26.44	Identify, discuss and defend medicolegal, socio-cultural professional and ethical issues pertaining to medical negligence	K	KH	N	Small group discussion	Written/ Viva voce			
IM26.45	Identify, discuss and defend medicolegal, socio-cultural professional and ethical issues pertaining to malpractice	K	KH	N	Small group discussion	Written/ Viva voce			
IM26.46	Identify, discuss and defend medicolegal, socio-cultural professional and ethical issues in dealing with impaired physicians	K	KH	N	Small group discussion	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH / SH/P	Core Y/ N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
IM26.47	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as they pertain to refusal of care including do not resuscitateand withdrawal of life support	K	KH	Y	Small group discussion	Written/ Viva voce			
IM26.48	Demonstrate altruism	S	SH	Y	Small group discussion	Written/ Viva voce			
IM26.49	Administer informed consent and approriately adress patient queriesto a patient being enrolled in a research protocol in a simulated environment	S	SH	Y	Bedside clinic, DOAP session	Written/ Viva voce			

Internal Assessment
Subject: General Medicine and allied
Applicable for batches admitted from 2019 and onwards

Phase	IA – 1 -Exam			IA – 2 - Exam		
	Theory General Medicine Only (January)	**Practical EOP**	Total Marks	**Theory General Medicine Only (May)**	**Practical of Allied EOP**	Total Marks
Second MBBS	50	50	100	50	Dermatology = 25 Psychaitry = 25	100

Phase	IA – 3 -Exam			IA – 4 -Exam		
	Theory General Medicine + allied) (January)	**Practical EOP**	Total Marks	**Theory General Medicine + allied) (April)**	**Practical of Allied EOP**	Total Marks
III MBBS Part I	50	50	100	50	Dermatology = 25 Psychaitry = 25	100

Phase	IA – 5 - Exam			Prelim Exam (As per university pattern)		
	Theory Gen Medicine + Allied(May)	**PracticalEnd of** 8Weeks posting	Total Marks	**Theory (November)**	**Practical (November)**	Total Marks
III MBBS Part II	100	100	200	100 x 2 papers = 200	200	400

(There will be FORMATIVE ASSESSMENT at the End of four weeks Clinical Posting ofGeneral **Medicine** NOT to be added to INTERNAL ASSESSMENT)**.**

Assessment in CBME is **ONGOING PRCESS**,No Preparatory leave is permitted.

1. There shall be 6 internal assessment examinations in General Medicine including allied.
2. The suggested pattern of question paper for internal assessment internal examinations, except prelim examination is attached at the end. Pattern of the prelim's examinations should be similar to the University examinations.
3. Internal assessment marks for theory and practical will be converted to out of 50 (theory) +50 (practical). Internal assessment marks, after conversion, should be submitted to university within the stipulated time as per directives from the University.
4. **Conversion Formula for calculation of marks in internal assessment examinations**

	Theory	**Practical**
Phase II	100	100
Phase III/I	100	100
Phase III/II	300	300
Total	**500**	**500**
Conversion out of	**50**	**50**
Conversionformula	**Total marks in 6IA theory examinations /10**	**Total marks in 6 IA Practical examinations /10**
Eligibility criteriaafter conversion	**20**	**20**
	Combined theory + Practical = 50	

5. While preparing Final Marks of Internal Assessment, the rounding-off marks shall be done as illustrated in following table.

Total Internal Assessment Marks	**Final rounded marks**
33.01 to 33.49	33
33.50 to 33.99	34

6. Students must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination of that subject.
7. Internal assessment marks will not to be added to marks of the University examinations and will be shown separately in mark list.

8. Remedial measures

A) Remedial measures for non-eligible students

1. At the end of each internal assessment examination, students securing less than 50% marks shall be identified. Such students should be counseled at the earliest and periodically. Extra classes for such studentsmay be conducted, if needed.
2. If majority of the students found to be weak in a particular area, then extra classes must be scheduled for all such students.
3. Even after these measures, if a student is failed to secure 50% marks combined in theory and practical (40% separately in theory and practical) after prelim examination, the student shall not be eligible for final examination.
4. Non eligible candidates are offered to reappear for repeat internal assessment examination/s, which must be conducted 2 months before next University examination. Extra classes for such students may be conducted for such students. The pattern for this repeat internal assessment examination shall be similar to the final University examination. Only the marks in this examination shall be considered for deciding the eligibility criteria. Following conversion formula shall be used for converting the marks.

	Theory	**Practical**
Remedial examination (as per final examination)	200	200
Conversion out of	50	50
Conversionformula	Marks in remedialtheory examinations /4	Marks in remedial Practical examinations /4
Eligibility criteriaafter conversion	20	20
	Combined theory + Practical = 50	

B) Remedial measures for absent students:

i. If any of the students is absent for any of the 6 IA examinations due to any reasons, following measures shall be taken.

ii. The student is asked to apply to the academic committee of the college for reexamination, through HOD, to ascertain the genuineness of the reason for absentee.

iii. If permitted by academic committee, an additional examination for suchstudents is to be conducted after prelims examination. Marks for such additional examination shall be equal to the missed examination.

iv. Even if a student has missed more than one IA examination, he/she can appear for only one additional IA examination. In such scenario, eligibility should be determined by marks obtained in internal assessment examinations for which the candidate has appeared,without changing the denominator of 500.

Internal Assessment Practical Examinations

II MBBS

Internal Assessment - 1General Medicine

Clinical A (30)			OSCE & Viva B (20)		
			OSCE & Table viva (20)		Grand Total A +B= 50
Long Case	Demonstration of clinical signs	Communication skills	OSCE of Psychomotor Skills	Table viva [ECG, Drugs, X rays, Instruments, Logbook, Journal]	
20	5	5	10	10	50

Internal Assessment - 2

Dermatology and Psychiatry (to be conducted at the end of respectiveclinical postings)

Subject: General Medicine Allied Practical			
Case	OSCE 1	Viva (Surgical Pathology, Radiology, Instruments and Surgical Procedure, Journal / log book)	Practical Total
10	5	10	25

Subject: General Medicine Allied Practical (IA –2)			
X-Ray and other diagnostic modalities - Basics	Viva (Knowledge of legal aspects, radiation protection etc.)	Journal / log book	Practical Total
15	5	5	25

III MBBS Part I

Internal Assessment - 3 General medicine

Clinical A (30)			OSCE & Viva B (20)		
Long Case	Demonstration of clinical signs	Communication skills	OSCE & Table viva		Grand Total A +B= 50
			OSCE of Psychomotor Skills	Table viva [ECG, Drugs, X rays, Instruments, Logbook, Journal]	
20	5	5	10	10	50

Internal Assessment - 4 Dermatology and Psychiatry

Subject: General Medicine Allied Practical (IA – 2)			
Case	**OSCE 1**	**Viva (ECG, Drugs, Radiology, Instruments and Journal / log book)**	**Practical Total**
10	**5**	**10**	**25**

Subject: General Medicine & Allied Practical (IA – 2)			
OSCE	**Drugs, Instruments**	**Viva**	**Practical Total**
10	**8**	**7**	**25**

III MBBS Part II
Internal Assessment - 5General Medicine

Clinical A (60)			OSCE & Viva B (40)		
Long Case	**Demonstration of clinical signs**	**Communication skills**	**OSCE & Table viva (40)**		**Grand Total**
			OSCE of Psychomotor Skills	**Table viva [ECG, Drugs, X rays, Instruments, Logbook, Journal]**	**A +B= 100**
40	**10**	**10**	**20**	**20**	**100**

Final practical examinationGeneral Medicine

Seat No.	**Long Case General Medicine including communication skill (60)**		**Short Case 1 General Medicine (30)**		**Short Case2 General Medicine (30)**		**General Medicine (60) OSCE # & Table viva**			**Ortho (20)**	**Grand Total**
	Long case	Communication skills	Short case	Clinical signs demo	Short case	Clinical signs demo	Instruments +Procedure+ Log book	X rays + ECG, Drugs +Journal	OSCE	OSCE (10) + Table (10)	
	50	10	20	10	20	10	20	20	20	20	200

OSCE Stations may include General examinations, Local examinations, psychomotor skills,Communication skills, AETCOM etc.

*Communication skills to be assessed by Kalamazoo Consensus, clinical signs to be assessed by either GLOBAL Rating Scale or OSCE, Psychomotor Skills to be assessed by OSCE with checklist. If the skills are small, 2 or 3 skills may be combined.

Paper wise distribution of topics for Prelim

Annual ExaminationYear: **III-II MBBS**

Subject: **General Medicine and Allied**

Paper	Section	Topics
I	A	MCQs on all topics of paper I of Medicine
	B	Cardiovascular System, Gastrointestinal System, Hepatobiliary System & Pancreas, & Genetics Endocrinology, infectious disease & Nephrology, Clinical Nutrition, Miscellaneous 1. Heart Failure 2. Acute Myocardial Infection/ HD 3. Liver DIS 4. Fever and Febrile Syndrome 5. HIV 6. Hypertension 7. AKI/CKI 8. DM 9. Thyroid 10. Obesity 11. GI BLED 12. Diarrhea 13. Envenomation 14. Poison 15. Min/Fluids/ELE/Acid-Base 16. Nutrition, Vitamin 17. Miscellaneous Infections (Lepto/ Rabies/Tetanus)
	C	Genetics Endocrinology, infectious disease & Nephrology, Clinical Nutrition, Miscellaneous 1. Fever and Febrile Syndrome 2. HIV 3. AKI/CKI 4. DM 5. Thyroid 6. Obesity 7. Envenomation 8. Poison 9. Min/Fluids/ELE/Acid- base 10. Nutrition Vitamin 11. Miscellaneous Infections (Lepto/ Rabies/Tetanus)
II	A	MCQs on all topics of the paper II including Psychiatry, Dermatology, Respiratory Medicine
	B	Resp. Med including Pneumonia 2. Rheumatology 3. Anemia 4. Malignancy 5. Headache 6. CVA 7. MOVT DISORD 8. Geriatrics 9. Psychiatry 10. Dermat. /VD/Leprosy
	C	Resp. Med, including Pneumonia 2. Psychiatry 3. Dermat. / VD/Leprosy

Skills Training

1. **Objective of the Document**

   The objective of the document is to facilitate institutions and faculty to develop and implement skills training as part of implementation of new Undergraduate Curriculum.

2. **Glossary of Terms Used in the Document**

   Skill: Skill is the ability to perform a task leading to a specific predefined outcome.Skill may be:

   a) Intellectual or cognitive which includes clinical reasoning and decision making skills,
   b) Procedural or psychomotor skills that require manual dexterity and include laboratory and clinical skills,
   c) Communication skills,
   d) Team skills including leadership skills.

   Competency: The habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, attitude, values, and reflection in daily practice for the benefit of the individual and the community being served.

   Skill Assessment: A session that assesses the skill of the student including those in the laboratory, bed-side, skills lab, skills station that uses mannequins/ paper cases/simulated patients/real patients as the context demands.

   DOAP (Demonstration -Observation - Assistance - Performance): A practical session that allows the student to observe a demonstration, assist the performer, perform in a simulated environment, perform under supervision or perform independently.

3. **Introduction-** The current undergraduate medical education curriculum focuses on competencies and outcomes and gives emphasis to skill development in all phases. The competencies 'Shows How' (SH) or 'Perform' (P) are listed in relation to the skills to be acquired by the learner. The Graduate Medical Education Regulations Part II, 2019 envisages that certain skills are prerequisites for graduation. Therefore, it is necessary for institutions to create skill sessions in which essential/ desirable and certifiable skills are acquired. These skill sessions should be planned during their respective phase in a laboratory/during clinical posting. There should be proper documentation of the process of acquisition of skills. When required, a skills lab may be used to impart training. Skills lab provides a safe training environment in which a learner can be observed and be provided with the feedback necessary to improve. It also allows the learner to do tasks repetitively under supervision till the desired level of competency is achieved.

4. **Salient Principles:** The undergraduate medical education program is designed with a goal to create an "Indian Medical Graduate" (IMG) possessing the requisite knowledge, skills, attitudes, values and responsiveness, so that he or she may function appropriately and effectively as a physician of first contact of the community while being globally relevant. The principles governing skill acquisition have been presented in this module which also facilitate the utilization of 'Skills lab'

during the undergraduate training and assessment.

This module helps to:

a) understand the link between competency and skill,

b) enumerate the general principles of skill acquisition,

c) explain how to apply these principles,

d) understand the different methods and steps of skills teaching and acquisition (skill cycle),

e) develop skill sessions from a given competency, and

f) impart, assess and document the acquisition of these skills.

The module also elaborates the concepts, processes, resources and organizational set up for a basic skills lab in a college setting.

Certifiable Procedural Skills, as given in GMER 2019 are given below:

- General Medicine
- Venipuncture (I)
- Intramuscular injection (I)
- Intradermal injection (D)
- Subcutaneous injection (I)
- Intra Venous (IV) injection (I)
- Setting up IV infusion and calculating drip rate (I)
- Blood transfusion (O)
- Urinary catheterization (D)
- Basic life support (D)
- Oxygen therapy (I)
- Aerosol therapy / nebulization (I)
- Ryle's tube insertion (D)
- Lumbar puncture (O)
- Pleural and ascitic aspiration (O)
- Cardiac resuscitation (D)
- Peripheral blood smear interpretation (I)
- Bedside urine analysis (D)

Figure II: Approach to competency-based skill development

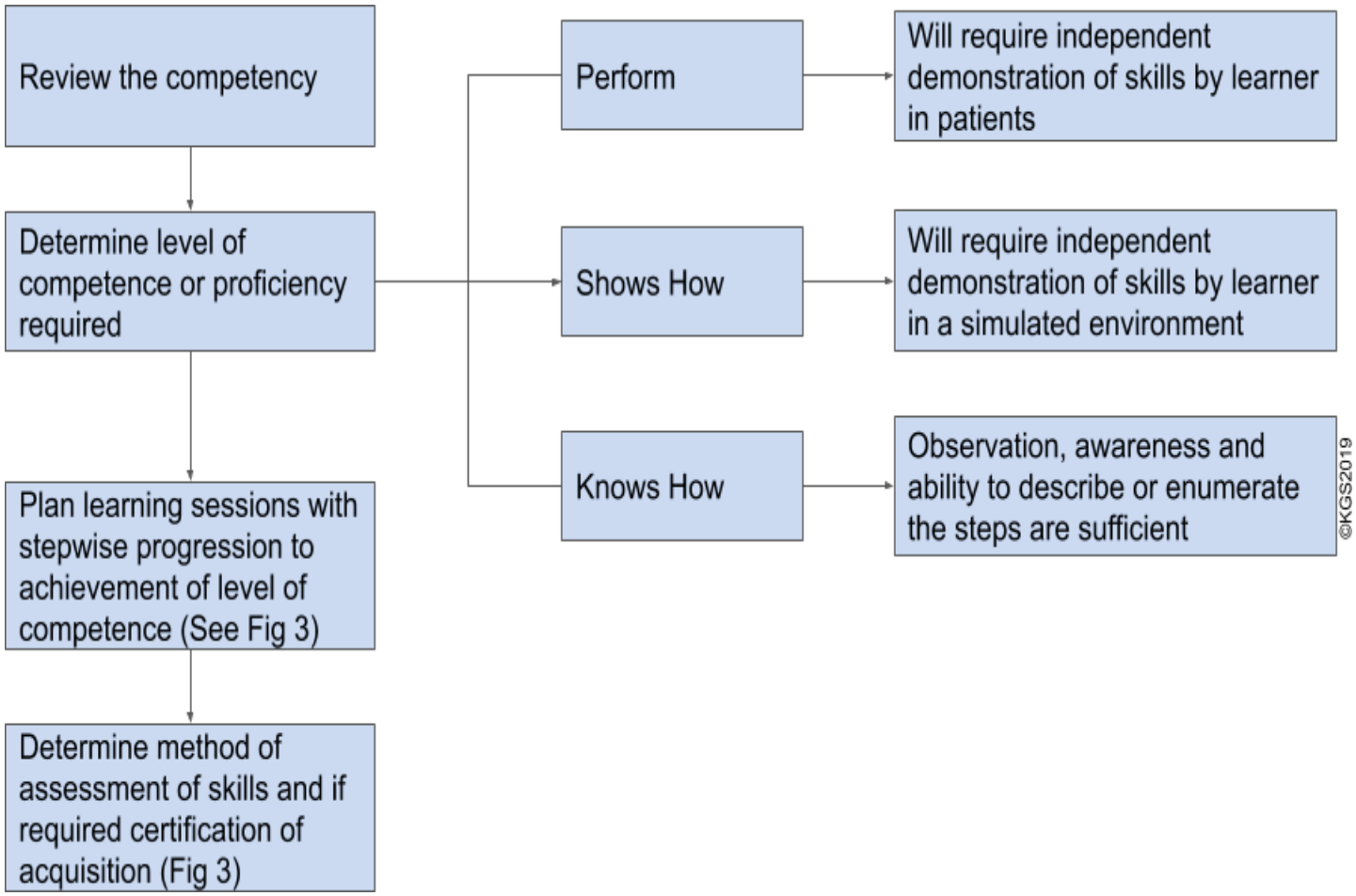
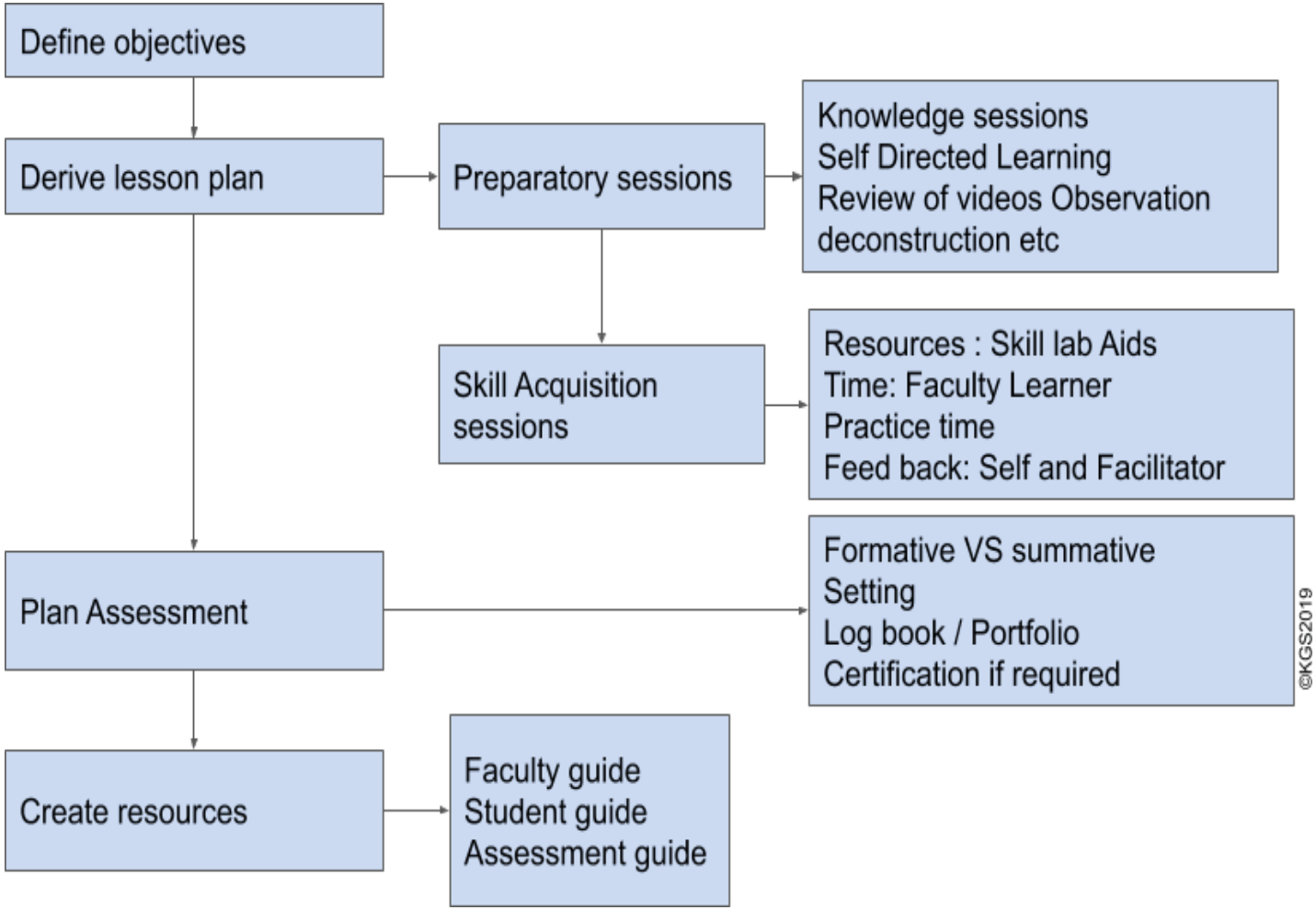


Figure III: Planning a skill session



PEADIATRIC

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

GOAL:

The broad goal of the teaching of undergraduate students in Pediatrics is to acquire adequate knowledge and appropriate skills for optimally dealing with major health problems of children to ensure their optimal growth and development.

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety

2.Graduate Attributes: Planning Patient Care and problem solving abilities

PO 2:

Demonstrate ability to apply this knowledge to the practice of medicine in routine, emergency and disaster situations.

Demonstrate ability to appraise and assimilate scientific evidence into their own ongoing learning, research, and patient care.

Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences.

3. Graduate Attributes: Professional excellence & Ethics

PO 3:

Demonstrate commitment to the highest standards of professional responsibility towards patient, colleagues, society, growth of medical professional and adhere to universally accepted code of ethics.

Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate Attributes: Communication Skills.

PO 4:

Demonstrate ability to communicate effectively, respectfully, non-judgemental, empathetic manner with patients, their families and colleagues that will improve patient satisfaction ,health care and encourages participation and shared decision-making.

Demonstrate the ability to listen clearly, inform, communicate and educate patients &/ caregivers for the promotion of health, diagnosis of disease and the treatment of illness; advocate for disease prevention, wellness and the promotion of healthy lifestyles including a focus on population health.

5. Graduate attributes: Leader & Member of the health care team & System

PO 5:

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members in a manner to maximize the health delivery potential of the team, considering various roles, responsibilities and competencies of the other health professionals.

Identify the self- potential, functioning ability as a team leader in primary and secondary health care settings, utilize various indicators of the health care system and to promote appropriate, low cost, ethical, fair and qualitative health delivery.

6. Graduate attributes: Life long learner

PO 6:

Demonstrate ability to acquire new knowledge, skills and reflect upon their experience to enhance personal and professional growth and apply the information in the care of the patient.

Demonstrate self-motivation and awareness to their own limitations.

Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.

7. Graduate attributes: Research Aptitude

PO7:

Demonstrate an attitude of inquiry/search/investigation ,scientific and objective effort to uncover facts.

8. Graduate attributes: Societal Responsibilities

PO8 :

Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Course Outcomes :

CO1: Describe the normal growth and development during foetal life, neonatal period, childhood and adolescence and outline deviations thereof; state age related requirements of calories, nutrients, fluids, drugs etc. in health and disease. Provide necessary knowledge regarding this to parents.

CO2: Describe the common pediatric emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy, holistic care including counselling the parents and child rehabilitation.

CO3: Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents, child abuse , protection and right of children . outline national programmes relating to child health including immunization programmes.

CO4: Present and discuss detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.

CO5: Demonstrate anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programs. Knows and shows how to perform lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascitic tap start an intravenous saline and provide nasogastric feeding.

CO6: Discuss and describe normal newborn babies and those requiring special care and institute early care to all new born babies including care of preterm and low birth weight babies, provide correct guidance and support parents and provide counselling in breast feeding.

CO7: Describe and discuss preventive, promotive, curative and rehabilitative services to children, and keep himself updated with recent developments regarding same.

OBJECTIVES:

(a) KNOWLEDGE:

At the end of the course, the student shall be able to:

1. Describe the normal growth and development during foetal life, neonatal period, childhood and adolescence and outline deviations thereof;
2. Describe the common pediatric disorders and emergencies in terms of Epidemiology, aetiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
3. Age related requirements of calories, nutrients, fluids, drugs etc, in health and disease;
4. Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
5. Outline national Programmes relating to child health including immunization Programmes.

(b) SKILLS:

At the end of the course, the student shall be able to:

1. Take a detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.
2. Take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, perform venesection, start an intravenous saline and provide nasogastric feeding:
3. Conduct diagnostic procedures such as a lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascetic tap;
4. Distinguish between normal newborn babies and those requiring special care and institute early care o all new born babies including care of preterm and low birth weight babies, provide correct guidance and counseling in breast feeding;
5. Provide ambulatory care to all sick children, identify indications for specialized / inpatient care and ensure timely referral of those who require hospitalization :

Pediatric including Neonatology

The course includes systematic instructions in growth and development, nutritional needs of a child, immunization schedules and management of common diseases of infancy and childhood including scope for Social Pediatrics and counseling.

(C) INTEGRATION:

The training in pediatrics should prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of team in an integrated form with other disciplines, e.g. Anatomy, Physiology, Forensic Medicine, Community Medicine and Physical Medicine and Rehabilitation.

1. Total Teaching hours: 105 hours (Lectures + Tutorials); 15 hours (Self-directed learning); 174 hours Clinical postig
2. A. Lectures (hours): 40 (20 hours each in III MBBS Part I &Part II)

   B. Self-directed learning(hours): 15(5hours in III MBBS Part I &10 hours in III MBBS Part II)

   B. Clinical Postings(hours): 174 (2 weeks/4weeks/4weeks)

   C. Small group teachings/tutorials/Integrated teaching/Practical's (hours):65 hours (30 hours in III MBBS Part I and 35 hours in III MBBS Part II)

- 8 symposia will be conducted from theory topics in
  - 15hours of Self-directed Learning (3 in III MBBS (Part I)and
  - 5inIII MBBS(Part II))

- Two(02)Full day workshops
  - IMNCI
  - NRP
- Module 4.7 AETCOM Module will be covered in III MBBS (Part II) (05hours)

Tutorials/Small Group Discussions III (Part I) MBBS (30 hours)

Sr.No	Topic	Hours	Lectures (Competency No.)	SLO	Horizontal Integration
	Normal Growth and Development	01	Developmental milestones (PE1.5,1.6)	1. Definition of Development 2. Principals of development 3. Factors affecting Development 4. Domains of Development 5. Milestones in various domains 6. Developmental assessment	Psychiatry
2	Common problem related to growth	02	Failure to thrive(PE2.1,2.4)	1. Definition 2. Etiology 1. Clinical Features 2. Evaluation of a child with Failure to thrive 3. Management	
			Short stature(PE2.6)	1. Definition 2. Etiology 3. Clinical Features 4. Evaluation of a child with Short stature 5. Management	
3.	Care of the Normal Newborn, and High-risk Newborn	02	Care of normal newborn (PE20.1,20.2, 20.6,)	1. Define the common neonatal nomenclatures including the classification 2. Describe the characteristics of a Normal Term Neonate and High-Risk Neonates. 3. Explain the care of a normal neonate	Obs & Gynae
			Temperature regulation and Neonatal hypothermia(PE20.12)	1. Temperature regulation in neonates 2. Disorders of temperature regulation 3. Definition of hypothermia 4. Prevention of hypothermia 5. Clinical features of hypothermia	

				6. Management of hypothermia	
4.	To promote and support optimal Breastfeeding for infants	01	Breast Feeding(PE7.1,7.2, 7.3,7.4,7.6)	1. Awareness on the cultural beliefs and practices of breast feeding. 2. Enumerate advantages of breastfeeding **3.** Explain the physiology of lactation**.** 4. Technique of breastfeeding 5. Problems in breastfeeding 6. Enumerate he baby friendly hospital initiatives 7. Describe the composition and types of breast milk 8. Discuss the differences between cow's milk and Human milk. 9. Discuss the advantages of breast milk. 10. Overview about expressed breast milk	Obs &Gynae
5.	Complementary Feeding	01	Complementary feeding and	1. Define the term Complementary Feeding. 2. Discuss the principles ,the initiation,	
			IYCF(PE8.1, 8.2,8.3)	Attributes ,frequency ,techniques and hygiene related to Complementary Feeding 3. IYCF 4. Enumerate the common complimentary foods	
6.	Provide nutritional support, assessment and monitoring for common nutritional problems	01	Protein Energy Malnutrition(PE10.1,10.2, 10.4,10.6)	1. Define malnutrition 2. Classify malnutrition including WHO classification, 3. Describe the etio-pathogenesis, clinical features, complication of Severe Acute Malnourishment(SAM)and Moderate Acute Malnutrition(MAM). 4. Differentiate between kwashiokor and marasmus 5. Outline the clinical approach to a child with SAM and MAM.	

				6. Management of a child with SAM and MAM. 7. Enumerate the role of locally prepared therapeutic diets and ready to use therapeutic diets. 8. Strategies to prevent malnutrition	
7.	Obesity in Children	01	Obesity (PE11.1,11.2, 11.6)	1. Define obesity 2. Describe the common etiology ,clinical features and management of obesity in children. 3. Discuss the risk approach for obesity and criteria for referral 4. Discuss the prevention strategies	
8.	Micronutrients in health and disease 1:(Vitamins A,D,E,K,B Complex and C) Micronutrients in health anddisease2:Iron,Iodine,	04	Vitamin A Vitamin E, K (PE12.1,12.2, 12.4,12.5, 12.11,12.12, 12.13,12.14)	**Vitamin A** 1. RDA, dietary sources of Vitamin A and their role in Health and disease. 2. Describe the causes, clinical features ,diagnosis and management of Deficiency/excess of Vitamin A. 3. Discuss the Vitamin A prophylaxis program and their recommendations **Vitamin E** 1.Discuss the RDA, dietary sources of Vitamin E and their role in health and disease.	
	Calcium and Magnesium			2.Describe the causes, clinical features ,diagnosis and management of deficiency of Vitamin E. **Vitamin K** 1. Discuss the RDA, dietary sources of Vitamin K and their role in health and disease. 2. Describe the causes ,clinical features ,diagnosis management and Prevention of deficiency of Vitamin K	
			Vitamin B, C and Iodine deficiency disorders(PE12.15, 12.16,12.18, 12.19,12.20,	**Vitamin B** 1. Discuss the RDA, dietary sources of Vitamin B and their role in health and disease	

			13.7,13.8, 13.10,13.10)	**2.** Describe the causes ,clinical features, diagnosis and management of deficiency of B complex Vitamins**.** **Vitamin C** 1. Discuss the RDA , dietary sources of Vitamin C and their role in Health and disease 2. Describe the causes ,clinical features, diagnosis and management of deficiency of Vitamin C(scurvy)	
				Iodine deficiency Disorder 1. Discuss the RDA, dietary sources of Iodine and their role in Health and disease. 2. Describe the causes ,clinical features, diagnosis and management of deficiency of Iodine. 3. Discuss the National Goiter Control program and their recommendations .	
			Iron deficiency anemia (PE13.1,13.2, 13.5,13.6)	1. Discuss the RDA ,dietary sources of Iron and their role in health and disease' 2. Describe the causes, clinical features ,diagnosis and management of Fe deficiency 3. Discuss the National Anemia control 4. Program and its recommendations**.**	
			Vitamin D and Calcium &Magnesium deficiency (PE12.6,12.7, 12.9,12.10, 13.11,13.12, 13.13,13.14)	**Vitamin D/Ca/Mg** 1. Discuss the RDA, dietary sources of Vitamin D and their role in health and disease. Describe the causes ,clinical features, diagnosis and management of Deficiency / excess of Vitamin D(Rickets and Hyper vitamin osis D). 3. Discuss the role of screening for Vitamin D deficiency 4. Discuss the RDA, dietary sources of Calcium and their role in health and disease	

				5. Describe the causes ,clinical features ,diagnosis and management of C Deficiency **6.** Discuss the RDA, dietary sources of Magnesium and their role in health and disease**.** 7. Describe the causes, clinical features, diagnosis and management of Magnesium Deficiency	
	Anemia and other Hemato-oncologic disorders in children	02	Anemia(PE29.1)	1. Definition 2. Etiopathogenesis 3. Classification 4. Approach to a child with anemia	
			Nutritional anemia (PE29.2,29.3, 29.5)	**Iron defanemia /Megaloblastic anemia** 1. Etiopathogenesis 2. Clinical features 3. Lab investigations 4. Management 5. Discuss the National Anemia Control Program	
9.	Fluid and electrolyte balance	01	Fluid and electrolytes(PE15.1,15.2)	1. Composition of body fluids 2. Water balance and Osmolality 3. Normal maintenance fluid and electrolyte requirements 4. Sodium balance and its disorders 5. Potassium balance and its disorders 6. Overview of Acid –Base disorders	
10 .	National Programs ,RCH – Universal Immunizations program	02	Vaccines in children (PE19.1,19.2, 19.3,19.4)	1. Components of the Universal Immunization Program and the National Immunization Program. 2. Epidemiology of Vaccine preventable diseases 3. Vaccine description with regard toclassificationofvaccines,strainused,dose,route,schedule,risks,benefits And side effects , indications and Contraindications.(BCG ,OPV,	

				IPV Hep B ,DPT, Hi b ,MMR) 4. Define cold chain and discuss the methods of safe storage and handling Of vaccines	
			Immunization in special situation s and newer vaccines(PE19.5,19.16)	1. Immunization in special situations –HIV positive children, immunodeficiency, pre-term, organ transplants ,those who received blood and blood products, splenectomised children, adolescents ,travelers. 2. Enumerate available newer vaccines and their indications including 3. pentavalent pneumococcal, rotavirus ,JE, typhoid IPV& HPV. 4. Combination vaccines 5. AEFI	
11	Respiratory system	02	RTIGEM–I(PE28.1,28.2, 28.3,28.4, 28.5,28.6, 28.7,28.8))	**Nasopharyngitis /PharyngoT on sillitis/Acute Otitis Media(AOM)** 1. Etio-pathogenesis 2. Clinical features 3. Management 4. Complications	
			RTI GEM -II(PE28.18)	**Stridor/Epiglottitis/Acutelaryngotracheobronchitis/For eignBodyAspiration** 1. Etiopathogenesis 2. Clinical features 3. Management	
				Bronchiolitis and wheeze associated LRTI/Empyema/LungAbscess 1. Etio- pathogenesis 2. Clinical features 3. Diagnosis 4. Management 5. Prevention	
12.	Vaccine preventable Diseases &Tuberculosis	02	Fever& Exanthematous Fever (PE34.14, 34.15)	1. Enumerate the common causes of fever 2. Etiopathogenesis	

				3. Clinical features 4. Complications 5. Management 6. Approach to a child with Exanthematous Fever	
			Measles, Mumps, Rubella & Chicken pox (PE34.15)	1. Etiopathogenesis 2. Clinical features 3. Complications 4. Management 5. Prevention 6. Measles, Mumps, Rubella &Chickenpox vaccines	
13 .	Chromosomal Abnormalities	01	Down syndrome ,Turner &Kline felter syndrome (PE32.1,32.3, 32.4,32.5, 32.6,32.8, 32.9,32.10, 32.11,32.13)	1. Genetic basis 2. Risk factors 3. Clinical features 4. Complications 5. Prenatal diagnosis 6. Management 7. Genetic counseling.	General Medicine – PE32.3, 32.9 Obs &Gynae – PE32.9
14 .	Diarrheal diseases and Dehydration	01	Diarrheal diseases &dehydration in cl Persistent diarrhea, Chronic diarrhea and dysentery (PE24.1,24.2, 24.3,24.4, 24.5,24.6, 24.7,24.8, 24.14)	1. Etio-pathogenesis 2. Classification 3. Clinical presentation 4. Management 5. Physiological basis of ORT 6. Types of ORS 7. Composition of various types of ORS 8. Classification and clinical presentation of various types of diarrheal dehydration 9. Types of fluid used in Pediatric diarrheal diseases and their composition 10. Role of antibiotics, antispasmodics ,anti-secretary drugs, probiotics, anti-emetics in acute diarrheal diseases	

15	Pediatric Emergencies –Common	02	Poisoning	1. Clinical approach to a child with	General Medicine
.	Pediatric Emergencies		(PE27.8,14.1, 14.2,14.3, 14.4)	suspected poisoning **2. Common poisonings– Hydrocarbon/OP/PCM/Lead/ Envenomation** 3. Etiopathogenesis 4. Clinical features 5. Lab investigations 6. Management	
			Child abuse(PE27.29)	1. Causes 2. Clinical presentation Medico-legal implications	
16	Allergic Rhinitis, Atopic Dermatitis, Bronchial Asthma ,Urticaria Angioedema			**Allergic Rhinitis/A topic Dermatitis/ Urticaria Angioedema** 1. Etiology 2. Clinical features 3. Management 4. Complications 5. Prevention	
17 .	Adolescent health and common problems related to Adolescent Health.	01	Adolescence &Puberty (PE6.10,6.11)	1.Visit to the Adolescent Clinic .Discuss the objectives and functions of AFHS(Adolescent Friendly Health Services)and the referral criteria.	Psychiatry
18 .	Common problems related to Development-1 (Development al delay, Cerebral palsy)	01	Developmental delay (PE3.5,3.6, 3.7)	1.Visit a Child Developmental Unit and observe its functioning .Discuss the role of the child developmental unit in management of developmental delay .Discuss the referral criteria for children with developmental delay	
19 .	Common problems related toDevelopment-2 (Scholastic backwardness, Learning disabilities, Autism ADHD)	01	Scholastic backwardness and Learning Disabilities (LD)(PE4.5,4.6, 5.10,5.11)	1.Visit to child guidance clinic. Discuss the role of Child Guidance clinic in children with Developmental problems &Behavioral problems.	
	TOTAL	**30**			

Theory III (Part I) MBBS (20hours)

S. No	Topic	Hours	Lectures (Competency No)	SLO	Horizontal Integration
1.	Normal Growth and Development	01	Growth &Development(PE1.1,1.2,1.3, 1.5)	1. Definition of Growth 2. Definition of Development 3. Physiology of Growth &Development 4. Normal Growth – Somatic and physical Assessment of Growth parameters; Growth charts 6. Factors affecting Growth &Development 7. Overview of disorders related to 5. Growth &Development	Psychiatry
2.	Common problems related toDevelopment-1(Developmental delay, Cerebral palsy)	02	Developmental delay (PE3.1,3.2, 30.10)	1. Definition 2. Developmental delay vs Intellectual disability 3. Etiology 4. Clinical Features 5. Approach to developmental delay and ID 6. Prevention and management	
			Cerebral palsy(PE3.8,30.11)	1. Definition 2. Etiopathogenesis 3. Types of CP 4. Evaluation of a child with CP 5. Prevention and management	Physical Medicine &Rehabilitation
3.	Common problems related toDevelopment-2(Scholasticbackwardness,Learningdisabilities,AutismADHD)	02	Scholastic backwardness and Learning Disabilities (LD)(PE4.1,4.2)	1. Causes of Scholastic backwardness 2. Approach to a child with Scholastic backwardness 3. Definition of LD 4. Types of LD and clinical features 5. Etiology 6. Approach to a child with LD and management	
			ADHD and Autism (PE4.3,4.4)	1. Etiology of ADHD 2. Clinical features of ADHD 3. Diagnosis and management of ADHD	

				4. Etiology of Autism 5. Clinical features of Autism 6. Diagnosis and management of Autism	
4.	Common problems related to behavior	01	Behavioral problems of children incl Enuresis & Encopresis (PE5.1,5.2,5.3, 5.4,5.5,5.6,5.7, 5.8,5.9)	1. Describe the clinical features, diagnosis and management of common behavioral problems like • Thumb sucking, • Feeding problems, • Nail biting • Breath Holding spells, • Pica, • Fussy infant . 2. Definition of enuresis and encopresis 3. Differentiate between primary and secondary enuresis 4. Maturation of bowel and bladder control 5. Etiology of Enuresis and Encopresis 6. Clinical features of Enuresis and Encopresis 7. Management of Enuresis and Encopresis	Psychiatry
5.	Adolescent health and common problems related to Adolescent Health.	01	Adolescence &Puberty (PE6.1,6.2,6.3, 6.4,6.5,6.6,6.7, 6.12,6.13)	1. Define Adolescence 2. Stages of adolescence and SMR 3. Describe the physical ,physiological and psychological changes during adolescence and Puberty. 4. Outline the general health problems during adolescence. 5. Describe adolescent sexuality and common problems related o it. 6. Explain the Adolescent Nutrition and common nutritional problems. 7. Outline the common Adolescent eating disorders (Anorexia Nervosa ,Bulimia). 8. Describe the common mental health problems during adolescence. 9. Enumerate the importance of obesity and other NCD in adolescents.	Psychiatry

				10. Enumerate the prevalence and the importance of recognition of sexual drug abuse in adolescents And children.	
6.	Normal nutrition, assessment and monitoring.	01	Normal Nutrition (PE9.1,9.2,9.3, 9.7)	1. Describe the age-related nutritional needs of infants, children and adolescents including micronutrients and vitamins 2. Concept of RDA and balanced diet. 3. Describe the tools and methods for assessment and classification of nutritional status of infants ,children and adolescents. 4. Explain the Calorific value of Common Indian foods	
7.	Vaccine preventable Diseases &Tuberculosis	8	Tuberculosis in children (PE34.1,34.2, 34.12,34.13)	1. Epidemiology 2. Clinical features and clinical types 3. Complications of Tuberculosis 4. Diagnostic tools for childhood tuberculosis. 5. Indications and discuss the limitations of methods of culturing M. Tuberculosis. 6. Newer diagnostic tools for Tuberculosis including BACTECCBNAAT and their indications	Respiratory Medicine
			Management of tuberculosis (PE34.3,34.4)	1. Various regimens for management of Tuberculosis as per National Guidelines. 2. Preventive strategies adopted and the objectives and outcome of the National Tuberculosis Control Programme	Respiratory Medicine
			Diphtheria, Pertussis ,Tetanus (PE34.16)	1. Etiopathogenesis 2. Clinical features 3. Complications 4. Management 5. Prevention 6. Diphtheria ,Pertussis, Tetanus vaccines	
			Enteric fever (PE34.17)	1. Etiopathogenesis 2. Clinical features	

				3. Complications 4. Management 5. Prevention 6. Typhoidvaccines	
			Rickettsial diseases (PE34.20)	1. Etiopathogenesis 2. Clinical features 3. Complications 4. Management 5. Prevention	
			Parasitic infections (PE34.19)	**Common Parasitic infections –leishmaniasis ,filariasis ,helminthic infestations, amebiasis , giardiasis** 1. Etiopathogenesis 2. Clinical features 3. Complications 4. Management 5. Prevention	
			Malaria (PE34.19)	1. Etiopathogenesis 2. Clinical features 3. Complications 4. Management 5. Prevention 6. National Malaria Eradication Programme	
			Dengue Fever (PE34.18)	1. Etiopathogenesis 2. Clinical features 3. Complications 4. Management 5. Prevention 6. Over view of Chikungunya	
8.	Systemic Pediatrics-Central Nervous system	01	Acute Flaccid Paralysis (AFP)and Poliomyelitis (PE30.13)	1. Etiology 2. Approach to a child with AFP 3. Evaluation 4. Management	

				5. AFP Surveillance	
9.	Endocrinology	03	Hypothyroidism (PE33.1)	1. Physiology of thyroid land 2. Thyroid function test 3. Etiology 4. Congenital vs Acquired 5. Clinical features 6. Evaluation 7. Management 8. New-born Screening	
			Diabetes mellitus in children and DKA (PE33.4)	1. Etiopathogenesis 2. Diagnostic criteria 3. Classification 4. Clinical features 5. Management 6. Complications in cl DKA	
			Disorders of puberty (PE33.8)	**Precocious and delayed Puberty** 1. Definition 2. Etiology 3. Clinical Features 4. EvaluationManagement	
	TOTAL	**20**			

Self- Directed Learning III(Part I)MBBS(05hours)

S. No	Topic	Hours	Lectures (Competency No.)	SLO	Horizontal Integration
1.	The National Health Programs ,NHM The National Health Programs ,RCH	02	National programs pertaining to maternal &child health, child survival &safe motherhood (PE17.1,17.2, 18.1,18.2)	1. State the vision and outline the goals, strategies and plan of action of NHM and other important national programs pertaining to maternal and child health including RMNCH A+,RBSK, RKSK, JSSK mission Indra Dhanush and ICDS. 2. List and explain the components ,plan, outcome of Reproductive Child Health (RCH) program and appraise its monitoring and evaluation 3. Explain preventive interventions for child survival and safe motherhood	Obs & Gynae
TOTAL		**02**			

Tutorials/Small Group Discussions III (Part II) MBBS (35hours)

S. No	Topic	Hours	Domain (Competency No.)	SLO	Horizontal Integration
1	Group Discussions	01	Fluids &Electrolytes, Nutrition (PE15.3,15.4,15.5, 9.5)	1. Calculate fluid and electrolyteim balance, Interpretelectrolyte report, 2. Calculate the fluid and electrolyte requirement in health 3. Plan an appropriate diet in health & disease	
		01	Cardiac Failure (PE23.11,23.16,23.17, 23.18)	1. Develop a treatment plan and prescribe appropriate drugs including fluids in cardiac diseases, anti -failure drugs, and inotropic agents. 2. Discuss the in dications and limitations of Cardiac at heterization. 3. Enumerate some common cardiac surgeries like BTshunt ,Potts and Waterston's and corrective surgeries 4. Demonstrate empathy while dealing with cardiac disease.	
		01	Oxygen Therapy (PE27.9,27.10,14.5)	1. Discuss oxygen therapy in Pediatric emergencies and modes of administration. 2. Observe the various methods of administering Oxygen. 3. Discuss oxygen toxicity and free radical injury	
		01	Counselling (PE2.3,3.4,8.5,27.32, 27.33,28.20)	1. Counseling apparent with failing to thrive child 2. Counseling apparent with developmental delay 3. Counsel & educate mothers on the best practices in complimentary feeding 4. Obtain In formed Consent. 5. Counsel parents of dangerously ill/terminally ill child to break bad news 6. Counsel the child with asthma on the correct use of in halersina simulated environment	

		01	Hemat (PE29.18,29.20)	1. Enumerate the referral criteria for Hematological conditions. 2. Enumerate the indications for splenectomy and precautions	
2.	Radiology	01	X- Ray/USG/Neuroimaging (PE21.12,21.13, 23.12,26.9,28.17, 30.21,30.22,31.9, 34.8)	1. Interpret report of Plain XRay of KUB 2. Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB 3. Interpret a chest X ray and recognize Cardiomegaly 4. Interpret Liver USG 5. Interpret X-ray of the paranasal sinusesandmastoid; and /or use written report incase of management 6. Interpret CXR in foreign body aspiration and lower respiratory tract infection ,under stand the significance of thymic shadow in pediatric chest X-rays 7. Enumerate the indication and limitations &Interpret the reports of CT, MRI Brain &Spine 8. Interpret C X Ray in Asthma 9. Interpret a Chest Radiograph in pediatric TB	
3.	Cards (Case Scenario based)	01	(PE21.11,23.13,23.14. 24.13,26.9,26.11, 28.16,29.14,19.15, 29.16,30.20,30.21, 30.22,33.3,33.6,33.9, 34.9,34.10)	1. Interpret Hemogram and Iron Panel 2. Interpret the common analytesina Urine examination 3. Interpret Pediatric ECG 4. Choose and Interpret blood reports in Cardiac illness 5. Interpret RFT and electrolyte report Interpret Liver Function Tests, viral markers. 7. Enumerate indications of UGI Endoscopy 8. Interpret blood tests relevant to upper respiratory problems. 9. Interpret CBC ,LFT in anemia 10. Perform and interpretperipheral smear 11. Discuss the indications for Hemoglobin electrophoresis and interpret report 12. InterpretandexplainthefindingsinaCSFanalysis	

				13. Interpret and explain neonatal thyroid screening report 14. Perform and interpret Urine Dip Stick for Sugar. Interpret Blood sugar reports andexplainthediagnosticcriteriaforType1Diabetes 15. Interpret the reports of EEG 16. Perform Sexual Maturity Rating(SMR)and interpret 17. Interpret blood tests in the context of laboratory evidence for tuberculosis. Discuss the various samples for demonstrating the organism e.g. Gastric Aspirate, Sputum, CSF,FNAC.	
4.	SkillsLab	02	(PE15.6,15.7,19.9, 19.13,20.3,24.15, 24.16,24.17,26.10, 27.20,29.17,30.23)	1. Demonstrate the steps of inserting an IV cannula in a model 2. Demonstrate the steps of inserting an inter osseous line in a mannequin 3. Demonstrate the correct administration of different vaccines in a mannequin. 4. Describe the components of safe vaccine practice – Patient education/ counseling ;adverse events following immunization, safe injection practices, documentation and Medico-legal implications Perform Neonatal resuscitation in a manikin 6. Perform NG tube insertion in a manikin 7. Perform IV cannulation in a model 8. Demonstrate the technique of liver biopsy or perform Liver Biopsy in a simulated environment. 9. Demonstrate performance of bone marrow aspiration in manikin 10. Perform in a mannequin lumbar puncture. Discuss the indications, contraindication of the procedure	AETCOM – PE19.9
5.	Genito - Urinary system	02	Hypertension in children (PE21.17)	1. Definition 2. Etiopathogenesis 3. Grading 4. Clinical features 5. Management	

				6. Complications 7. Acute severe hypertension	
			Voiding Disorders (PE21.15)	1. Discuss & Enumerate the 2. referral criteria for children with genitourinary disorder 3. Counsel &educate patients regarding referral	
6.	Cardiovascular system: Heart disease	04	Congestive cardiac failure in infants and children (PE23.3)	1. Etiology 2. Pathogenesis 3. Clinical presentation 4. Management	
			Acyanotic congenital heart diseases (PE23.1)	**VSD ,ASD and PDA** 1. Etiology 2. Hemodynamic changes 3. Clinical features 4. Investigations 5. Management	
			Cyanotic congenital heart diseases (PE23.2)	1. Classify Cyanotic congenital heart disease **Fallot' s Physiology** 2. Etiology 3. Hemodynamic changes 4. Clinical features 5. Investigations 6. Management	
			Acquired Heart Disease (PE23.4,23.5,23.6)	I**nfective endocarditis** 1. Etio-pathogenesis 2. Clinical features 3. Diagnosis 4. Management **A cuterheumatic fever** 1. Etio-pathogenesis 2. Clinical features 3. Diagnosis	

				4. Management and prevention 5. Complications	
7.	Pediatric Emergencies – Common Pediatric Emergencies	03	Shock in children (PE27.5)	1. Definition 2. B Pregulation 3. Pathophysiology 4. Classification 5. Monitoring 6. Management	
			Status epilepticus (PE27.6,30.9)	1. Definition 2. Etiology 3. Approach to a child with statusepilepticus 4. Evaluation 5. Management	
			Unconscious child and Coma (PE27.8)	1. Definition 2. Etiopathogenesis 3. Evaluation 4. Management 5. Brain death	
8.	Care of the Normal Newborn, and High-risk Newborn	04	Care of low birth weight (LBW) babies(PE20.11)	1. Definition 2. Etiology 3. Explain the terminologies –IUGR/SGA 4. Clinical features 5. Issues in LBW care 6. Feeding in LBW babies 7. Management of LBW babies 8. Growth monitoring of LBW babies	
			Neonatal hypoglycemia & hypocalcemia (PE20.13,20.14)	**Hypoglycemia and hypocalcemia** 1. Definition 2. Etiology 3. Clinical features 4. Management	
			Neonatal Seizures (PE20.15)	1. Etiology 2. Clinical features	

				3. Management	
			Perinatal infections (PE20.17)	TORCH/Tuberculosis/ HepB /Varicella 1. Etiology 2. Transmission 3. Clinical features 4. Management	
9.	Anemia and other Hemato-oncologic disorders in children	02	Hemolyticanemia (PE29.4)	1. Etiology 2. Classification 3. Approach to a child with hemolyticanemia 4. Management 5. Overview of HS ,AIHA and HUS	
			Thalassemia and Sickle Cell Anemia (PE29.4)	1. Etiology 2. Clinical features 3. Lab investigations 4. Managementincl Iron Chelation therapy 5. Complications	
10.	Acute and chronic liver disorders	02	Acute liver disease &Fulminant hepatic failure (PE26.1,26.2)	**Acute hepatitis in children – Viral(Hep A,B,C), Autoimmune and Wilsons disease** 1. Etio-pathogenesis 2. Clinical features **3.** Management **Fulminant Hepatic Failure in children** 1. Etio-pathogenesis 2. Clinical features 3. Management	
			Chronic liver disease &Portal hypertension(PE26.3,26.4,26.11, 26.12)	**Chronic liver diseases in children** 1. Etio-pathogenesis 2. Clinical features 3. Evaluation 4. Complications – hepatic encephalopathy and ascites 5. management **Portal Hypertension in children** 1. Etio-pathogenesis 2. Clinical features	

				3. Management 4. Complications	
11.	Respiratory system	01	Pneumonia and ARDS(PE27.3,27.4)	1. Etio-pathogenesis 2. Clinical features 3. Diagnosis 4. Management 5. Prevention	
12	Malabsorption	01	Malabsorption(PE25.1)	1. Etio-pathogenesis 2. Clinical presentation 3. Management 4. Overview of celiac disease	
	Total	**28**			

Theory III (PartII) MBBS (20hours)

Sr. No	Topic	Hours	Lectures (Competency No.)	SLO	Horizontal Integration
1.	Care of the Normal Newborn, and High-risk Newborn	05	Birth asphyxia (PE20.)	1. Definition 2. Etiology 3. Clinical features 4. Management 5. Prevention	
			Respiratory distress in newborn(PE20.8)	**RDS/TTNB/MAS** 1. Etiology 2. Clinical features in clscoring systems 3. Management	
			Birth injuries &Hemorrhagicdisease of newborn (HDN)(PE20.9,20.10)	**BirthInjuries** 1. Etiology 2. Clinical features 3. Management **HDN** 1. Definition and classification 2. Etiology 3. Clinical features 4. Management 5. Prevention	
			Neonatal Sepsis (PE20.16)	1. Classification 2. Etiology 3. Clinical features 4. Investigations 5. Management	
			Surgical conditions in newborn (PE20.20)	TEF, esophagealatresia ,analatresia, cleft lip and palate, congenitaldiaphragmatichernia 1. Etiology 2. Clinical presentation 3. Management 4. Causes of acute abdomen in neonates	

2.	Genito-Urinary system	03	UTI (PE21.1)	1. Etiology and predisposing factors 2. Clinical features 3. Diagnosis 4. Management 5. VUR	
			Approach to hematuria &Acute glomerulonephritis (PE21.2,21.4)	Hematuria 1. Definition 2. Diagnostic evaluation 3. Referral criteria Acute Glomerulonephritis 1. Definition 2. Etiology 3. Clinical features of PSGN 4. Management of PSGN 5. Complications	
			Acute kidney injury (AKI) and Chronic kidney disease (CKD) (PE21.5,21.6)	1. Definition and classification 2. Etiology and pathophysiology 3. Approach to a child with AKI 4. Management 5. Complications 6. Renal replacement therapy	
3.	Approach to and recognition of a child with possible rheumatologic problem	02	Approach to Rheumatological Problemsincl JIA and SLE (PE22.1)	1. Enumerate the common Rheumatological problems in children. 2. Approach to a child with arthritis 3. Referral criteria for a child with possible rheumatologic problem **JIA/SLE** 1. Definition 2. Etiopathogenesis 3. Clinical subtypes/Clinical features 4. Diagnosis 5. Management	

			Vasculitic disorders in children (PE22.3)	Enumerate common Vasculitic disorders in children and its classification **Kawasaki disease/HSP** 1. Etiology 2. Clinical features 3. Diagnosis 4. Management	
4.	Anemia and other Hemato-oncologic disorders in children	02	Thrombocytopenia and Hemophilia (PE29.6,29.7)	Thrombocytopenia **1.** Causes of thrombocytopenia **2.** Etiology of ITP **3.**Clinical features and management of ITP **Hemophilia** **1.** Approach to a child with bleeding disorder **2.** Etiology and types of hemophilia **3.** Clinical features and management of hemophilia	
			Leukemia ,Lymphomas and Solid Tumors in children (PE29.8,29.9, 21.17)	**ALL/Lymphoma/Wilm' sTumor** 1. Etiology 2. Clinical features 3. Management	
5.	Systemic Pediatrics-Central Nervous system	08	Meningitis in children (PE30.1,30.2)	1. Etiopathogenesis 2. Clinical features 3. Lab investigations 4. Management 5. Prevention 6. Differentiate between Bacterial ,Viral and TB Meningitis 7. Approach to a child with acute febrileencephalopathy	
			Hydrocephalus(PE30.3)	1. Etiopathogenesis 2. Clinical features 3. Investigations 4. Complications 5. Management 6. Overview of IIH	

			Microcephaly and Neural tube defects (PE30.4,30.5)	1. Etiopathogenesis 2. Classification/Types 3. Clinical features 4. Complications 5. Management	
			Infantilehemiplegia/Stroke(PE30.6)	1. Etiopathogenesis 2. Clinical features 3. Investigations 4. Management	
			Epilepsy in children(PE30.8)	1. Definition 2. Pathogenesis 3. Types of Epilepsy 4. Clinical presentation 5. Management 6. Overview of status epilepticus	
			Muscular dystrophy (PE30.14)	**DMD/BMD** 1. Etiology 2. Clinical features 3. Differential diagnosis 4. Evaluation 5. Management	
			Ataxia in children(PE30.15)	1. Definition 2. Etiology 3. Clinical features 4. Differential Diagnosis 5. Management	
			Approach toheadacheinchildren (PE30.16)	1. Pathophysiology of headache 2. Approach to a child with headache 3. Types of Headache 4. Management	
	Total	20			

Self- Directed Learning III (Part II) MBBS (10hours)

Sr. No	Topic	Hours	Lectures (CompetencyNo.)	SLO	Horizontal Integration
1.	Systemic Pediatrics-Central Nervous system	04	Floppy infant(PE30.12)	1. Etiology 2. Clinical features 3. Differential diagnosis 4. Evaluation 5. Management	
			Febrile seizures(PE30.7)	1. Definition 2. Types 3. Etiopathogenesis 4. Clinical features 5. Investigations 6. Complications 7. Management	
2.	Care of the Normal Newborn ,and High-risk Newborn	02	Neonatal hyperbilirubinemia(PE20.19)	1. Physiological vs pathological jaundice 2. Etiology 3. Clinical features 4. Approach to aneonate with jaundice 5. Management 6. Follow-up	

3.	Genito - Urinary system	02	Approach to Proteinuria & Nephrotic syndrome (PE21.3)	Proteinuria 1. Definition 2. Diagnostic evaluation 3.Referral criteria Nephrotic Syndrome 1. Definition 2. Etiology 3. Terminologies – Remission/Relapse/Steroid dependence/Steroid resistance 4. Clinical features 5. Management 6. Complications 7. SDNS/SRNS/Congenital nephritic syndrome	
4.	Respiratory system	02	Asthma in children(PE28.19, 28.20, 31.5,31.7,31.8, 31.10)	1. Pathophysiologyincl Triggers 2. Clinical features 3. Diagnosis and differential diagnosis 4. Management 5. Inhalational therapy 6. Monitoring and modification of treatment 8.Management of acute exacerbation of bronchial asthma	
	Total	10			

Internal Assessment Subject–Pediatrics

Applicable w.e.f October 2020 onwards examination for batches admitted from June 2019 onwards

3rd Year (III MBBS ,PART I)						
Phase	**I-Exam(January)**			**II-Exam(April)**		
	Theory	Practical	Total Marks	Theory	Practical	Total Marks
III/I MBBS	50	50	100	50	50	100

4th Year (III MBBS, PART II) **Clinical posting -4 weeks** **Theory –lectures -20, tutorials-35, self-directed learning- 10. Total 65hrs**						
Phase	**III-Exam (May)**			**IV-Exam(Preliminary examination) (November)**		
	Theory	Practical	Total Marks	Theory	Practical	Total Marks
III/II MBBS	50	50	100	100	100	200

Assessment in CBME is ON GOING PRCESS, No Preparatory leave is Permitted.

There shall be 4 internal assessment examinations in Pediatrics including Prelim.

1. The suggested pattern of question paper for internal assessment examinations, except prelim examination is attached at the end. Pattern of the prelims examinations should be similar to the University examinations.
2. Internal assessment marks for theory and practical will be converted to outof25(theory)+25(practical). Internal assessment marks, after conversion, should be submitted to university with in the stipulated time as per directives from the University .
3. Conversion Formula for calculation of marks in internal assessment examinations.

	Theory	Practical
Phase II	-	-
Phase III /I	100	100
Phase III/II	150	150
Total	250	250
Conversion out of	25	25
Conversion formula	Total marks in 4I A theory examinations/10	Total marks in 4 IA Practical examinations/10
Eligibility criteria after conversion	10	10
	Combined theory +Practical=25	

1. While preparing Final Marks of Internal Assessment, the rounding-off marks shall done as illustrated in following table.

Total Internal Assessment Marks	Final rounded marks
13.01 to 13.49	13
13.50 to13.99	14

2. Students must secure at least 50% marks of the total marks (combined in theory and practical/clinical; not lessthan40%marksintheoryandpracticalseparately) assigned for internal assessment in order to be eligible for appearing at the final University examination of that subject.

3. Internal assessment marks will not to be added to marks of the University examinations and will be shown separately in mark list.

4. Remedial measures

A. Remedial measures for non-eligible students

i) At the end of each internal assessment examination, students securing less than50%marks shall be identified .Such students should be counseled at the earliest and periodically. Extra classes for such students may be arranged.

ii) If majority of the students found to be weak in a particular area then extra classes must be scheduled for all such students. Even after these measures, if a student is failed to secure 50% marks combined in theory and practical (40% separately in theory and practical) after prelim examination ,the student shall not be eligible for final examination.

iii) Non eligible candidates are offered to reappear for repeat internal assessment examination/s, which must be conducted 2 months before next University examination .The pattern for this repeat internal assessment examination shall be similar to the final University examination .The marks in this examination shall be considered for deciding the eligibility criteria. Following conversion formula shall be used for converting the marks.

	Theory	Practical
Remedial examination	**100**	**100**
Conversion out of	**25**	**25**
Conversion formula	**Marks in remedial theory examinations /4**	**Marks in remedial Practical examinations/4**
Eligibility criteria after conversion	**10**	**10**
	Combined theory+ Practical=25	

B. <u>Remedial measures for absent students:</u>

If any of the students is absent for any of the 4 IA examinations due to any reasons, following measures shall be taken.

i) The student is asked to apply to the academic committee of the college for reexamination, through HOD, to ascertain the genuineness of the reason for absentee.

ii) If permitted by academic committee, an additional examination for such students is to be conducted after prelims examination. Marks for such additional examination shall be equal to the missed examination.

iii) Even if a student has missed more than one IA examination, he/she can appear for only one additional I A examination. In such scenario, eligibility should be determined by marks obtained in internal assessment examinations for which the candid ate has appeared, without changing the denominator.

Internal Assessment Practical Examinations

Pediatrics

Internal Assessment Practical–I, II and III

Subject: Pediatrics Practical (IA–I,II and III)				
Case	OSCE	Table Viva	Journal & logbook	Practical Total marks
20	10	10	10	50

OSCE Stations to include Signs of General examinations, Local examinations, Psychomotor skills and Communication skills., history taking of a particular symptom; nutrition history, developmental history, immunization history.

Prelim Practical

Subject: Pediatrics Practical (Prelims)				
Long Case(Including clinical skills demonstration)	Short Case(Including communication skills)	OSCE (4 stations x 10markseach)	Viva	Practical Total marks
40	20	20	20	100

OSCE 1– Clinical Skills , OSCE 2 – Anthropometry assessment ,OSCE 3– Certifiable procedural skills ,OSCE4–AETCOM related skills

4 Table Viva – 5 Marks each a)X –Ray b) Instruments c) Drugs & Vaccine d) Nutrition

OSCE Stations to include Signs of General examinations, Local examinations, Psychomotor skills and Communication skills., history taking of a particular symptom; nutrition history, developmental history, immunization history.

Final Practical

Subject: Pediatrics Practical (Prelims)				
Long Case(Including clinical skills demonstration)	Short Case(Including communication skills)	OSCE (4 stations x 10markseach)	Viva	Practical Total marks
40	20	20	20	100

OSCE– Clinical Skills , OSCE – Anthropometry assessment, OSCE – Certifiable procedural skills ,OSCE–AETCOM related skills

4 Table Viva – 5 Marks each a)X –Ray b) Instruments c) Drugs & Vaccine d) Nutrition

Internal Assessment Examination(I, II and III) Pediatrics

Instructions:

SECTION"A"MCQ

1) *Put ☐ In the appropriate box below the question number once only.*
2) *Use blue ball point pen only*
3) *.Each question carries **Onemark.***
4) *Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.*

SECTION"A "MCQ (10Marks)

(_10_x_1_=_10)

a) b) c) d) e) f) g) h) i) j)

SECTION"B" &"C"

Instructions: 1) *Use **blue/ black** ball point pen only.*
2) ***Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attemptt or e sort to unfair means.*
3) ***All** questions are **compulsory**.*
4) *The number to the **right** indicates **full** marks*
5) *.Draw diagrams **wherever** necessary.*
6) *Use a common answer book for all sections.*

SECTION"B"(40Marks)

2. Long Answer Questions (10 marks each)(Any2outof3) (10x2=20)

a) b) c)

3.Short Answer Question (5 Marks each) (Any 4 out of 5) (5 x4=20)

a) b) c) d) e)

SECTION C (40Marks)

4Long answer questions(10 marks each) (Any 2 out of 3) (10x2=20)

5Short answer questions(5 marks each) (any4outof5)

a) b) c) d) e) (5x4=20)

Skills Training Module

1. Objective of the Document - The objective of the document is to facilitate institutions and faculty to develop and implement skills training as part of implementation of new Undergraduate Curriculum.
2. Glossary of Terms Used in the Document

   Skill: **Skill is the ability to perform a task leading to a specific predefined outcome. Skill may be:**

   a) Intellectual or cognitive which includes clinical reasoning and decision making skills,
   b) Proceduralorpsychomotorskillsthatrequiremanualdexterityandincludelaboratoryandclinical skills,
   c) Communication skills,
   d) Team skills including leadership skills.

   Competency: The habitual and judicious use of communication, knowledge ,technical skills, clinical reasoning, attitude, values, and reflection in daily practice for the benefit of the individual and the community being served.

   Skill Assessment: A session that assesses the skill of the student including those in the laboratory, bed-side, skills lab, skills station that uses mannequins/ paper cases/simulated patients/real patients as the context demands.

   DOAP (Demonstration -Observation - Assistance - Performance): A practical session that allows the student to observe a demonstration, assist the performer, perform in a simulated environment ,perform under supervision or perform in dependently.
3. Introduction- The current undergraduate medical education curriculum focuses on competencies and outcomes and gives emphasis to skill development in all phases .The competencies 'Shows How' (SH) or 'Perform' (P) are listed in relation to the skills to be acquired by the learner. The Graduate Medical Education Regulations Part II,2019 envisages that certain skills are prerequisites for graduation. Therefore, it is necessary for institutions to create skill sessions in which essential/ desirable and certifiable skills are acquired. These skill sessions should be planned during their respective phase in a laboratory/during clinical posting. There should be proper documentation of the process of acquisition of skills. When required, a skills lab maybe used to impart training. Skills lab provides a safe training environment in which a learner can be observed and be provided with the feedback necessary to improve. It also allows the learner to do tasks repetitively under supervision till the desired level of competency is achieved.
4. Salient Principles-The undergraduate medical education program is designed with a goal to create an "Indian Medical Graduate" (IMG) possessing there quisite knowledge, skills, attitudes, values and responsiveness, so that he or she may function appropriately and effectively as a physician of first contact of the community while being globally relevant.

The principles governing skill acquisition have been presented in this module which also facilitate the utilization of 'Skills lab' during the undergraduate training and assessment.

This module helps to:

a) Under stand the link between competency and skill,
b) Enumerate the general principles of skill acquisition,
c) Explain how to apply these principles,
d) under stand the different methods an steps of skills teaching and acquisition (skill cycle),
e) develop skill sessions from a given competency, and
f) impart, assess and document the acquisition of these skills.

The module also elaborates the concepts ,processes, resources and organizational set up for a basic skills lab in a college setting.

Table11(GMER2019):Certifiable Procedural Skills:

A comprehensive list of skills recommended as desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS)–Indian Medical Graduate.

Specialty	Procedure
Pediatrics	• Neonatal resuscitation(D) • Setting up Pediatric IV infusion and calculating drip rate (I) Setting up Pediatric Intra osseous line (O)

Figure II: Approach to competency based skill development

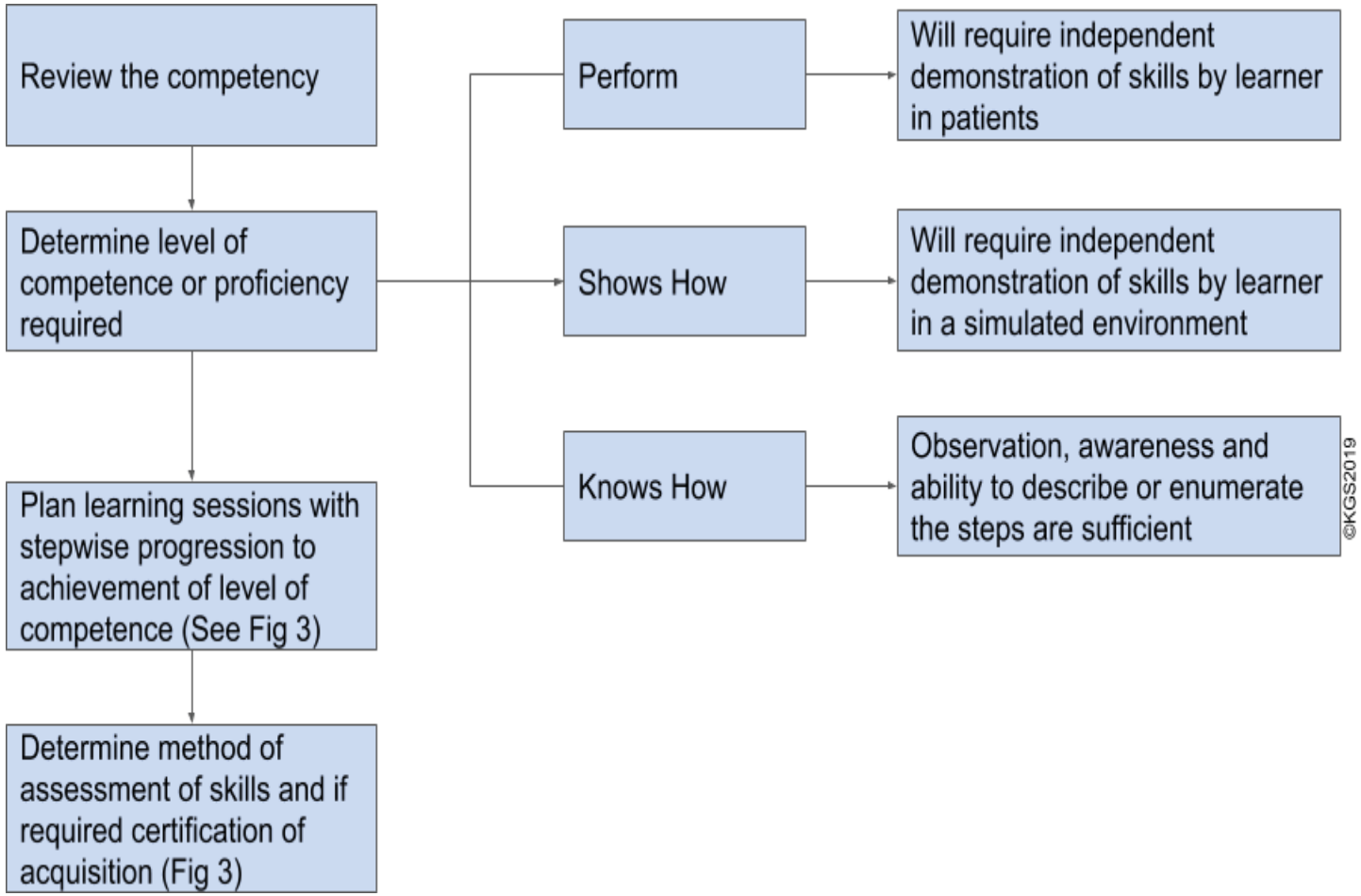
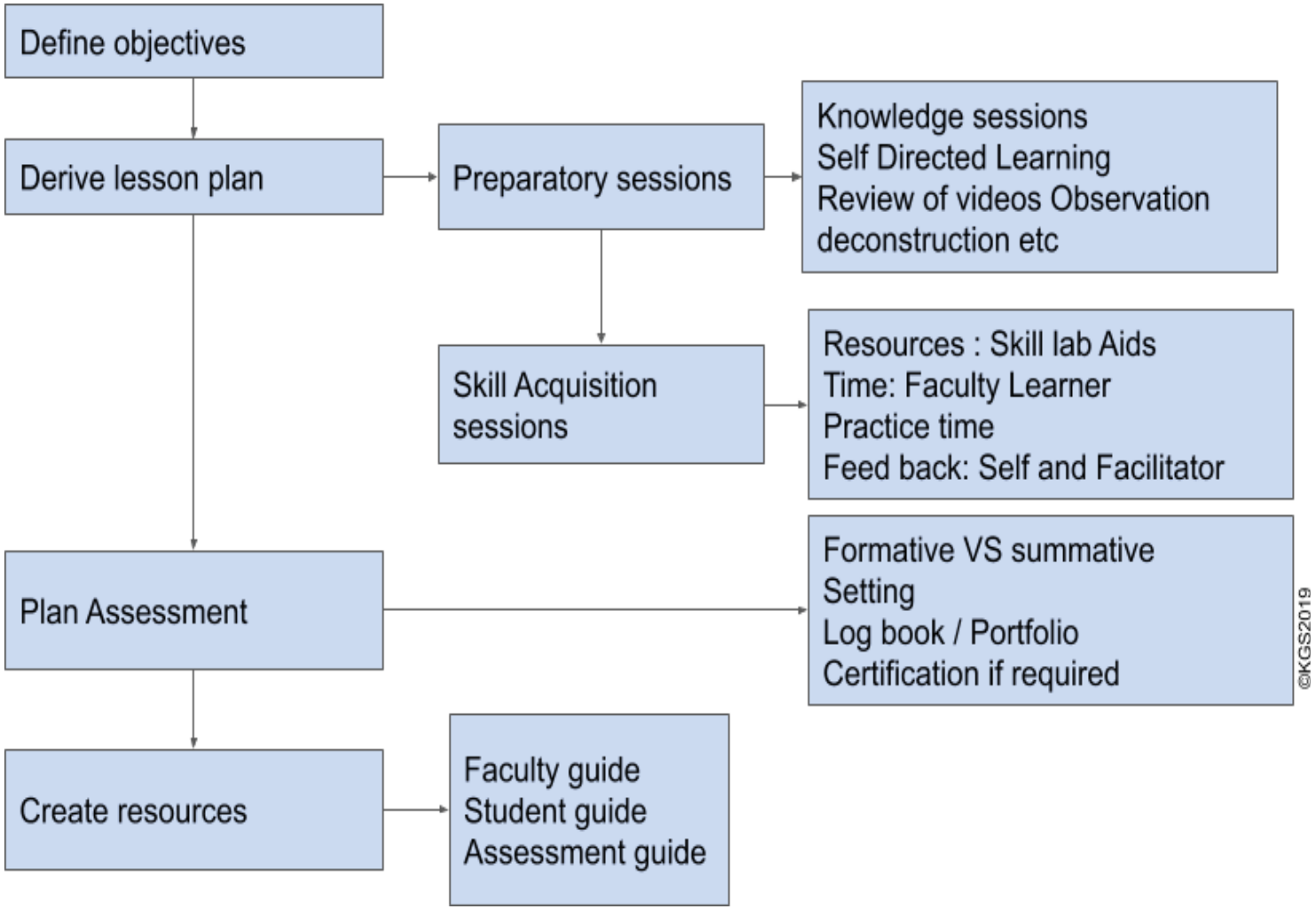


Figure III: Planning a skill session



SURGERY AND ALLIED SUBJECTS

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

GOAL:

The broad goal of the teaching of undergraduate students in Surgery is to produce graduates capable of delivering efficient first contact surgical care.

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.

2.Graduate Attributes: Planning Patient Care and problem solving abilities

PO 2:

Demonstrate ability to apply this knowledge to the practice of medicine in routine, emergency and disaster situations.

Demonstrate ability to appraise and assimilate scientific evidence into their own ongoing learning, research, and patient care.

Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences.

3. Graduate Attributes: Professional excellence & Ethics

PO 3:

Demonstrate commitment to the highest standards of professional responsibility towards patient, colleagues, society, growth of medical professional and adhere to universally accepted code of ethics.

Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate Attributes: Communication Skills.

PO 4:

Demonstrate ability to communicate effectively, respectfully, non-judgemental, empathetic manner with patients, their families and colleagues that will improve patient satisfaction ,health care and encourages participation and shared decision-making.

Demonstrate the ability to listen clearly, inform, communicate and educate patients &/ caregivers for the promotion of health, diagnosis of disease and the treatment of illness; advocate for disease prevention, wellness and the promotion of healthy lifestyles including a focus on population health.

5. Graduate attributes: Leader & Member of the health care team & System

PO 5:

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members in a manner to maximize the health delivery potential of the team, considering various roles, responsibilities and competencies of the other health professionals.

Identify the self- potential, functioning ability as a team leader in primary and secondary health care settings, utilize various indicators of the health care system and to promote appropriate, low cost, ethical, fair and qualitative health delivery.

6. Graduate attributes: Life long learner

PO 6:

Demonstrate ability to acquire new knowledge, skills and reflect upon their experience to enhance personal and professional growth and apply the information in the care of the patient.

Demonstrate self-motivation and awareness to their own limitations.

Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.

7. Graduate attributes: Research Aptitude

PO7:

Demonstrate an attitude of inquiry/search/investigation ,scientific and objective effort to uncover facts**.**

8. Graduate attributes: Societal Responsibilities

PO8 :

Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Course Outcomes :

CO1: To describe and discuss aetiology, anatomy, pathophysiology of common surgical problems.

CO2: To elaborate patient assessment and devise and differential diagnosis for common surgical problems.

CO3: To describe and discuss, operative and non-operative modalities of treatment & complications of common surgical problems.

CO4: To demonstrate basic technical skills such as dressing, suturing,catheterization and minor surgical procedures.

CO5: To interpret and co-relate radiological investigations to commonsurgical procedures.

CO6: To discuss clinic-pathological co-relation of common surgical surgical problems.

CO7: To describe and discuss recent advances in surgery.

CO8: To demonstrate respect, compassion and empathy to patients and colleagues, displaying sensitivity to one's individual background throughout the course of the surgical settings including pre-operative, intra-operative, and post-operative.

OBJECTIVES:

The departmental objectives, syllabus and skills to be developed in the department of surgery during undergraduate medical education are presented herewith. These are prepared taking into consideration of various aspects and institutional goals given below:

1. A medical student after graduation may have different avenues of his/her professional career and may work either as a first contact physician in a private, semi-private or public sector or may take up further specialization in surgery or other specialties.
2. He may have to work in different settings such as rural, semi-urban or urban which may have deficient or compromised facilities.
3. These are based on the various health services research data in our community.
4. These are also based on following institutional goals in general;

At the end of the teaching/ training the undergraduate will be able to:

- Diagnose and manage common health problems of the individual and the community appropriate to his/her position as a member of the health team at primary ,secondary and tertiary levels.
- Be competent to practice curative, preventive, promotive and rehabilitative medicine and understand the concepts of primary health care.
  Understand the importance and implementation of the National Health Programmes in the context of national priorities.
- Understand the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude required for professional responsibilities.
- Develop the ability for continued self-learning with a scientific attitude of mind and acquire further expertise in any chosen area of medicine.

KNOWLEDGE

At the end of the course, the student shall be able to:

1. Describe aetiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children;
2. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion.
3. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics.
4. Describe common malignancies in the country and their management including prevention.
5. Enumerate different types of anaesthetic agents, their indications, mode of administration, contraindications and side effects.

B. SKILLS

At the end of the course, the student should be able to

1. Diagnose common surgical conditions both acute and chronic, in adult and children.
2. Plan various laboratory tests for surgical conditions and interpret the results;
3. Identify and manage patients of haemorrhagic; septicaemic and other types of shock.
4. Be able to maintain patent air-way and resuscitate:
   A. A critically injured patient.
   B. Patient with cardio-respiratory failure;
   C. A drowning case.

5. Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children
6. Provide primary care for a patient of burns;
7. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
8. Treat open wounds including preventive measures against tetanus and gas gangrene.
9. Diagnose neonatal and paediatric surgical emergencies and provide sound primary care before referring the patient to secondary/territory centers;
10. Identify congenital anomalies and refer them for appropriate management.

In addition to the skills referred above in items (1) to (10), he shall have observed/assisted/performed the following:

i. Incision and drainage of abscess;
ii. Debridement and suturing open wound;
iii. Venesection;
iv. Excision of simple cyst and tumours.
v. Biopsy and surface malignancy
vi. Catheterisation and nasogastric intubation;
vii. Circumcision
viii. Meatotomy;
ix. Vasectomy;
x. Peritoneal and pleural aspirations;
xi. Diagnostic proctoscopy;
xii. Hydrocoele operation;
xiii. Endotracheal intubation
xiv. Tracheostomy and cricothyroidetomy;
xv. Chest tube insertion.

Human values, and Ethical practice

- Adopt ethical principles in all aspects of his clinical practice. Professional honesty and integrity are to be fostered. Surgical care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- Develop communication skills, in particular the skill to explain various options available in management
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues and specialist in the field when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion

Learner -Doctor Programme (clinical clerkship)

Phase II

- History taking
- General Examination
- Local Examination with demonstration of signs.
- Psychomotor Skills
- AETCOM of Phase II

Phase III/ I

- All of Phase II plus
- Psychomotor Skills
- Differential diagnosis
- Investigations
- AETCOM of Phase III Part I

Phase III/ II

- All of Phase III Part I plus
- Psychomotor Skills
- Management
- Counselling
- AETCOM Phase III/ Part II

- There shall be end post exam at the end of 1st, 2nd and 3rd clinical posting which will be added to internal assessment for practicals.
- At the end of 4th clinical posting of 4 weeks there will be only formative assessment.

Lectures

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number requiredto certifyP	Vertical Integration	Horizontal Integration
GENERAL SURGERY									
Topic: Metabolic response to injury		**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**			
SU1.1	Describe Basic concepts of homeostasis, enumerate the metabolicchanges in injury and their mediators.	K	KH	Y	Lecture, Bed side clinic, Small group discussion	Written/ Viva voce		Physiology, Biochemistry	
SU1.2	Describe the factors that affect the metabolic response to injury.	K	KH	Y	Lecture, Bed side clinic, Small group discussion	Written/ Viva voce		Biochemistry	
SU1.3	Describe basic concepts of perioperative care.	K	KH	Y	Lecture, Bed side clinic, Small group discussion	Written/ Viva voce			
Topic: Shock		**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**			
SU2.1	Describe Pathophysiology of shock, types of shock & principles ofresuscitation including fluid replacement and monitoring.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
SU2.2	Describe the clinical features of shock and its appropriate treatment.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU2.3	Communicate and counsel patients and families about the treatment and prognosis of shock demonstrating empathy and care	A/C	SH	Y	DOAP session	Skill assessment		AETCOM	
Topic: Blood and blood components		**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**			
SU3.1	Describe the Indications and appropriate use of blood and bloodproducts and complications of blood transfusion.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
SU3.2	Observe blood transfusions.	S	SH	Y	Small group discussion, DOAP session	Skills assessment/ Log book			
SU3.3	Counsel patients and family/ friends for blood transfusion and blooddonation.	A/C	SH	Y	DOAP session	Skills assessment			

Topic: Burns		**Number of competencies: (04)**			**Number of procedures that require certification: (NIL)**				
SU4.1	Elicit document and present history in a case of Burns and performphysical examination. Describe Pathophysiology of Burns.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology	
SU4.2	Describe Clinical features, Diagnose type and extent of burns andplan appropriate treatment.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU4.3	Discuss the Medicolegal aspects in burn injuries.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU4.4	Communicate and counsel patients and families on the outcomeand rehabilitation demonstrating empathy and care.	A /C	SH	Y	Small group discussion, Role play, Skills assessment	Viva voce			
Topic: Wound healing and wound care		**Number of competencies: (04)**			**Number of procedures that require certification: (NIL)**				
SU5.1	Describe normal wound healing and factors affecting healing.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
SU5.2	Elicit, document and present a history in a patient presenting withwounds.	C	SH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU5.3	Differentiate the various types of wounds, plan and observemanagement of wounds.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU5.4	Discuss medico legal aspects of wounds	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Surgical infections		**Number of competencies: (02)**			**Number of procedures that require certification: (NIL)**				
SU6.1	Define and describe the aetiology and pathogenesis of surgicalInfections	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology	
SU6.2	Enumerate Prophylactic and therapeutic antibioticsPlan appropriate management	**K**	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Surgical Audit and Research		**Number of competencies: (02)**			**Number of procedures that require certification: (NIL)**				
SU7.1	Describe the Planning and conduct of Surgical audit	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Community Medicine	
SU7.2	Describe the principles and steps of clinical research in GeneralSurgery	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Community Medicine	
Topic: Ethics		**Number of competencies: (03)**			**Number of procedures that require certification: (NIL)**				
SU8.1	Describe the principles of Ethics as it pertains to General Surgery	K	KH	Y	Lecture, Small group	Written/ Viva voce/	-	Forensic Medicine,	

					discussion	Skill assessment		AETCOM	
SU8.2	Demonstrate Professionalism and empathy to the patientundergoing General Surgery	A/C	SH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		Forensic Medicine, AETCOM	
SU8.3	Discuss Medico-legal issues in surgical practice	A/C	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Forensic Medicine, AETCOM	
Topic: Investigation of surgical patient		**Number of competencies (03)**				**Number of procedures that require certification: (NIL)**			
SU9.1	Choose appropriate biochemical, microbiological, pathological,imaging investigations and interpret the investigative data in a surgical patient	C	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, Microbiology, Pathology	
SU9.2	Biological basis for early detection of cancer and multidisciplinaryapproach in management of cancer	C	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU9.3	Communicate the results of surgical investigations and counsel thepatient appropriately	C	SH	Y	DOAP session	Skill assessment			
Topic: Pre, intra and post- operative management.		**Number of competencies: (04)**				**Number of procedures that require certification: (NIL)**			
SU10.1	Describe the principles of perioperative management of commonsurgical procedures	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU10.2	Describe the steps and obtain informed consent in a simulatedenvironment	S/A/C	SH	Y	DOAP session	Skill assessment/ Log book		AETCOM	
SU10.3	Observe common surgical procedures and assist in minor surgicalprocedures; Observe emergency lifesaving surgical procedures.	S	KH	Y	DOAP sessions	Log book			
SU10.4	Perform basic surgical Skills such as First aid including suturing andminor surgical procedures in simulated environment	S	P	Y	DOAP session	Skill assessment			
Topic: Anaesthesia and pain management		**Number of competencies: (06)**				**Number of procedures that require certification: (NIL)**			
SU11.1	Describe principles of Preoperative assessment.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Anaesthesiology
SU11.2	Enumerate the principles of general, regional, and localAnaesthesia.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Anaesthesiology
SU11.3	Demonstrate maintenance of an airway in a mannequin orequivalent	S	SH	Y	DOAP session	Skill assessment			Anaesthesiology
SU11.4	Enumerate the indications and principles of day care GeneralSurgery	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

SU11.5	Describe principles of providing post-operative pain relief andmanagement of chronic pain.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Anaesthesiology
SU11.6	Describe Principles of safe General Surgery	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Nutrition and fluid therapy		**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**			
SU12.1	Enumerate the causes and consequences of malnutrition in thesurgical patient	K	KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce		Physiology	
SU12.2	Describe and discuss the methods of estimation and replacement ofthe fluid and electrolyte requirements in the surgical patient	K	KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce		Physiology	
SU12.3	Discuss the nutritional requirements of surgical patients, the methods of providing nutritional support and their complications	K	KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce		Biochemistry	
Topic: Transplantation		**Number of competencies: (04)**				**Number of procedures that require certification: (NIL)**			
SU13.1	Describe the immunological basis of organ transplantation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology	
SU13.2	Discuss the Principles of immunosuppressive therapy.EnumerateIndications, describe surgical principles, management of organ transplantation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology, Pharmacology	
SU13.3	Discuss the legal and ethical issues concerning organ donation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		AETCOM	
SU13.4	Counsel patients and relatives on organ donation in a simulatedenvironment	S	SH	Y	DOAP session	Skill assessment		AETCOM	
Topic: Basic Surgical Skills		**Number of competencies: (04)**				**Number of procedures that require certification: (NIL)**			
SU14.1	Describe Aseptic techniques, sterilization and disinfection.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology	
SU14.2	Describe Surgical approaches, incisions and the use of appropriateinstruments in Surgery in general.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU14.3	Describe the materials and methods used for surgical woundclosure and anastomosis (sutures, knots and needles)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU14.4	Demonstrate the techniques of asepsis and suturing in a simulatedenvironment	S	SH	Y	DOAP session	Skill assessment/ Log book			

Topic: Biohazard disposal		**Number of competencies: (01)**			**Number of procedures that require certification: (NIL)**				
SU15.1	Describe classification of hospital waste and appropriate methods ofdisposal.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology	
Topic: Minimally invasive General Surgery		**Number of competencies: (01)**			**Number of procedures that require certification: (NIL)**				
SU16.1	Minimally invasive General Surgery: Describe indications advantages and disadvantages of Minimally invasive GeneralSurgery	K	K	Y	Lecture, Demonstration, Bedside clinic, Discussion	Theory/ Practical / Orals/Written/ Vivavoce			
Topic: Trauma		**Number of competencies: (10)**			**Number of procedures that require certification: (NIL)**				
SU17.1	Describe the Principles of FIRST AID	S	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.2	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment	S	SH	Y	DOAP session	Skill assessment			Anaesthesiology
SU17.3	Describe the Principles in management of mass casualties	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.4	Describe Pathophysiology, mechanism of head injuries	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.5	Describe clinical features for neurological assessment and GCS inhead injuries	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.6	Chose appropriate investigations and discuss the principles ofmanagement of head injuries	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.7	Describe the clinical features of soft tissue injuries. Choseappropriate investigations and discuss the principles of management.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.8	Describe the pathophysiology of chest injuries.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.9	Describe the clinical features and principles of management ofchest injuries.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU17.10	Demonstrate Airway maintenance. Recognize and manage tension pneumothorax, hemothorax and flail chest in simulated environment.	S	SH	Y	DOAP session	Skill assessment/ Log book			Anaesthesiology
Topic: Skin and subcutaneous tissue		**Number of competencies: (03)**			**Number of procedures that require certification: (NIL)**				

SU18.1	Describe the pathogenesis, clinical features and management ofvarious cutaneous and subcutaneous infections.	K	KH	Y	Lecture, Small group Discussion	Written/ Viva voce			
SU18.2	Classify skin tumors Differentiate different skin tumors and discuss their management.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU18.3	Describe and demonstrate the clinical examination of surgicalpatient including swelling and order relevant investigation for diagnosis. Describe and discuss appropriate treatment plan.	S	SH	Y	Bedside clinic, Small group discussion, DOAP session	Skill assessment			
Topic: Developmental anomalies of face, mouth and jaws		**Number of competencies: (02)**				**Number of procedures that require certification: (NIL)**			
SU19.1	Describe the etiology and classification of cleft lip and palate	K	KH	Y	Lecture, Small group Discussion	Written/ Viva voce		Human Anatomy	
SU19.2	Describe the Principles of reconstruction of cleft lip and palate	K	KH	Y	Lecture, Small group Discussion	Written/ Viva voce		Human Anatomy	
Topic: Oropharyngeal cancer		**Number of competencies: (02)**				**Number of procedures that require certification: (NIL)**			
SU20.1	Describe etiopathogenesis of oral cancer symptoms and signs oforopharyngeal cancer.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		ENT	
SU20.2	Enumerate the appropriate investigations and discuss the Principlesof treatment.	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Disorders of salivary glands		**Number of competencies: (02)**				**Number of procedures that require certification: (NIL)**			
SU21.1	Describe surgical anatomy of the salivary glands, pathology, andclinical presentation of disorders of salivary glands	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU21.2	Enumerate the appropriate investigations and describe thePrinciples of treatment of disorders of salivary glands	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Endocrine General Surgery: Thyroid and parathyroid		**Number of competencies: (06)**				**Number of procedures that require certification: (NIL)**			
SU22.1	Describe the applied anatomy and physiology of thyroid	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
SU22.2	Describe the etiopathogenesis of thyroidal swellings	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
SU22.3	Demonstrate and document the correct clinical examination ofthyroid swellings and discus the differential diagnosis and theirmanagement	S	SH	Y	Bedside clinic	Skill assessment			
SU22.4	Describe the clinical features, classification and	K	KH	Y	Lecture, Small group	Written/ Viva voce			

	principles ofmanagement of thyroid cancer				discussion				
SU22.5	Describe the applied anatomy of parathyroid	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
SU22.6	Describe and discuss the clinical features of hypo - and hyperparathyroidism and the principles of their management	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Medicine
Topic: Adrenal glands		**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**			
SU23.1	Describe the applied anatomy of adrenal glands	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
SU23.2	Describe the etiology, clinical features and principles ofmanagement of disorders of adrenal gland	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Medicine
SU23.3	Describe the clinical features, principles of investigation andmanagement of Adrenal tumors	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce			
Topic: Pancreas		**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**			
SU24.1	Describe the clinical features, principles of investigation, prognosisand management of pancreatitis.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
SU24.2	Describe the clinical features, principles of investigation, prognosisand management of pancreatic endocrine tumours	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce			
SU24.3	Describe the principles of investigation and management of Pancreatic disorders including pancreatitis and endocrine tumors.	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
Topic: Breast		**Number of competencies: (05)**				**Number of procedures that require certification: (NIL)**			
SU25.1	Describe applied anatomy and appropriate investigations for breastdisease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Human Anatomy	
SU25.2	Describe the etiopathogenesis, clinical features and principles ofmanagement of benign breast disease including infections of thebreast	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU25.3	Describe the etiopathogenesis, clinical features, Investigations andprinciples of treatment of benign and malignant tumours of breast.	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		Radiodiagnosis	
SU25.4	Counsel the patient and obtain informed consent for treatment ofmalignant conditions of the breast	A/ C	SH	Y	DOAP session	Skill assessment			
SU25.5	Demonstrate the correct technique to palpate the breast for	S	SH	Y	DOAP session	Skill assessment			

	breastswelling in a mannequin or equivalent								
Topic: Cardio-thoracic General Surgery- Chest - Heart and Lungs		**Number of competencies: (04)**				**Number of procedures that require certification: (NIL)**			
SU26.1	Outline the role of surgery in the management of coronary heartdisease, valvular heart diseases and congenital heart diseases	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			
SU26.3	**Describe the clinical features of mediastinal diseases and the principles of management**	**K**	**K**	Y	**Lecture, Small group discussion**	**Written/ Viva voce**			
SU26.4	**Describe the etiology, pathogenesis, clinical features of tumors of lung and the principles of management**	**K**	**K**	Y	**Lecture, Small group discussion**	**Written/ Viva voce**			
Topic: Vascular diseases		**Number of competencies: (08)**				**Number of procedures that require certification: (NIL)**			
SU27.1	Describe the etiopathogenesis, clinical features, investigations andprinciples of treatment of occlusive arterial disease.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU27.2	Demonstrate the correct examination of the vascular system andenumerate and describe the investigation of vascular disease	S	SH	Y	DOAP session	Skill assessment			
SU27.3	Describe clinical features, investigations and principles ofmanagement of vasospastic disorders	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU27.4	Describe the types of gangrene and principles of amputation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU27.5	Describe the applied anatomy of venous system of lower limb	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			
SU27.6	Describe pathophysiology, clinical features, Investigations andprinciples of management of DVT and Varicose veins	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
SU27.7	Describe pathophysiology, clinical features, investigations and principles of management of Lymph edema, lymphangitis andLymphomas	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU27.8	Demonstrate the correct examination of the lymphatic system	S	SH	Y	DOAP session, Bedside clinic	Skill assessment			
Topic: Abdomen		**Number of competencies: (18)**				**Number of procedures that require certification: (NIL)**			
SU28.1	Describe pathophysiology, clinical features, Investigations andprinciples of management of Hernias	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU28.2	Demonstrate the correct technique to examine the patient	S	SH	Y	DOAP session,	Skill assessment			

	withhernia and identify different types of hernias.				Bedside clinic				
SU28.3	Describe causes, clinical features, complications and principles ofmangament of peritonitis	K	K	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce			
SU28.4	Describe pathophysiology, clinical features, investigations and principles of management of Intra-abdominal abscess, mesentericcyst, and retroperitoneal tumors	K	K	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce			
SU28.5	Describe the applied Anatomy and physiology of esophagus	K	K	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce		Human Anatomy, Physiology	
SU28.6	Describe the clinical features, investigations and principles of management of benign and malignant disorders of esophagus	K	K	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce			
SU28.7	Describe the applied anatomy and physiology of stomach	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
SU28.8	Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinomastomach	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU28.9	Demonstrate the correct technique of examination of a patient withdisorders of the stomach	S	SH	Y	DOAP session, Bedside clinic	Skill assessment			
SU28.10	Describe the applied anatomy of liver. Describe the clinical features,Investigations and principles of management of liver abscess, hydatid disease, injuries and tumors of the liver	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce		Human Anatomy	
SU28.11	Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenicinjuries. Describe the post-splenectomy sepsis – prophylaxis	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce		Human Anatomy	
SU28.12	Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management ofdiseases of biliary system	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce		Human Anatomy	
SU28.13	Describe the applied anatomy of small and large intestine	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce		Human Anatomy	
SU28.14	Describe the clinical features, investigations and principles	K	KH	Y	Lecture, Small group	Written/ Viva voce			

	of management of disorders of small and large intestine includingneonatal obstruction and Short gut syndrome				discussion, Demonstration				
SU28.15	Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and itscomplications.	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
SU28.16	Describe applied anatomy including congenital anomalies of therectum and anal canal	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		Human Anatomy	
SU28.17	Describe the clinical features, investigations and principles ofmanagement of common anorectal diseases	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatmentplan	S	SH	Y	Bedside clinic, DOAP session, Small group discussion	Skill assessment			
Topic: Urinary System		**Number of competencies: (11)**				**Number of procedures that require certification: (NIL)**			
SU29.1	Describe the causes, investigations and principles of managementof Hematuria	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU29.2	Describe the clinical features, investigations and principles of management of congenital anomalies of genitourinary system	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy	
SU29.3	Describe the Clinical features, Investigations and principles ofmanagement of urinary tract infections	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Microbiology	
SU29.4	Describe the clinical features, investigations and principles ofmanagement of hydronephrosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU29.5	Describe the clinical features,investigations and principles ofmanagement of renal calculi	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU29.6	Describe the clinical features, investigations and principles ofmanagement of renal tumours	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU29.7	Describe the principles of management of acute and chronicretention of urine	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU29.8	Describe the clinical features, investigations and principles ofmanagement of bladder cancer	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
SU29.9	Describe the clinical features, investigations and principles ofmanagement of disorders of prostate	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment			
SU29.10	Demonstrate a digital rectal examination of the prostate in amannequin or equivalent	S	SH	Y	DOAP session	Skill assessment			

SU29.11	Describe clinical features, investigations and management ofurethral strictures	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
Topic: Penis, Testis and scrotum		**Number of competencies: (06)**				**Number of procedures that require certification: (NIL)**			
SU30.1	Describe the clinical features, investigations and principles of management of phimosis, paraphimosis and carcinoma penis.	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
SU30.2	Describe the applied anatomy clinical features, investigations andprinciples of management of undescended testis.	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		Human Anatomy	
SU30.3	Describe the applied anatomy clinical features, investigations andprinciples of management of epidydimo-orchitis	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		Human Anatomy	
SU30.4	Describe the applied anatomy clinical features, investigations andprinciples of management of varicocele	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		Human Anatomy	
SU30.5	Describe the applied anatomy, clinical features, investigations andprinciples of management of Hydrocele	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		Human Anatomy	
SU30.6	Describe classification, clinical features, investigations andprinciples of management of tumours of testis	K	KH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment			
	Column C: K- Knowledge, S – Skill , A - Attitude / professionalism, C- Communication. **Column D: K – Knows, KH - Knows How, SH - Shows how, P- performs independently,** **Column F: DOAP session – Demonstrate, Observe, Assess, Perform.** **Column H: If entry is P: indicate how many procedures must be done independently for certification/ graduation**								
Integration									
					Human Anatomy				
AN6.3	Explain the concept of lymphoedema and spread of tumors vialymphatics and venous system	K	KH	N	Lecture	Written		General Surgery	
AN9.2	Breast-Describe the location, extent, deep relations, structure, agechanges, blood supply, lymphatic drainage, microanatomy and applied anatomy of breast	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	
AN10.4	Describe the anatomical groups of axillary lymph nodes and specifytheir areas of drainage	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	

AN10.6	Explain the anatomical basis of clinical features of Erb's palsy andKlumpke's paralysis	K	KH	N	Lecture	Written		General Surgery	
AN10.7	Explain anatomical basis of enlarged axillary lymph nodes	K	KH	N	Lecture	Written		General Surgery	
AN11.3	Describe the anatomical basis of Venepuncture of cubital veins	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	
AN12.8	Describe anatomical basis of Claw hand	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN12.10	Explain infection of fascial spaces of palm	K	KH	N	Lecture	Written		General Surgery	
AN12.11	Identify, describe and demonstrate important muscle groups ofdorsal forearm with attachments, nerve supply and actions	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN12.12	Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels of back offorearm	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN12.13	Describe the anatomical basis of Wrist drop	K	KH	Y	Lecture	Written/Viva voce		General Surgery	
AN12.14	Identify & describe compartments deep to extensor retinaculum	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN15.3	Describe and demonstrate boundaries, floor, roof and contents offemoral triangle	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN15.4	Explain anatomical basis of Psoas abscess & Femoral hernia	K	KH	N	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN16.2	Describe anatomical basis of sciatic nerve injury during glutealintramuscular injections	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN16.3	Explain the anatomical basis of Trendelenburg sign	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN18.3	Explain the anatomical basis of foot drop	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN19.3	Explain the concept of "Peripheral heart"	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN20.4	Explain anatomical basis of enlarged inguinal lymph nodes	K	KH	N	Lecture	Written/ Viva voce		General Surgery	
AN20.5	Explain anatomical basis of varicose veins and deep veinthrombosis	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN20.9	Identify & demonstrate palpation of vessels (femoral, popliteal, dorsalis pedis, post tibial), Mid inguinal point, Surface projection	K/S	SH	Y	Practical, Lecture, Small group	Viva voce/ Skill assessment		General Medicine General Surgery	

	of: femoral nerve, Saphenous opening, Sciatic, tibial, common peroneal& deep peroneal nerve, great and small saphenous veins				discussion, DOAP session				
AN23.1	Describe & demonstrate the external appearance, relations, bloodsupply, nerve supply, lymphatic drainage and applied anatomy of oesophagus	K/S	SH	Y	Practical, Lecture, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN23.2	Describe & demonstrate the extent, relations, tributaries of thoracicduct and enumerate its applied anatomy	K/S	SH	Y	Practical, Lecture, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN23.7	Mention the extent, relations and applied anatomy of lymphatic duct	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN27.1	Describe the layers of scalp, its blood supply, its nerve supply andsurgical importance	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	
AN28.8	Explain surgical importance of deep facial vein	K	KH	Y	Lecture	Written		General Surgery	
AN28.9	Describe & demonstrate the parts, borders, surfaces, contents, relations and nerve supply of parotid gland with course of its duct and surgical importance	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN28.10	Explain the anatomical basis of Frey's syndrome	K	KH	N	Lecture	Written		General Surgery	
AN29.2	Explain anatomical basis of Erb's & Klumpke's palsy	K	KH	Y	Lecture	Written		General Surgery	
AN29.3	Explain anatomical basis of wry neck	K	KH	N	Lecture	Written		General Surgery	
AN30.1	Describe the cranial fossae & identify related structures.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/Skill assessment		General Surgery	
AN30.2	Describe & identify major foramina with structures passing throughthem	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN33.2	Describe & demonstrate attachments, direction of fibres, nervesupply and actions of muscles of mastication	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN33.4	Explain the clinical significance of pterygoid venous plexus	K	KH	Y	Lecture	Written		General Surgery	

AN33.5	Describe the features of dislocation of temporomandibular joint	K	KH	N	Lecture	Written		General Surgery	
AN34.1	Describe & demonstrate the morphology, relations and nerve supplyof submandibular salivary gland & submandibular ganglion	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN34.2	Describe the basis of formation of submandibular stones	K	KH	N	Lecture	Written		General Surgery	
AN35.2	Describe & demonstrate location, parts, borders, surfaces, relations& blood supply of thyroid gland	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN35.5	Describe & demonstrate extent, drainage & applied anatomy ofcervical lymph nodes	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN35.8	Describe the anatomically relevant clinical features of Thyroidswellings	K	KH	N	Lecture	Written		General Surgery	
AN35.9	Describe the clinical features of compression of subclavian arteryand lower trunk of brachial plexus by cervical rib	K	KH	N	Lecture	Written		General Surgery	
AN43.5	Demonstrate- 1) Testing of muscles of facial expression, extraocularmuscles, muscles of mastication, 2) Palpation of carotid arteries, facial artery, superficial temporal artery, 3) Location of internal and external jugular veins, 4) Location of hyoid bone, thyroid cartilage and cricoid cartilage with their vertebral levels	K/S	SH	Y	Practical	Viva voce/ Skill assessment		General Surgery	
AN43.6	Demonstrate surface projection of Thyroid gland, Parotid gland andduct, Pterion, Common carotid artery, Internal jugular vein, Subclavian vein, External jugular vein, Facial artery in the face & Accessory nerve	K/S	SH	N	Practical	Viva voce/ Skill assessment		General Surgery	
AN44.1	Describe & demonstrate the Planes (transpyloric, transtubercular, subcostal, lateral vertical, linea alba, linea semilunaris), regions &Quadrants of abdomen	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN44.4	Describe & demonstrate extent, boundaries, contents of Inguinalcanal including Hesselbach's triangle.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN44.5	Explain the anatomical basis of inguinal hernia.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	

AN44.6	Describe & demonstrate attachments of muscles of anteriorabdominal wall	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN44.7	Enumerate common Abdominal incisions	K	KH	N	Lecture	Written		General Surgery	
AN46.1	Describe & demonstrate coverings, internal structure, side determination, blood supply, nerve supply, lymphatic drainage &descent of testis with its applied anatomy	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN46.4	Explain the anatomical basis of varicocele	K	KH	N	Lecture	Written		General Surgery	
AN46.5	Explain the anatomical basis of Phimosis & Circumcision	K	KH	N	Lecture	Written		General Surgery	
AN47.1	Describe & identify boundaries and recesses of Lesser & Greatersac	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN47.2	Name & identify various peritoneal folds & pouches with itsexplanation.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN47.3	Explain anatomical basis of Ascites & Peritonitis	K	KH	N	Lecture	Written		General Surgery	
AN47.4	Explain anatomical basis of Subphrenic abscess	K	KH	N	Lecture	Written		General Surgery	
AN47.5	Describe & demonstrate major viscera of abdomen under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply,lymphatic drainage and applied aspects)	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written		General Surgery	
AN47.6	Explain the anatomical basis of Splenic notch, accessory spleens, Kehr's sign, different types of vagotomy, liver biopsy (site of needlepuncture), referred pain in cholecystitis, Obstructive jaundice, referred pain around umbilicus, radiating pain of kidney to groin & Lymphatic spread in carcinoma stomach	K	KH	N	Lecture	Written		General Surgery	
AN47.7	Mention the clinical importance of Calot's triangle	K	KH	N	Lecture	Written		General Surgery	
AN47.10	Enumerate the sites of portosystemic anastomosis	K	KH	Y	Lecture	Written		General Surgery	
AN47.11	Explain the anatomic basis of hematemesis & caput medusae inportal hypertension	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN47.14	Describe the abnormal openings of thoracoabdominal diaphragmand diaphragmatic hernia	K	KH	N	Lecture	Written		General Surgery	

AN48.5	Explain the anatomical basis of suprapubic cystostomy, Urinary obstruction in benign prostatic hypertrophy, Retroverted uterus, Prolapse uterus, Internal and external haemorrhoids, Anal fistula,Vasectomy, Tubal pregnancy & Tubal ligation	K	KH	N	Lecture	Written		General Surgery	
AN48.6	Describe neurological basis of automatic bladder	K	KH	N	Lecture	Written		General Surgery	
AN48.7	Mention the lobes involved in benign prostatic hypertrophy &prostatic cancer	K	KH	N	Lecture	Written		General Surgery	
AN48.8	Mention the structures palpable during vaginal & rectal examination	K	KH	N	Lecture	Written		Obstetrics & Gynaecology General Surgery	
AN49.4	Describe & demonstrate boundaries, content & applied anatomy oflschiorectal fossa	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ Skill assessment		General Surgery	
AN52.5	Describe the development and congenital anomalies of diaphragm	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN52.6	Describe the development and congenital anomalies of foregut,midgut & hindgut	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN52.7	Describe the development of urinary system	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN53.1	Identify & hold the bone in the anatomical position, describe the salient features, articulations & demonstrate the attachments ofmuscle groups	K/S	SH	Y	Lecture, DOAP session	Viva voce/ Skill assessment		General Surgery, Obstetrics & Gynaecology	
AN55.1	Demonstrate the surface marking of regions and planes of abdomen, superficial inguinal ring, deep inguinal ring , McBurney'spoint, Renal Angle & Murphy's point	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ Skill assessment		General Surgery	
AN55.2	Demonstrate the surface projections of: stomach, liver, fundus ofgall bladder, spleen, duodenum, pancreas, ileocaecal junction, idneys & root of mesentery	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ Skill assessment		General Surgery	
Biochemistry									
BI10.1	Describe the cancer initiation promotion oncogenes & oncogeneactivation.	K	KH	Y	Lectures, Small group discussion	Written/ viva voce		Obstetrics & Gynaecology, General Surgery, Pathology	

BI10.2	Describe various biochemical tumor markers and the biochemicalbasis of cancer therapy.	K	KH	Y	Lectures, Small group discussion	Written/ viva voce		Obstetrics & Gynaecology, General Surgery, Pathology	
BI10.3	Describe the cellular and humoral components of the immunesystem & describe the types and structure of antibody	K	KH	Y	Lectures, Small group discussion	Written/ viva voce		Obstetrics & Gynaecology, General Surgery, Pathology	
Pathology									
PA4.1	Define and describe the general features of acute and chronicinflammation including stimuli, vascular and cellular events	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA4.2	Enumerate and describe the mediators of acute inflammation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA5.1	Define and describe the process of repair and regenerationincluding wound healing and its types	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA6.3	Define and describe shock, its pathogenesis and its stages	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA8.1	Describe the diagnostic role of cytology and its application in clinicalcare	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA8.2	Describe the basis of exfoliative cytology including the technique,stains used	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		General Surgery	
PA19.1	Enumerate the causes and describe the differentiating features oflymphadenopathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA19.2	Describe the pathogenesis and pathology of tuberculouslymphadenitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA19.4	Describe and discuss the pathogenesis pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA19.5	Identify and describe the features of Hodgkin's lymphoma in a grossand microscopic specimen	S	SH	Y	DOAP session	Skill assessment		General Surgery	
PA19.6	Enumerate and differentiate the causes of splenomegaly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
PA22.4	Enumerate blood components and describe their clinical uses	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
PA24.4	Describe and etiology and pathogenesis and pathologic	K	KH	Y	Lecture, Small group	Written/ Viva voce		General Surgery	

	features ofcarcinoma of the stomach				discussion				
PA24.5	Describe and etiology and pathogenesis and pathologic features ofTuberculosis of the intestine	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA24.6	Describe and etiology and pathogenesis and pathologic anddistinguishing features of inflammatory bowel disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA24.7	Describe the etiology and pathogenesis and pathologic anddistinguishing features of carcinoma of the colon	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA25.2	Describe the pathophysiology and pathologic changes seen in hepatic failure and their clinical manifestations, complications andconsequences	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
PA25.4	Describe the pathophysiology, pathology and progression ofalcoholic liver disease including cirrhosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
PA25.5	Describe the etiology, pathogenesis and complications of portalhypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
PA28.10	Describe the etiology, pathogenesis, pathology, laboratory findings, distinguishing features progression and complications of acute andchronic pyelonephritis and reflux nephropathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, General Surgery	
PA28.13	Define, classify and describe the etiology, pathogenesis, pathology,laboratory urinary findings, distinguishing features, progression and complications of renal stone disease and obstructive uropathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA28.16	Describe the etiology, genetics, pathogenesis, pathology, presentingfeatures and progression of urothelial tumors	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA29.1	Classify testicular tumors and describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progressionand spread of testicular tumors	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA29.2	Describe the pathogenesis, pathology, presenting and distinguishingfeatures, diagnostic tests, progression and spread of carcinoma of the penis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA29.3	Describe the pathogenesis, pathology, hormonal dependency,presenting and distinguishing features, urologic findings and diagnostic tests of benign prostatic hyperplasia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA29.4	Describe the pathogenesis, pathology, hormonal dependency,	K	KH	Y	Lecture, Small group	Written/ Viva voce		General Surgery	

	presenting and distinguishing features, diagnostic tests, progressionand spread of carcinoma of the prostate				discussion				
PA29.5	Describe the etiology, pathogenesis, pathology and progression ofprostatitis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA31.1	Classify and describe the types, etiology, pathogenesis, pathologyand hormonal dependency of benign breast disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, General Surgery	
PA31.2	Classify and describe the epidemiology, pathogenesis, classification, morphology, prognostic factors, hormonal dependency, staging and spread of carcinoma of the breast	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA31.3	Describe and identify the morphologic and microscopic features ofcarcinoma of the breast	S	SH	N	DOAP session	Skill assessment		General Surgery	
PA32.1	Enumerate, classify and describe the etiology, pathogenesis,pathology and iodine dependency of thyroid swellings	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy , Physiology, General Medicine, Pathology	
PA32.6	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreaticcancer	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PA32.9	Describe the etiology, pathogenesis, manifestations, laboratory andmorphologic features of adrenal neoplasms	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Physiology, General Medicine, General Surgery	
Microbiology									
MI1.4	Classify and describe the different methods of sterilization and disinfection. Discuss the application of the different methods in thelaboratory, in clinical and surgical practice	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
MI1.5	Choose the most appropriate method of sterilization and disinfection to be used in specific situations in the laboratory, inclinical and surgical practice	K	KH	Y	Small group discussions, Case discussion	Written/ Viva voce/ OSPE		General Surgery	
MI7.1	Describe the etio-pathogenesis and discuss the laboratory diagnosisof infections of genitourinary system	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
MI8.7	Demonstrate Infection control practices and use of PersonalProtective Equipments (PPE)	S	P	Y	DOAP session	Skill assessment	3 each in (Hand hygiene & PPE)	General Surgery	Community Medicine

Community Medicine									
CM13.1	Define and describe the concept of Disaster management	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
CM13.2	Describe disaster management cycle	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
CM13.3	Describe man-made disasters in the world and in India	K	KH	Y	Lecture, Small group discussion	Written / Viva voce		General Surgery, General Medicine	
CM13.4	Describe the details of the National Disaster management Authority	K	KH	Y	Lecture, Small group discussion	Written / Viva voce		General Surgery, General Medicine	
Forensic Medicine & Toxicology									
FM1.9	Describe the importance of documentation in medical practice inregard to medicolegal examinations, Medical Certificates and medicolegal reports especially –maintenance of patient case records, discharge summary,prescribed registers to be maintained in Health Centres. -- maintenance of medico-legal register like accident register. -- documents of issuance of wound certificate -- documents of issuance of drunkenness certificate. -- documents of issuance of sickness and fitness certificate. -- documents for issuance of death certificate. -- documents of Medical Certification of Cause of Death - FormNumber 4 and 4A -- documents for estimation of age by physical, dental andradiological examination and issuance of certificate	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Radiodiagnosis, General Surgery, General Medicine, Pediatrics	
FM2.19	Investigation of anaesthetic, operative deaths:Describe and discussspecial protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Anesthesiology, General Surgery	
FM2.25	Describe types of injuries, clinical features, patho-physiology, post-mortem findings and medico-legal aspects in cases of burns, scalds, lightening, electrocution and radiations.	K	KH	Y	Lecture, Small group discussion, Autopsy, DOAP session	Written/ Viva voce/ OSPE		General Surgery	

FM3.3	Mechanical injuries and wounds: Define, describe and classify different types of mechanical injuries,abrasion, bruise, laceration, stab wound, incised wound, chop wound, defense wound, self-inflicted/fabricated wounds and their medico-legal aspects.	K	KH	Y	Lectures, Small group discussion, Bed side clinic/ DOAP session	Written/ Viva voce/ OSCE		General Surgery	
FM3.4	Mechanical injuries and wounds: define injury, assault & hurt.Describe IPC pertaining to injuries	K	KH	Y	Lectures, Small group discussion	Written/ Viva voce		General Surgery	
FM3.6	Mechanical injuries and wounds:Describe healing of injury andfracture of bones with its medico-legal importance	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
FM3.8	Mechanical injuries and wounds:Describe and discuss differenttypes of weapons including dangerous weapons and their examination.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, Orthopaedics	
FM3.9	Firearm injuries:Describe different types of firearms including structure and components, along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking.	K	K/KH	Y	Lecture, Small group discussion	Written/Viva voce		General Surgery, Orthopaedics	
FM3.10	Firearm injuries: Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries,various tests related to confirmation of use of firearms	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic, DOAP session	Written/ Viva voce/ OSCE		General Surgery, Orthopaedics	
FM3.11	Regional Injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cordand skeleton	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic or autopsy, DOAP session	Written/ Viva voce/ OSCE/OSPE		General Surgery, Orthopaedics	
FM3.12	Regional Injuries: Describe and discuss injuries related to fall from height and vehicular injuries – Primary and Secondary impact, Secondaryinjuries, crush syndrome, railway spine.	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic or autopsy, DOAP session	Written/ Viva voce/ OSCE/OSPE		General Surgery, Orthopaedics	
Dermatology, Venereology & Leprosy									

DR15.3	Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugsused in treatment of pyoderma	K	KH	Y	Lecture, Small group discussion	Written / Viva voce		General Surgery	Microbiology, Pharmacology
DR15.4	Enumerate the indications for surgical referral	S	KH	Y	DOAP session	Written/Viva voce		General Surgery	
Anesthesiology									
AS3.1	Describe the principles of preoperative evaluation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Surgery, General Medicine
AS3.2	Elicit, present and document an appropriate history including medication history in a patient undergoing Surgery as it pertains to apreoperative anaesthetic evaluation	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS3.3	Demonstrate and document an appropriate clinical examination in apatient undergoing General Surgery	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS3.4	Choose and interpret appropriate testing for patients undergoingSurgery	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS3.5	Determine the readiness for General Surgery in a patient based onthe preoperative evaluation	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS5.6	Observe and describe the principles and steps/ techniques involved in common blocks used in Surgery(including brachial plexus blocks)	S	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce			General Surgery
AS6.3	Describe the common complications encountered by patients in therecovery room, their recognition and principles of management	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce			General Surgery
AS9.3	Describe the principles of fluid therapy in the preoperative period	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce			General Surgery
AS9.4	Enumerate blood products and describe the use of blood productsin the preoperative period	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce		Pathology	General Surgery
AS10.3	Describe the role of communication in patient safety	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce		AETCOM	General Surgery
General Medicine									
IM5.8	Describe and discuss the pathophysiology, clinical evolution andcomplications of cholelithiasis and cholecystitis	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	

IM5.13	Enumerate the indications for ultrasound and other imaging studiesincluding MRCP and ERCP and describe the findings in liver disease	K	K	Y	Bed side clinic, Small group discussion	Written/ Viva voce		Radiodiagnosis	General Surgery
IM5.16	Describe and discuss the management of hepatitis, cirrhosis, portal hypertension, ascites, spontaneous, bacterial peritonitis and hepaticencephalopathy	K	KH	Y	Written, Small group discussion	Skill assessment/ Written/ Viva voce		Pharmacology	General Surgery
IM5.18	Enumerate the indications for hepatic transplantation	K	K	Y	Written, Small group discussion	Written/ Viva voce			General Surgery
IM12.6	Perform and demonstrate a systematic examination based on thehistory that will help establish the diagnosis and severity includingsystemic signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of thethyroid and lymph nodes and cardiovascular findings	S	SH	Y	Bed side clinic, DOAP session	Skill assessment			General Surgery
IM12.7	Demonstrate the correct technique to palpate the thyroid	S	SH	Y	Bedside clinic, DOAP session	Skill assessment			General Surgery
IM12.8	Generate a differential diagnosis based on the clinical presentationand prioritise it based on the most likely diagnosis	K	KH	Y	Bedside clinic, small group discussion	Short case			General Surgery
IM12.9	Order and interpret diagnostic testing based on the clinical diagnosis including CBC, thyroid function tests and ECG and radioiodine uptake and scan	S	SH	Y	Bed side clinic, DOAP session	Skill assessment			General Surgery
IM12.10	Identify atrial fibrillation, pericardial effusion and bradycardia onECG	S	SH	Y	Bedside clinic, lab	Skill assessment			General Surgery
IM12.11	Interpret thyroid function tests in hypo-and hyperthyroidism	S	SH	Y	Bedside clinic, lab	Skill assessment			General Surgery
IM12.13	Describe the pharmacology, indications, adverse reaction,interactions of thyroxine and antithyroid drugs	K	KH	Y	Lecture, Small group discussion	Viva voce/ Short note		Pharmacology	General Surgery
IM12.15	Describe and discuss the indications of thionamide therapy, radioiodine therapy and Surgeryin the management of thyrotoxicosis	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce, Skill assessment		Pharmacology	General Surgery
IM13.7	Elicit document and present a history that will help establish theaetiology of cancer and includes the appropriate risk factors, duration and evolution	S	K	Y	Bedside clinic	Skill assessment/ Short case			General Surgery
IM13.8	Perform and demonstrate a physical examination that	S	SH	Y	Bedside clinic	Skill assessment/			General Surgery

	includes anappropriate general and local examination that excludes the diagnosis, extent spread and complications of cancer					Short case			
IM13.9	Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and papsmear	S	K	Y	Bedside clinic	Skill assessment/ Short case		Human Anatomy	General Surgery
IM13.10	Generate a differential diagnosis based on the presenting symptomsand clinical features and prioritise based on the most likely diagnosis	S	K	Y	Bedside clinic	Skill assessment/ Short case			General Surgery
IM13.13	Describe and assess pain and suffering objectively in a patient withcancer	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Pharmacology	General Surgery
IM13.14	Describe the indications for General Surgery, radiation andchemotherapy for common malignancies	K	KH	Y	Bedside clinic, Small group discussion	Short note/ Viva voce		Pharmacology	General Surgery
IM14.14	Describe and enumerate the indications and side effects of bariatricsurgery	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
IM15.1	Enumerate,describe and discuss the aetiology of upper and lowerGI bleeding	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM15.2	Enumerate describe and discuss the evaluation and steps involvedin stabilizing a patient who presents with acute volume loss and GIbleed	S	SH	Y	DOAP session, Small group discussion, Lecture	Written/ Viva voce/ Skill assessment		Pathology	General Surgery
IM15.3	Describe and discuss the physiologic effects of acute blood andvolume loss	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Physiology	General Surgery
IM15.4	Elicit document and present an appropriate history that identifies theroute of bleeding, quantity, grade, volume loss, duration, etiology, comorbid illnesses and risk factors	S	SH	Y	Bedside clinic	Skill assessment			General Surgery
IM15.5	Perform, demonstrate and document a physical examination basedon the history that includes general examination, volume assessment and appropriate abdominal examination	S	SH	Y	Bedside clinic, Skills lab	Skill assessment			General Surgery
IM15.6	Distinguish between upper and lower gastrointestinal bleedingbased on the clinical features	S	KH	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
IM15.7	Demonstrate the correct technique to perform an anal and rectalexamination in a mannequin or equivalent	S	SH	Y	DOAP session	Skill assessment			General Surgery
IM15.8	Generate a differential diagnosis based on the presenting	S	SH	Y	Bedside clinic, Skills	Skill assessment/			General Surgery

	symptomsand clinical features and prioritise based on the most likely diagnosis				lab	Short note/ Viva voce			
IM15.9	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, PT and PTT, stoolexamination, occult blood, liver function tests, H.pylori test.	S	SH	Y	Bedside clinic, DOAP session, Small group discussion	Skill assessment/ Short note/ Viva voce		Pathology	General Surgery
IM15.10	Enumerate the indications for endoscopy, colonoscopy and otherimaging procedures in the investigation of Upper GI bleeding	K	KH	Y	Lectures, Small group discussion	Written/ Viva voce			General Surgery
IM15.11	Develop, document and present a treatment plan that includes fluidresuscitation, blood and blood component transfusion, and specifictherapy for arresting blood loss	S	KH	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM15.12	Enumerate the indications for whole blood, component and platelet transfusion and describe the clinical features and management of amismatched transfusion	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM15.13	Observe cross matching and blood / blood component transfusion	S	SH	Y	Bedside clinic	Short note/ Viva voce/ Skill assessment		Pathology	General Surgery
IM15.14	Describe and enumerate the indications, pharmacology and sideeffects of pharmacotherapy of pressors used in the treatment of Upper GI bleed	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology	General Surgery
IM15.15	Describe and enumerate the indications, pharmacology and sideeffects of pharmacotherapy of acid peptic disease including Helicobacter pylori	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pharmacology, Microbiology	General Surgery
IM15.16	Enumerate the indications for endoscopic interventions and Surgery	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
IM15.17	Determine appropriate level of specialist consultation	S	K	Y	Small group discussion				General Surgery
IM15.18	Counsel the family and patient in an empathetic non-judgmentalmanner on the diagnosis and therapeutic options	S	SH	Y	DOAP session	Skill assessment			General Surgery
IM16.12	Enumerate and discuss the indications for further investigations including antibodies, colonoscopy, diagnostic imaging and biopsy inthe diagnosis of chronic diarrhea	K	KH	Y	Lectures, Small group discussion	Written/ Viva voce		Pathology	General Surgery
IM16.15	Distinguish, based on the clinical presentation, Crohn's	S	SH	Y	Lecture, Small group	Short note/ Viva voce		Pathology	General Surgery

	diseasefrom ulcerative colitis				discussion				
IM16.17	Describe and enumerate the indications for Surgeryin inflammatorybowel disease	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce			General Surgery
IM18.15	Enumerate the indications for Surgery in a hemorrhagic stroke	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			General Surgery
IM19.9	Enumerate the indications for use of Surgery and botulinum toxin inthe treatment of movement disorders	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pharmacology	General Surgery
IM22.2	Describe the aetiology, clinical manifestations, diagnosis and clinicalapproach to primary hyperparathyroidism	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	General Surgery
IM24.11	Describe and discuss the aetiopathogenesis,clinical presentation,identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Anesthesiology, General Surgery
Obstetrics & Gynaecology									
OG26.2	Describe the causes, prevention, clinical features, principles ofmanagement of genital injuries and fistulae	K	KH	N	Lecture, Small group discussion	Written/ Viva voce			General Surgery
OG33.2	Describe the principles of management including Surgery and radiotherapy of benign, pre-malignant (CIN) and malignant Lesionsof the Cervix	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written/ Viva voce/ Skill assessment			General Surgery
Pediatrics									
PE21.8	Elicit, document and present a history pertaining to diseases of theGenitourinary tract00	S	SH	Y	Bedside clinics, Skills lab	Skill Assessment			General Surgery
PE21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis pancreatitis perforation intussusception, Phimosis, undescendedtestis, Chordee, hypospadiasis,Torsion testis, hernia Hydrocele,Vulval Synechiae	S	SH	Y	Bed side clinics, Skills lab	Log book assessment			General Surgery
rthopedics									
OR1.1	Describe and discuss the principles of pre-hospital care and casuality management of a trauma victim including	K/S/A/C	K/KH	Y	Lecture with video, Small group	Written/ Viva voce/ OSCE/ Simulation			General Surgery - Anaesthesiology

	principles oftriage				discussion				
OR1.2	Describe and discuss the aetiopathogenesis, clinical features,investigations, and principles of management of shock	K/S	K/KH	Y	Lecture	Written/ Viva voce/ OSCE/ Simulation			General Surgery
OR1.3	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of soft tissue injuries	K	KH / SH	Y	Lecture, Small group discussion	Written/ OSCE			General Surgery
OR1.4	Describe and discuss the principles of management of soft tissueinjuries	K	K/KH	Y	Lecture, Small group discussion	Written Assesment/ Viva voce			General Surgery
OR3.1	Describe and discuss the aetiopathogenesis, clinical features, Investigations and principles of management of Bone and Jointinfections a) Acute Osteomyelitis b) Subacute osteomyelitis c) Acute Suppurative arthritis d) Septic arthritis & HIV infection e) Spirochaetal infection f) Skeletal Tuberculosis	K/S	K/KH / SH	Y	Lecture, Small group discussion, Video assisted lecture	Written/ Viva voce/ OSCE		Pathology, Microbiology	General surgery
OR3.3	Participate as a member in team for procedures like drainage ofabscess, sequestrectomy/ saucerisation and arthrotomy	K/S/A/C	SH	Y	DOAP session, Video demonstration	Viva voce/ OSCE/ Skills assessment			General Surgery
OR4.1	Describe and discuss the clinical features, Investigation and principles of management of Tuberculosis affecting major joints(Hip, Knee) including cold abcess and caries spine	K	K/KH	Y	Lecture,Small group discussion, Case discussion	Written/ Viva voce/ OSCE		Pathology	General surgery
OR10.1	Describe and discuss the aetiopathogenesis, clinical features,Investigations and principles of management of benign and malignant bone tumours and pathological fractures	K	K/KH	Y	Lecture, Small group discussion, Video assisted interactive lecture	Written/ Viva voce OSCE		Pathology	General surgery, Radiotherapy
OR11.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of peripheral nerveinjuries in diseases like foot drop, wrist drop, claw hand, palsies ofRadial, Ulnar, Median, Lateral Popliteal and Sciatic Nerves	K	K/H	Y	Lecture Small Group discussion, Case discussion	Written/ Viva voce/ OSCE		Human Anatomy	General Medicine, General surgery
Physical Medicine & Rehabilitation									
PM5.1	Enumerate the indications and describe the principles of	K	KH	Y	Lecture, Small group	Written/ Viva voce			Orthopedics, General

	amputation				discussion				Surgery
PM7.8	Enumerate the causes of, describe, classify Pressure sores,prevention, and treatment.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Surgery
PM7.9	Enumerate the indications of debridement, and Split thickness skingrafting.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Surgery
PM8.1	Describe the clinical features, evaluation, diagnosis andmanagement of disability following traumatic brain injury	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Medicine, Orthopedics, General Surgery
Radiotherapy									
RT1.1	Describe and discuss definition of radiation, mechanism of action ofradiation, types of radiation	K	KH	Y	Lecture	Written/ Viva voce			General Surgery Anaesthesiology
RT1.3	Enumerate, describe and discuss and classify staging of cancer(AJCC, FIGO etc.)	K	KH	Y	Lecture	Written/ Viva voce		Pathology	General Surgery, General Medicine
RT4.5	Describe and discuss role of radiation in management of commonmalignancies in India (region specific)	K	KH	Y	Lecture, Bed side clinic	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.6	Describe and discuss radiotherapy for benign disease	K	KH	Y	Lecture	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.7	Counsel patients regarding acute and late effects of radiation andsupportive care	K/A/S	KH	Y	Bedside clinic, Group discussion	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.8	Describe oncological emergencies and palliative care	K/A/S	K/KH	Y	Lecture, Group discussion	Written/ Viva voce			General Surgery, Obstetrics & Gynaecology
RT5.1	Describe and discuss cancer prevention, screening, vaccination,cancer registry	K	K	Y	Group discussion	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology

Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required tocertify P	Vertical Integration	Horizontal Integration
ORTHOPEDICS									
Topic: Skeletal Trauma, Poly trauma		**Number of competencies : (06)**				**Number of procedures that require certification: (NIL)**			
OR1.1	Describe and discuss the Principles of pre-hospital care and Casuality management of a trauma victim including principles oftriage	K/S/A/C	K/KH	Y	Lecture with video, Small group discussion	Written/ Viva voce/OSCE/ Simulation			General Surgery, Anaesthesiology
OR1.2	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of shock	K/S	K/KH	Y	Lecture	Written/ Viva voce/OSCE/ Simulation			General Surgery
OR1.3	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of soft tissue injuries	K	KH/SH	Y	Lecture, Small groupdiscussion	Written/ OSCE			General Surgery
OR1.4	Describe and discuss the Principles of management of soft tissueinjuries	K	K/KH	Y	Lecture, Small groupdiscussion	Written/ Assesment/Viva voce			General Surgery
OR1.5	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of dislocation of majorjoints, shoulder, knee, hip	K	K/KH	Y	Lecture, Small group discussion, Bed sideclinic	Written/ Viva voce/OSCE/ Simulation			
OR1.6	Participate as a member in the team for closed reduction ofshoulder dislocation / hip dislocation / knee dislocation	K/S/A/C	SH	Y	Simulation, DOAP session	OSCE/ Simulation			
Topic: Fractures		**Number of competencies : (16)**				**Number of procedures that require certification: (NIL)**			
OR2.1	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fracture of clavicle	K/S	KH/SH	Y	Lecture, Small group discussion, Bed sideclinic	Written/ Viva voce/OSCE		Human Anatomy	

OR2.2	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fractures of proximal humerus	K	K/KH/ SH	Y	Lecture, Small group discussion, Bed sideclinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.3	Select, prescribe and communicate appropriate medications for relief of joint pain	K	KH/SH	Y	Lecture, Small group discussion, Bed sideclinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.4	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of fracture of shaft of humerus and intercondylar fracture humerus with emphasis on neurovasular deficit	K/S	K/KH	Y	Lecture, Small group discussion, Bed sideclinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.5	Describe and discuss the aetiopathogenesis, clinical features, mechanism of injury, investigation & principles of management of fractures of both bones forearm and Galeazzi and Monteggia injury	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.6	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of fractures of distal radius	K	KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.7	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of pelvic injuries with emphasis on hemodynamic instability	K	K/KH/ SH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.8	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of spine injuries with emphasis on mobilisation of the patient	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.9	Describe and discuss the mechanism of injury, Clinical features, investigations and principle of management of acetabular fracture	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	

Number	**COMPETENCY** **The student should be able to:**	**Domain K/S/A/C**	**Level K/KH / SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical Integration**	**Horizontal Integration**
OR2.10	Describe and discuss the aetiopathogenesis, mechanism of injury,clinical features, investigations and principles of management of fractures of proximal femur	K/S/A/C	KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.11	Describe and discuss the aetiopathogenesis, mechanism of injury,clinical features, investigations and principles of management of (a) Fracture patella (b) Fracture distal femur (c) Fracture proximaltibia with special focus on neurovascular injury and compartment syndrome	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.12	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of Fracture shaft of femur in all age groups and the recognition and management of fatembolism as a complication	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.13	Describe and discuss the aetiopathogenesis, clinical features,Investigation and principles of management of: (a) Fracture both bones leg (b) Calcaneus (c) Small bones of foot	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.14	Describe and discuss the aetiopathogenesis, clinical features,Investigation and principles of management of ankle fractures	K/S/C	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.15	Plan and interpret the investigations to diagnose complications offractures like malunion, non-union, infection, compartmental syndrome	K/S	SH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	
OR2.16	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of open fractures withfocus on secondary infection prevention and management	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE		Human Anatomy	

Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required tocertify P	Vertical Integration	Horizontal Integration
Topic: Musculoskeletal Infection		**Number of competencies : (03)**				**Number of Procedures that require certification: (NIL)**			
OR3.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of Bone and Jointinfections a) Acute Osteomyelitis b) Subacute osteomyelitis c) Acute Suppurative arthritis d) Septic arthritis & HIV infection e) Spirochaetal infection f) Skeletal Tuberculosis	K/S	K/KH / SH	Y	Lecture, Small groupdiscussion, Video assisted lecture	Written/ Viva voce/OSCE		Pathology, Microbiology	General surgery
OR3.2	Participate as a member in team for aspiration of joints undersupervision	K/S/A/C	SH	Y	Small group Discussion. DOAP session	Viva voce/ OSCE/ Skills assessment		–	
OR3.3	Participate as a member in team for procedures like drainage ofabscess, sequestrectomy/ saucerisation and arthrotomy	K/S/A/C	SH	Y	DOAP session, Video demonstration	Viva voce/ OSCE/ Skills assessment			General Surgery
Topic: Skeletal Tuberculosis		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR4.1	Describe and discuss the clinical features, Investigation and principles of management of Tuberculosis affecting major joints(Hip, Knee) including cold abcess and caries spine	K	K/KH	Y	Lecture, Small groupdiscussion, Case discussion	Written/ Viva voce/OSCE		Pathology	General surgery
Topic: Rheumatoid Arthritis and associated inlammatory disorders		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			

Number	**COMPETENCY** **The student should be able to:**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical Integration**	**Horizontal Integration**
OR5.1	Describe and discuss the aetiopathogenesis, clinical features,investigations and principles of management of various inflammatory disorder of joints	K	K/KH	Y	Lecture, Small groupdiscussion, Bedside clinic	Written/ Viva voce/OSCE			General Medicine
Topic: Degenerative disorders		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR6.1	Describe and discuss the clinical features, investigations and principles of management of degenerative condition of spine(Cervical Spondylosis, Lumbar Spondylosis, PID)	K	K/KH	Y	Lecture, Small groupdiscussion, Case discussion	Written/ Viva voce/OSCE			
Topic: Metabolic bone disorders		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR7.1	Describe and discuss the aetiopathogenesis, clinical features, investigation and principles of management of metabolic bone disorders in particular osteoporosis, osteomalacia, rickets, Paget'sdisease	K	K/KH	Y	Lecture, Small groupdiscussion, Case discussion	Written/ Viva voce/OSCE			
Topic: Poliomyelitis		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR8.1	Describe and discuss the aetiopathogenesis, clinical features, assessment and principles of management a patient with PostPolio Residual Paralysis	K	K/KH	Y	Lecture, Small groupdiscussion, Case discussion	Written/ Viva voce/OSCE			
Topic: Cerebral Palsy		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			

Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required tocertify P	Vertical Integration	Horizontal Integration
OR9.1	Describe and discuss the aetiopathogenesis, clinical features, assessment and principles of management of Cerebral palsypatient	K	K/KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce/OSCE			
Topic:Bone Tumors		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR10.1	Describe and discuss the aetiopathogenesis, clinical features,investigations and principles of management of benign and malignant bone tumours and pathological fractures	K	K/KH	Y	Lecture, Small groupdiscussion, Video assisted interactive lecture	Written/ Viva voce/OSCE		Pathology	General surgery, Radiotherapy
Topic: Peripheral nerve injuries		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR11.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of peripheral nerveinjuries in diseases like foot drop, wrist drop, claw hand, palsies ofRadial, Ulnar, Median, Lateral Popliteal and Sciatic Nerves	K	K/H	Y	Lecture, Small groupdiscussion, case discussion	Written/ Viva voce/OSCE		Human Anatomy	General Medicine, General surgery
Topic: Congenital lesions		**Number of competencies : (01)**				**Number of procedures that require certification: (NIL)**			
OR12.1	Describe and discuss the clinical features, investigations andprinciples of management of Congenital and acquired malformations and deformities of: a. limbs and spine - Scoliosis and spinal bifida b. Congenital dislocation of Hip,Torticollis, c. congenital talipes equino varus	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce/OSCE		Human Anatomy	
Topic: Procedural Skills		**Number of competencies : (02)**				**Number of procedures that require certification: (NIL)**			

Number	**COMPETENCY** **The student should be able to:**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical Integration**	**Horizontal Integration**
OR13.1	Participate in a team for procedures in patients and demonstratingthe ability to perform on mannequins / simulated patients in the following: i. Above elbow plaster ii. Below knee plaster iii. Above knee plaster iv. Thomas splint v. splinting for long bone fractures vi. Strapping for shoulder and clavicle trauma	S/A	KH / SH	Y	Case discussion, Video assisted Lecture, Smallgroup discussion, Teaching, Skill lab sessions	OSCE with Simulation based assessment			
OR13.2	Participate as a member in team for Resuscitation of Polytraumavictim by doing all of the following : (a) I.V. access central - peripheral (b) Bladder catheterization (c) Endotracheal intubation (d) Splintage	S/A	KH / SH	Y	Case discussion, Video assisted Lecture, Smallgroup discussion, Teaching, Skill lab sessions	OSCE with Simulation based assessment			Anaesthesiology
Topic: Counselling Skills		**Number of competencies : (03)**				**Number of procedures that require certification: (NIL)**			
OR14.1	Demonstrate the ability to counsel patients regarding prognosis inpatients with various orthopedic illnesses like a. fractures with disabilities b. fractures that require prolonged bed stay c. bone tumours d. congenital disabilities	K/S/A/C	KH / SH	Y	Case discussion, Video assisted lecture, Small group discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment			AETCOM
OR14.2	Demonstrate the ability to counsel patients to obtain consent for various orthopedic procedures like limp amputation, permanentfixations etc..	K/S/A/C	KH / SH	Y	Case discussion, Video assisted Lecture, Smallgroup discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment			AETCOM

Number	**COMPETENCY** **The student should be able to:**	**Domain K/S/A/C**	**Level K/KH / SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical Integration**	**Horizontal Integration**
OR14.3	Demonstrate the ability to convince the patient for referral to ahigher centre in various orthopedic illnesses, based on the detection of warning signals and need for sophisticated management	K/S/A/C	KH / SH	Y	Case discussion, Video assisted Lecture, Smallgroup discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment			AETCOM
	Column C: K- Knowledge, S – Skill, A - Attitude / professionalism, C- Communication. **Column D: K – Knows, KH - Knows How, SH - Shows how, P- performs independently,** **Column F: DOAP session – Demonstrate, Observe, Assess, Perform.** **Column H: If entry is P: indicate how many procedures must be done independently for certification/ graduation**								
Integration									
				Human Anatomy					
AN2.4	Describe various types of cartilage with its structure & distribution inbody	K	KH	Y	Lecture	Written/ Viva voce		Orthopedics	
AN2.5	Describe various joints with subtypes and examples	K	KH	Y	Lecture	Written/ Viva voce		Orthopedics	
AN8.4	Demonstrate important muscle attachment on the given bone	K/S	SH	Y	Practical, DOAP session, Small group teaching	Viva voce/ Practicals		Orthopedics	
AN8.6	Describe scaphoid fracture and explain the anatomical basis ofavascular necrosis	K	KH	N	DOAP session	Viva voce		Orthopedics	

Number	**COMPETENCY** **The student should be able to:**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical Integration**	**Horizontal Integration**
AN10.12	Describe and demonstrate Shoulder joint for– type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply andapplied anatomy	K/S	SH	Y	Practical, Lecture,Small group discussion, DOAPsession	Written/ Viva voce/Skills assessment		Orthopedics	
AN11.4	Describe the anatomical basis of Saturday night paralysis	K	KH	Y	Practical, Lecture	Written/ Viva voce		Orthopedics	
AN17.2	Describe anatomical basis of complications of fracture neck offemur.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN17.3	Describe dislocation of hip joint and surgical hip replacement	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN18.6	Describe knee joint injuries with its applied anatomy	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN18.7	Explain anatomical basis of Osteoarthritis	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN19.4	Explain the anatomical basis of rupture of calcaneal tendon	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN19.6	Explain the anatomical basis of Flat foot & Club foot	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN19.7	Explain the anatomical basis of Metatarsalgia & Plantar fasciitis	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN50.4	Explain the anatomical basis of Scoliosis, Lordosis, Prolapsed disc,Spondylolisthesis & Spina bifida	K	KH	N	Lecture	Written		Orthopedics	
Pathology									

Number	**COMPETENCY** **The student should be able to:**	**Domain K/S/A/ C**	**Level K/KH / SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical Integration**	**Horizont al Integrati on**
PA33.1	Classify and describe the etiology, pathogenesis, manifestations,radiologic and morphologic features and complications of osteomyelitis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Human Anatomy, Orthopedics	Microbiology
PA33.2	Classify and describe the etiology, pathogenesis, manifestations,radiologic and morphologic features and complications and metastases of bone tumors	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Orthopedics	
PA33.3	Classify and describe the etiology, pathogenesis, manifestations,radiologic and morphologic features and complications and metastases of soft tissue tumors	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Orthopedics	
PA33.4	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of Paget'sdisease of the bone	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Orthopedics	
	Microbiology								
MI4.2	Describe the etiopathogenesis, clinical course and discuss thelaboratory diagnosis of bone & joint infections.	K	KH	Y	Lecture	Written/ Viva voce		Orthopedics	
	Forensic Medicine & Toxicology								
FM3.7	Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death: Primary and Secondary.	K	K/KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Forensic medicicne, Orthopaedics	
FM3.8	Mechanical injuries and wounds: Describe and discuss different types of weapons including dangerous weapons and their examination.	K	K/KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery, Orthopaedics	

FM3.9	Firearm injuries: Describe different types of firearms including structure and components. Along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking.	K	K/KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery, Orthopaedics	
FM3.10	Firearm injuries: Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries, various tests related to confirmation of use of firearms	K	K/KH	Y	Lecture,Small group discussion, Bed side clinic DOAP session	Written/ Viva voce /OSCE		General Surgery, Orthopaedics	
FM3.11	Regional Injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cord and skeleton	K	K/KH	Y	Lecture, Small group discussion,Bed side clinic or autopsy, DOAP session	Written/ Viva voce /OSCE/ OSPE		General Surgery, Orthopaedics	
FM3.12	Regional Injuries Describe and discuss injuries related to fall from height and vehicular injuries – Primary and Secondary impact, Secondary injuries, crush syndrome, railway spine.	K	K/KH	Y	Lecture, Small groupdiscussion, Bed sideclinic or autopsy, DOAP session	Written/ Viva voce /OSCE/ OSPE		General Surgery, Orthopaedics	
IM7.8	Discriminate, describe and discuss distinguishing articular fromperiarticular complaints	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics
IM7.9	Determine the potential causes of join pain based on the presentingfeatures of joint involvement	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics
IM7.10	Describe the common signs and symptoms of articular andperiarticular diseases	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics
IM7.13	Perform a systematic examination of all joints, muscle and skin thatwill establish the diagnosis and severity of disease	S	SH	Y	Bed side clinic, DOAP session	Skill assessment			Orthopedics
IM7.17	Enumerate the indications for arthrocentesis	K	K	Y	small group discussion,Lecture	Written/ Viva voce			Orthopedics
IM7.18	Enumerate the indications and interpret plain radiographs of joints	K	SH	Y	Bed side clinic, smallgroup discussion	Skill assessment/ Written		Radiodiagnosis	Orthopedics

IM7.21	Select, prescribe and communicate appropriate medications forrelief of joint pain	K/C	SH	Y	DOAP session	Skill assessment/ Written		Pharmacology	Orthopedics
IM24.12	Describe and discuss the aetiopathogenesis, clinical presentation,identification, functional changes, acute care, stabilization, management and rehabilitation of degenerative joint disease	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics
IM24.13	Describe and discuss the aetiopathogenesis, clinical presentation,identification, functional changes, acute care, stabilization, management and rehabilitation of falls in the elderly	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics, Physical Medicine& Rehabilitation
IM24.14	Describe and discuss the aetiopathogenesis, clinical presentation,identification, functional changes, acute care, stabilization, management and rehabilitation of common fractures in the elderly	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics
Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH / SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
IM24.16	Describe and discuss the principles of physical and social rehabilitation, functional assessment, role of physiotherapy and occupational therapy in the management of disability in the elderly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics, Physical Medicine & Rehabilitation
Physical Medicine & Rehabilitation									
PM1.2	Define and describe disability, its cause, and magnitude,identification and prevention of disability	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			General Medicine Orthopedics
PM1.3	Define and describe the methods to identify and prevent disability	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			General Medicine Orthopedics
PM1.4	Enumerate the rights and entitlements of differently abled persons	K	K	Y	Lecture, Small groupdiscussion	Written/ Viva voce			General Medicine, Orthopedics
PM4.1	Describe the common patterns, clinical features,	K	KH	Y	Lecture, Small	Written/ Viva voce			General

	investigations,diagnosis and treatment of common causes of arthritis				groupdiscussion				Medicine Orthopedics
PM4.3	Observe in a mannequin or equivalent the administration of an intra-articular injection	S	KH	N	DOAP session	Skill assessment			Orthopedics
PM4.5	Demonstrate correct assessment of muscle strength and range ofmovements	S	SH	Y	DOAP session, Bedside clinic	Skill assessment			General Medicine Orthopedics
PM5.1	Enumerate the indications and describe the principles ofamputation	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics General Surgery
PM5.2	Describe the principles of early mobilization, evaluation of the residual limb, contralateral limb and the influence of co-morbidities	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Orthopedics
Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
PM5.3	Demonstrate the correct use of crutches in ambulation and postures to correct contractures and deformities	S	SH	Y	DOAP session, Bedside clinic discussion	Skill assessment			Orthopedics
PM5.4	Identify the correct prosthesis for common amputations	S	SH	Y	DOAP session	Skill assessment / written			Orthopedics
PM6.3	Describe the principles of skin traction, serial casts and surgical treatment including contracture release, tendon transfer, osteotomies and arthrodesis.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
PM6.4	Describe the principles of orthosis for ambulation in PPRP	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
PM7.1	Describe and discuss the clinical features, diagnostic work up, work up diagnosis and management of spinal cord injury	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Orthopedics
PM7.2	Describe and demonstrate process of transfer, applications of collar restraints while maintaining airway and prevention of secondary injury in a mannequin/model	S	SH	Y	DOAP session, Small group discussion	Skill assessment			Orthopedics
PM7.3	Perform and demonstrate a correct neurological examination in a patient with spinal injury and determine the neurologic level of injury	S	SH	Y	Bed side clinic	Skill assessment			Orthopedics

PM7.4	Assess bowel and bladder function and identify common patterns of bladder dysfunction	S	KH	Y	Small group discussion	Written/ Viva voce			General Medicine, Orthopedics
PM7.5	Enumerate the indications and identify the common mobility aids and appliances, wheel chairs	S	S	Y	DOAP session	Skill assessment/ Viva voce			Orthopedics
Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
PM7.7	Enumerate and describe common life threatening complications following SCI like Deep vein Thrombosis, Aspiration Pneumonia, Autonomic dysreflexia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			General Medicine, Orthopedics
PM8.1	Describe the clinical features, evaluation, diagnosis and management of disability following traumatic brain injury	K	KH	Y	Lecture, Small group discussion	Written / Viva voce			General Medicine, Orthopedics, General Surgery

umber	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required tocertify P	Vertical integration	Horizontal integration
ANAESTHESIOLOGY									
Topic: Anaesthesiology as a specialty		**Number of competencies: (04)**				**Number of procedures that require certification: (NIL)**			
AS1.1	Describe the evolution of Anaesthesiology as a modern specialty	K	K	N	Lecture	Written/ Viva voce			
AS1.2	Describe the roles of Anaesthesiologist in the medical profession (including as a peri-operative physician, in the intensive care and high dependency units, in the management of acute and chronic pain, including labour analgesia, in the resuscitation of acutely ill)	K	K	N	Lecture	Written/ Viva voce			
AS1.3	Enumerate and describe the principle of ethics as it relates toAnaesthesiology	K	K	N	Lecture	Written/ Viva voce		AETCOM	
AS1.4	Describe the prospects of Anaesthesiology as a career	K	K	N	Lecture	Written/ Viva voce			
Topic: Cardiopulmonary resuscitation		**Number of competencies: (02)**				**Number of procedures that require certification : (NIL)**			
AS2.1	Enumerate the indications, describe the steps and demonstrate in asimulated environment, Basic Life Support in adults, children and neonates	K/S	SH	N	DOAP session	Skill assessment		General Medicine, Pediatrics	
AS2.2	Enumerate the indications, describe the steps and demonstrate in asimulated environment, Advanced Life Support in adults and children	S	SH	N	DOAP session	Skill assessment		General Medicine	
Topic: Preoperative evaluation and medication		**Number of competencies: (06)**				**Number of procedures that require certification : (NIL)**			
AS3.1	Describe the principles of preoperative evaluation	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			General Surgery, General Medicine
AS3.2	Elicit, present and document an appropriate history including medication history in a patient undergoing Surgery as it pertains to apreoperative anaesthetic evaluation	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine

AS3.3	Demonstrate and document an appropriate clinical examination in apatient undergoing General Surgery	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS3.4	Choose and interpret appropriate testing for patients undergoingSurgery	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS3.5	Determine the readiness for General Surgery in a patient based onthe preoperative evaluation	S	SH	Y	DOAP session, Bedside clinic	Skill station			General Surgery, General Medicine
AS3.6	Choose and write a prescription for appropriate premedications forpatients undergoing surgery	S	SH	Y	DOAP session, Bedside clinic	Skill station		Pharmacology	
Topic: General Anaesthesia		**Number of competencies: (07)**				**Number of procedures that require certification : (NIL)**			
AS4.1	Describe and discuss the pharmacology of drugs used in induction and maintenance of general anaesthesia (including intravenous andinhalation induction agents, opiate and non-opiate analgesics, depolarising and non depolarising muscle relaxants, anticholinesterases)	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Pharmacology	
AS4.2	Describe the anatomy of the airway and its implications for generalanaesthesia	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Human Anatomy	
AS4.3	Observe and describe the principles and the practical aspects ofinduction and maintenance of anesthesia	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Pharmacology	
AS4.4	Observe and describe the principles and the steps/ techniques in maintenance of vital organ functions in patients undergoing surgicalprocedures	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS4.5	Observe and describe the principles and the steps/ techniques inmonitoring patients during anaesthesia	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS4.6	Observe and describe the principles and the steps/ techniquesinvolved in day care anesthesia	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS4.7	Observe and describe the principles and the steps/ techniquesinvolved in anaesthesia outside the operating	S	KH	Y	Lecture, Small groupdiscussion,	Written/ Viva voce			

	room				DOAP session				
Topic: Regional anaesthesia		**Number of competencies: (06)**				**Number of procedures that require certification: (NIL)**			
AS5.1	Enumerate the indications for and describe the principles of regionalanaesthesia (including spinal, epidural and combined)	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
AS5.2	Describe the correlative anatomy of the brachial plexus,subarachnoid and epidural spaces	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Human Anatomy	
AS5.3	Observe and describe the principles and steps/ techniques involvedin peripheral nerve blocks	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Human Anatomy	
AS5.4	Observe and describe the pharmacology and correct use of commonly used drugs and adjuvant agents in regional anesthesia	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Pharmacology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/ C**	**Level K/KH / SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical integration**	**Horizontal integration**
AS5.5	Observe and describe the principles and steps/ techniques involvedin caudal epidural in adults and children	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS5.6	Observe and describe the principles and steps/ techniques involvedin common blocks used in surgery (including brachial plexus blocks)	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			General Surgery
Topic: Post-anaesthesia recovery		**Number of competencies: (03)**				**Number of procedures that require certification: NIL)**			
AS6.1	Describe the principles of monitoring and resuscitation in therecovery room	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS6.2	Observe and enumerate the contents of the crash cart and describethe equipment used in the recovery room	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS6.3	Describe the common complications encountered by patients in therecovery room, their recognition and principles of management	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			General Surgery

Topic: Intensive Care Management		**Number of competencies: (05)**			**Number of procedures that require certification: (NIL)**				
AS7.1	Visit, enumerate and describe the functions of an Intensive CareUnit	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS7.2	Enumerate and describe the criteria for admission and discharge ofa patient to an ICU	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			General Medicine
AS7.3	Observe and describe the management of an unconscious patient	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Physiology	General Medicine
AS7.4	Observe and describe the basic setup process of a ventilator	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Physiology	General Medicine
AS7.5	Observe and describe the principles of monitoring in an ICU	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			General Medicine
Topic: Pain and its management		**Number of competencies: (05)**			**Number of procedures that require certification: (NIL)**				
AS8.1	Describe the anatomical correlates and physiologic principles ofpain	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Human Anatomy, Physiology	
AS8.2	Elicit and determine the level, quality and quantity of pain and itstolerance in patient or surrogate	S	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Physiology	
AS8.3	Describe the pharmacology and use of drugs in the management ofpain	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Pharmacology	
AS8.4	Describe the principles of pain management in palliative care	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Pharmacology	General Medicine
AS8.5	Describe the principles of pain management in the terminally ill	K	KH	Y	Lecture, Small groupdiscussion,	Written/ Viva voce		Pharmacology	General Medicine

					DOAP session				
Topic: Fluids		**Number of competencies: (04)**				**Number of procedures that require certification: (NIL)**			
AS9.1	Establish intravenous access in a simulated environment	S	KH	Y	Small group discussion, DOAP session	Skill assessment			
AS9.2	Establish central venous access in a simulated environment	S	KH	Y	Small group discussion, DOAP session	Skill assessment			
AS9.3	Describe the principles of fluid therapy in the preoperative period	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			General Surgery
AS9.4	Enumerate blood products and describe the use of blood productsin the preoperative period	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Pathology	General Surgery
Topic: Patient safety		**Number of competencies: (04)**				**Number of procedures that require certification: NIL)**			
AS10.1	Enumerate the hazards of incorrect patient positioning	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS10.2	Enumerate the hazards encountered in the perioperative period andsteps/techniques taken to prevent them	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce			
AS10.3	Describe the role of communication in patient safety	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		AETCOM	General Surgery
AS10.4	Define and describe common medical and medication errors inanaesthesia	K	KH	Y	Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce		Pharmacology	General Medicine
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/ C**	**Level K/KH / SH/P**	**Core (Y/N)**	**Suggested Teaching Learning method**	**Suggested Assessment method**	**Number required tocertify P**	**Vertical integration**	**Horizontal integration**
	Column C: K- Knowledge, S – Skill, A - Attitude / professionalism, C- Communication.								

	Column D: K – Knows, KH - Knows How, SH - Shows how, P- performs independently, **Column F: DOAP session – Demonstrate, Observe, Assess, Perform.** **Column H: If entry is P: indicate how many procedures must be done independently for certification/ graduation**								
Integration									
				Physiology					
PY3.4	Describe the structure of neuro-muscular junction and transmissionof impulses	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Anaesthesiology	
PY3.5	Discuss the action of neuro-muscular blocking agents	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Anaesthesiology Pharmacology	
PY11.14	Demonstrate Basic Life Support in a simulated environment	S	SH	Y	DOAP sessions	OSCE		General Medicine Anaesthesiology	
				Pharmacology					
PH1.15	Describe mechanism/s of action, types, doses, side effects, indications and contraindications of skeletal muscle relaxants	K	KH	Y	Lecture	Written/ Viva voce		Anesthesiology, Physiology	
PH1.17	Describe the mechanism/s of action, types, doses, side effects,indications and contraindications of local anaesthetics	K	KH	Y	Lecture	Written/ Viva voce		Anesthesiology	
PH1.18	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of general anaesthetics, and pre-anaesthetic medications	K	KH	Y	Lecture	Written/ Viva voce		Anesthesiology	
FM2.19	Investigation of anaesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Anesthesiology, General Surgery	
				General Surgery					
SU11.1	Describe principles of Preoperative assessment.	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Anesthesiology
SU11.2	Enumerate the principles of general, regional, and localAnaesthesia.	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Anesthesiology
SU11.3	Demonstrate maintenance of an airway in a mannequin	S	SH	Y	DOAP session	Skill Assessment			Anesthesiology

	orequivalent								
SU11.5	Describe principles of providing post-operative pain relief andmanagement of chronic pain.	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Anesthesiology
SU17.2	Demonstrate the steps in Basic Life Support. Transport of injuredpatient in a simulated environment	S	SH	Y	DOAP session	Skill assessment			Anesthesiology
SU17.10	Demonstrate Airway maintenance and recognize and managementof tension pneumothorax, hemothorax and flail chest in simulated environment	S	SH	Y	DOAP session	Skill Assessment/ Log book			Anesthesiology
Orthopaedics									
OR1.1	Describe and discuss the Principles of Pre hospital care and Casuality management of a trauma victim including principles oftriage,	K/S/A/C	K, KH	Y	Lecture with video,Small group Discussion	Written/ Viva voce/OSCE/ Simulation			General Surgery Anaesthesiology
OR13.2	Participate as a member in team for Resuscitation of Polytraumavictim by doing all of the following : (a) IV. access central - peripheral (b) Bladder catheterization (c) Endotracheal intubation (d) Splintage	S/A	KH / SH	Y	Case discussion, Video assisted Lecture, Small group discussion, Teaching, Skill lab sessions	OSCE with Simulationbased assessment			Anaesthesiology

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
RADIODIAGNOSIS									
Topic: Radiological investigations and Radiation safety		**Number of competencies: (13)**			**Number of procedures that require certification: (NIL)**				
RD1.1	Define radiation and the interaction of radiation and importance ofradiation protection	K	KH	Y	Lecture, Demonstration				
RD1.2	Describe the evolution of Radiodiagnosis. Identify variousradiological equipments In the current era	S	SH	Y	Lecture, Demonstration				
RD1.3	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining todisorder of ENT	K/S	SH	Y	Lecture, Demonstration				
RD1.4	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining todisorder in Ob & Gy	K/S	SH	Y	Lecture, Demonstration				
RD1.5	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining todisorder in internal medicine	K/S	SH	Y	Lecture, Demonstration				
RD1.6	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining todisorderls in surgery	K/S	SH	Y	Lecture, Demonstration				
RD1.7	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining todisorder in Pediatrics	K/S	SH	Y	Lecture, Demonstration				
RD1.8	Enumerate indications for various common radiological	K/S	SH	Y	Lecture,				

	investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining tocommon malignancies				Demonstration				
RD1.9	Describe the role of Interventional Radiology in common clinicalconditions	K	KH	Y	Lecture, Demonstration				
RD1.10	Describe the role of Emergency Radiology, miscellaneous & appliedaspects, interaction with clinical departments	K	KH	Y	Lecture, Demonstration				
RD1.11	Describe preparation of patient for common imaging procedures	K	KH	Y	Lecture, Demonstration				
RD1.12	Describe the effects of radiation in pregnancy and the methods ofprevention/ minimization of radiation exposure	K	KH	Y	Lecture, Demonstration				
RD1.13	Describe the components of the PC & PNDT Act and itsmedicolegal implications	K	KH	Y	Lecture, Small groupdiscussion			Obstetrics & Gynaecology, Forensic Medicine &Toxicology	
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Integration									
	Human Anatomy								
AN13.4	Identify the bones and joints of upper limb seen in anteroposterior and lateral view radiographs of shoulder region, arm, elbow, forearmand hand	K/S	SH	Y	Practical, Small groupdiscussion, DOAP session	Viva voce/ Skill assessment		Radiodiagnosis	
AN20.6	Identify the bones and joints of lower limb seen in anteroposteriorand lateral view radiographs of various regions of lower limb	K/S	SH	Y	Lecture, Small groupdiscussion, DOAP session	Viva voce/ Skill assessment		Radiodiagnosis	
AN25.7	Identify structures seen on a plain x-ray chest (PA view)	K/S	SH	Y	Practical, DOAP session	Written/ Viva voce		Radiodiagnosis, General Medicine	
AN25.8	Identify and describe in brief a barium swallow	K/S	SH	N	Practical, DOAP session	Written/ Viva voce		Radiodiagnosis, General Medicine	

AN43.7	Identify the anatomical structures in 1) Plain x ray skull, 2) AP viewand lateral view 3) Plain x ray cervical spine - AP and lateral view 4) Plain x ray of paranasal sinuses	K/S	SH	Y	Practical	Viva voce/ Skill assessment		Radiodiagnosis	
AN43.8	Describe the anatomical route used for carotid angiogram andvertebral angiogram	K/S	SH	N	Practical	Viva voce/ Skill assessment		Radiodiagnosis	
AN43.9	Identify anatomical structures in carotid angiogram and vertebralangiogram	K/S	SH	N	Practical	Viva voce/ Skill assessment		Radiodiagnosis	
AN51.1	Describe & identify the cross-section at the level of T8, T10 and L1(transpyloric plane)	K/S	SH	Y	Practical, Lecture,Small group discussion, DOAPsession	Written/ Viva voce/Skill assessment		Radiodiagnosis	
AN51.2	Describe & identify the midsagittal section of male and female pelvis	K	SH	Y	Practical, Lecture,Small group discussion, DOAPsession	Written/ Viva voce/Skill assessment		Radiodiagnosis	
AN541.	Describe & identify features of plain X ray abdomen	K/S	SH	Y	Lecture, DOAP session	Viva voce/ Skill assessment		Radiodiagnosis	
AN54.2	Describe & identify the special radiographs of abdominopelvic region (contrast X ray Barium swallow, Barium meal, Barium enema,Cholecystography, Intravenous pyelography &Hysterosalpingography)	K/S	SH	Y	Lecture, DOAP session	Viva voce/ Skill assessment		Radiodiagnosis	
AN54.3	Describe role of ERCP, CT abdomen, MRI, Arteriography inradiodiagnosis of abdomen	K	KH	N	Lecture	Viva voce		Radiodiagnosis	
Forensic Medicine & Toxicology									
FM1.9	Describe the importance of documentation in medical practice inregard to medicolegal examinations, Medical Certificates and medicolegal reports especially: – maintenance of patient case records, discharge summary,prescribed registers to be maintained in	K	KH	Y	Lecture/ Small group discussion	Written/ Viva voce		Radiodiagnosis, General Surgery, General Medicine, Pediatrics	

	Health Centres. -- maintenance of medico-legal register like accident register. -- documents of issuance of wound certificate -- documents of issuance of drunkenness certificate. -- documents of issuance of sickness and fitness certificate. -- documents for issuance of death certificate. -- documents of Medical Certification of Cause of Death - FormNumber4 and 4A -- documents for estimation of age by physical, dental andradiological examination and issuance of certificate								
General Medicine									
IM1.19	Enumerate the indications for and describe the findings of heart failure with the following conditions including: 2D echocardiography,brain natriuretic peptide, exercise testing, nuclear medicine testing and coronary angiogram	S	KH	N	Lecture, Small groupdiscussion, Bedside clinic	Skill assessment		Radiodiagnosis	
IM3.7	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X ray PA view, Mantoux, sputumgram stain, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing and ABG	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Radiodiagnosis, Microbiology	
IM3.11	Describe and enumerate the indications for further testing includingHRCT, Viral cultures, PCR and specialised testing	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Radiodiagnosis, Microbiology	
IM5.13	Enumerate the indications for ultrasound and other imaging studiesincluding MRCP and ERCP and describe the findings in liver disease	K	K	Y	Bedside clinic,Smallgroup discussion	Viva voce/ Written		Radiodiagnosis	General Surgery
IM6.12	Enumerate the indications and describe the findings for CT of thechest and brain and MRI	K	K	N	Small group discussion, Lecture,Bedside clinic	Written/ Viva voce		Radiodiagnosis	
IM7.18	Enumerate the indications and interpret plain radiographs of joints	K	SH	Y	Bedside clinic, Smallgroup discussion	Skill assessment/ Written		Radiodiagnosis	Orthopedics
IM10.19	Enumerate the indications and describe the findings in	K	KH	N	Lecture, Small	Written/ Viva voce		Radiodiagnosis	

	renalultrasound				groupdiscussion				
IM13.12	Describe the indications and interpret the results of Chest X Ray, mammogram, skin and tissue biopsies and tumor markers used incommon cancers	K	KH	Y	Bedside clinic, Smallgroup discussion	Short note/ Viva voce		Radiodiagnosis	
IM18.9	Choose and interpret the appropriate diagnostic and imaging testthat will delineate the anatomy and underlying cause of the lesion	S	KH	Y	Bedside clinic, DOAP session, Small group discussion	Written/ Viva voce/Skill assessment		Radiodiagnosis	
IM19.7	Choose and interpret diagnostic and imaging tests in the diagnosisof movement disorders	S	SH	Y	Bedside clinic, Smallgroup discussion	Skill assessment/ Small group session/Written/ Viva voce		Radiodiagnosis	
Pediatrics									
PE21.12	Interpret report of Plain radiograph of KUB	S	SH	Y	Bedside clinics, Skills lab	Log book		Radiodiagnosis	
PE21.13	Enumerate the indications for and Interpret the written report of Ultrasonogram of KUB	S	SH	Y	Bedside clinics, Skills lab	Log book		Radiodiagnosis	
PE23.13	Interpret a chest radiograph and recognize Cardiomegaly	S	SH	Y	Bedside clinics, Skills lab	Log book entry		Radiodiagnosis	
PE23.16	Use the ECHO reports in management of cases	S	SH	Y	Bedside clinics	Log book entry		Radiodiagnosis	
PE28.17	Interpret X-ray of the paranasal sinuses and mastoid; and /or usewritten report in case of management Interpret CXR in foreign body aspiration and lower respiratory tractinfection, understand the significance of thymic shadow in Pediatricchest X-rays	S	P	Y	Bedside clinics, Small group discussion	Skills Assessment	3	ENT, Radiodiagnosis	
PE30.23	Interpret the reports of EEG, CT, MRI	S	SH	Y	Bedside clinics, Skill lab	Log book		Radiodiagnosis	
PE34.8	Interpret a Chest radiograph	S	SH	Y	Bedside clinics, Skill lab	Skill assessment		Radiodiagnosis	Respiratory Medicine

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested teaching learning method	Suggested assessment method	Number required to certify P	Vertical integration	Horizontal integration
RADIOTHERAPY									
Topic: Principles of Radiation Oncology (Radiotherapy) **Number of competencies: (03)** **Number of procedures that require certification : (NIL)**									
RT1.1	Describe and discuss definition of radiation, mechanism of action ofradiation, types of radiation	K	KH	Y	Lecture	Written/ Viva voce			General Surgery, Anaesthesiology
RT1.2	Describe and discuss interaction of radiation with matter &measurement of radiation	K	KH	Y	Lecture	Written/ Viva voce			
RT1.3	Enumerate, describe and discuss classification and staging ofcancer (AJCC, FIGO etc.)	K	KH	Y	Lecture	Written/ Viva voce		Pathology	General Surgery, General Medicine
Topic: Radiation Protection **Number of competencies: (01)** **Number of procedures that require certification : (NIL)**									
RT2.1	Describe and discuss radiation protection and personnel monitoringduring radiation treatment	K	KH	Y	Lecture	Written/ Viva voce			
Topic: Radiobiology & Chemoradiation **Number of competencies: (02)** **Number of procedures that require certification : (NIL)**									
RT3.1	Describe and discuss cell cycle and cell survival curve, principles ofradiobiology	K	KH	Y	Lecture	Written/ Viva voce			
RT3.2	Describe and discuss synergism of radiation and chemotherapy	K	KH	Y	Lecture	Written/ Viva voce			
Topic: Radiation Treatment Delivery & outcome **Number of competencies: (09)** **Number of procedures that require certification : (NIL)**									
RT4.1	Describe and discuss teletherapy machine (Co60/LINAC)	K	KH	Y	DOAP session	Written/ Viva voce			
RT4.2	Enumerate, describe and discuss types of treatment plan, basicworkflow of 2D/3DCRT/IMRT/IGRT	K	KH	Y	DOAP session	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested teaching learning method	Suggested assessment method	Number required to certify P	Vertical integration	Horizontal integration
RT4.3	Describe and discuss Brachytherapy machine (remote after loading)	K	KH	Y	DOAP session	Written/ Viva voce			
RT4.4	Describe and discuss different radioactive isotopes and their use incancer patients	K	KH	Y	Lecture	Written/ Viva voce			
RT4.5	Describe and discuss role of radiation in management of commonmalignancies in India (region specific)	K	KH	Y	Lecture and Bed sideclinics	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.6	Describe and discuss radiotherapy for benign disease	K	KH	Y	Lecture	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.7	Counsel patients regarding acute and late effects of radiation andsupportive care	K/A/S	KH	Y	Bed side clinic, groupdiscussion	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.8	Describe oncological emergencies and palliative care	K/A/S	K/KH	Y	Lecture, group discussion	Written/ Viva voce			General Surgery, Obstetrics & Gynaecology
RT4.9	Display empathy in the care of patients with cancer	A	SH	N				AETCOM	
Topic: Cancer Prevention & Registries		**Number of competencies: (01)**				**Number of procedures that require certification : (NIL)**			
RT5.1	Describe and discuss cancer prevention, screening, vaccination,cancer registry	K	K	Y	Group discussion	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology

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Column F: DOAP session – Demonstrate, Observe, Assess, Perform.

Column H: If entry is P: indicate how many procedures must be done independently for certification/ graduation

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
DENTISTRY									
Topic: Dental Caries		**Number of competencies: (05)**			**Number of procedures that require certification (NIL)**				
DE1.1	Enumerate the parts of the tooth	K	K	N	Lecture, Small groupdiscussion	Viva voce		Human Anatomy	
DE1.2	Discuss the role of causative microorganisms in the aetio-pathogenesis of dental caries	K	KH	Y	Lecture, Small groupdiscussion	Viva voce		Microbiology	
DE1.3	Identify Dental caries	S	SH	N	Observation, Bed sideclinics	Skill assessment			
DE1.4	Discuss the role of dental caries as a focus of sepsis	K	KH	Y	Lecture, Small groupdiscussion	Viva voce		Microbiology, GeneralMedicine	
DE1.5	Counsel patients with respect to oral hygiene, diet and the directbearing on systemic health	A/C	SH	Y	DOAP session	Document in Log book			
Topic: Edentulous state		**Number of competencies: (05)**			**Number of procedures that require certification (NIL)**				
DE2.1	Discuss the various causes for partial /complete loss of teeth andassociated structures	K	K	N	Lecture, Small groupdiscussion	Viva voce			
DE2.2	Discuss the local and systemic sequelae of the above	K	KH	Y	Lecture, Small groupdiscussion	Viva voce			
DE2.3	Identify complete complement of teeth and identify missing teeth	S	SH	N	Observation, Bed sideclinics	Skill assessment			
DE2.4	Enumerate common ways of restoring the edentulous state	K	KH	Y	Lecture, Small groupdiscussion	Viva voce			
DE2.5	Counsel patients on the importance of restoring missing teeth/tissues with respect to the benefits on oral and systemichealth.	A/C	SH	Y	DOAP session	Document in Log book			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
Topic: Malocclusion		**Number of competencies: (04)**			**Number of procedures that require certification: (NIL)**				
DE3.1	Aware of malocclusion and the tissues that cause it	K	K	N	Lecture, Small groupdiscussion	Viva voce			
DE3.2	Enumerate the impact of malocclusion on aesthetics, health	K	KH	Y	Lecture, Small groupdiscussion	Viva voce			
DE3.3	Identify malocclusion	S	SH	N	Observation, Bedsideclinics	Skill assessment			
DE3.4	Counsel patients with respect to correction of malocclusion and therole it might have on oral health specifically on the TMJ	A/C	SH	Y	DOAP session	Document in Log book			
Topic: Oral cancer		**Number of competencies: (04)**			**Number of procedures that require certification: (NIL)**				
DE4.1	Discuss the prevalence of oral cancer and enumerate the commontypes of cancer that can affect tissues of the oral cavity	K	K	N	Lecture, Small groupdiscussion	Viva voce		Pathology	ENT
DE4.2	Discuss the role of etiological factors in the formation ofprecancerous /cancerous lesions	K	KH	Y	Lecture, Small groupdiscussion	Viva voce		Pathology	ENT
DE4.3	Identify potential pre-cancerous /cancerous lesions	S	SH	N	Observation, Bed sideclinics	Skill assessment		Pathology	ENT
DE4.4	Counsel patients to risks of oral cancer with respect to tobacco,smoking, alcohol and other causative factors.	A/C	SH	Y	DOAP session	Document in Log book		Pathology	ENT
Topic: Periodontal disease		**Number of competencies: (05)**			**Number of procedures that require certification: (NIL)**				
DE5.1	Enumerate the parts of the tooth and supporting structures	K	K	N	Lecture, Small groupdiscussion	Viva voce		Human Anatomy	
DE5.2	Enumerate the common diseases that affect the periodontium andidentify local and systemic causative factors	K	KH	Y	Lecture, Small groupdiscussion	Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P	Vertical Integration	Horizontal Integration
DE5.3	Identify Periodontal disease	S	SH	N	Observation, Bedsideclinics	Skill assessment			
DE5.4	Discuss the role of Periodontal disease as a focus of sepsis	K	KH	Y	Lecture, Small group discussion	Viva voce			
DE5.5	Counsel patients with respect to oral hygiene, diet and the directbearing on systemic health and vice versa	A/C	SH	Y	DOAP session	Document in Log book			

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Internal Assessment

Subject: General surgery and allied including OrthopedicsApplicable for batches admitted from 2019 and onwards

Formative & Internal Assessment (IA)

Formative assessment is an assessment conducted during the instruction with the primary purpose of providing feedback for improving learning. It also helps the teachers and learners to modify their teaching learning strategies. The feedback is central to formative assessment and is linked to deep learning, seeking to explore the educational literature and its pedagogical lessons for healthcare educational practice

Components of IA

(i) Theory IA can include: Written tests, should have essay questions, short notes and creative writing experiences.

(ii) Practical / Clinical IA can include: practical / clinical tests, Objective Structured Clinical Examination (OSCE) / Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), Mini Clinical Evaluation Exercise (mini-CEX), records maintenance and attitudinal assessment.

(iii) Assessment of Log-book. Log book should record all activities like seminar, symposia, quizzes and other academic activities. Achievement of certifiable competencies should also be recorded in logbooks. It should be assessed regularly and submitted to the department. Up To twenty per cent IA marks (Theory and Practical) should be from Log book assessment.

(iv) Internal Assessment for Professional development programme (AETCOM) will include:

a. Written tests comprising of short notes and creative writing experiences in each subject.
b. OSCE based clinical scenarios and/or viva voce. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce in every subject

The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better. Universities should guide the colleges regarding formulating policies for remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason(s).

It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.

Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

Excerpts from proposed GMER 2019

11.1.1 (b) Internal Assessment: Internal assessment shall be based on day-to-day assessment.

It shall relate to different ways in which learners participate in learning process including assignments, preparation for seminar, clinical case presentation, preparation of clinical case for discussion, clinical case study/problem solving exercise, participation in project for health care in the community, proficiency in carrying out a practical or a skill in small research project, a written test etc.

1. Regular periodic examinations shall be conducted throughout the course. There shall be no less than three internal assessment examinations in each Preclinical / Para-clinical subject and no less than two examinations in each clinical subject in a professional year. An end of posting clinical assessment shall be conducted for each clinical posting in each professional year.
2. When subjects are taught in more than one phase, the internal assessment must be done in each phase and must contribute proportionately to final assessment. For example, General Surgery must be assessed in second Professional, third Professional Part I and third Professional Part II,independently.
3. Day to day records and log book (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.
4. The final internal assessment in a broad clinical specialty (e.g. Surgery and allied specialties etc.) shall comprise of marks from all the constituent specialties. The proportion of the marks for each constituent specialty shall be determined by the time of instruction allotted to each.
5. Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject. Internal assessment marks will reflect as separate head of passing at the summative examination.

6. The results of IA should be displayed on the notice board within a 1-2 week of the test. Universities shall guide the colleges regarding formulating policies for remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason.
7. Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

Summative assessment logistics (For Universities)

Summative assessment consists of University examinations. Each theory paper will have 100 marks. Marks distribution as per proposed GMER 2019 for various subjects

General Surgery - 2 papers of 100 marks each (Total 200 marks)

Practical 200 marks

GRAND TOTAL 400 marks

Pass Criteria

- Internal Assessment: 50%combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations University Examination

Mandatory 50% marks in theory and practical (practical = practical/ clinical + viva) [theory=theory paper(s) only] Internal assessment marks are not to be added to marks of the University examinations and should be shown separately in the grade card.

Theory question paper (Knowledge part)-

Universities guidelines for paper setting are as given below:

1. Follow MCI competencies for paper setting in the subject.

2. Designing of question paper should take into consideration all levels of

knowledge domain e.g. Bloom's taxonomy of cognitive domain. Use appropriate verbs for the questions at each level to assess higher levels of learning.Use combination of various types of questions e.g. structured essays (Long Answer Questions - LAQ), Short Answers Questions (SAQ) and objective type questions (e.g. Multiple Choice Questions - MCQ). Marks for each part should be indicated separately. MCQs if used, should not have more than 20% weightage. Example of theory paper and some examples of questions are given in Annexure

The disciplines of Orthopaedics, Anaesthesiology, Dentistry and Radiodiagnosis will constitute 25% of the total theory marks incorporated as a separate section in paper II of General Surgery.

There should be at least one question from each allied subject

3. The question paper setter must sample the contents appropriately from competencies.

4. Practical/clinical examinations will be conducted in the laboratories and /or hospital wards. The objective will be to assess proficiency and skills to conduct experiments, interpret data and form logical conclusion. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.

5. Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

6. There shall be one main examination in an academic year and a supplementary examination to be held not later than 90 days after the declaration of the results of the main examination.

7. A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course.

Note: AETCOM question should be based on competencies (primarily knowledge based) acquired during the AETCOM modulet raining. At least one question in each paper of the clinical specialties should test knowledge - competencies acquired during the professional development programme (AETCOM module); Skills competencies acquired during the Professional Development programme (AETCOM module) must be tested during clinical, practical and viva.

In subjects that have two papers, the learner must secure at least 40% marks in each of the papers with minimum 50% of marks in aggregate (both papers together) to pass in the said subject

The scheme of internal assessment

Phase	IA – 1 -Exam			IA – 2 -Exam		
	Theory General Surgery Only (January)	**Practical EOP**	Total Marks	**Theory General Surgery Only (May)**	**Practical of Allied EOP**	Total Marks
Second MBBS	50	50	100	50	Orthopedics = 25 Radiodiagnosis = 25	100

Phase	IA – 3 -Exam			IA – 4 -Exam		
	Theory General Surgery +allied) (January)	**Practical EOP**	Total Marks	**Theory General Surgery + allied) (April)**	**Practical of Allied EOP**	Total Marks
III MBBS Part I	50	50	100	50	Orthopaedics =25 Anaesthesia =25	100

Phase	IA – 5 - Exam			Prelim Exam (As per university pattern)		
	Theory Gen Surgery + Allied (May)	**Practical End of** 8 Weeks posting	Total Marks	**Theory (November)**	**Practical (November)**	Total Marks
III MBBS Part II	100	100	200	100 x 2 papers = 200	200	400

(There will be FORMATIVE ASSESSMENT at the End of four weeks Clinical Posting ofGeneral Surgery NOT to be added to INTERNAL ASSESSMENT).

Assessment in CBME is **ONGOING PRCESS**,No Preparatory leave is permitted.

1. There shall be 6 internal assessment examinations in General Surgery including allied.
2. The suggested pattern of question paper for internal assessment internal examinations, except prelim examination is attached at the end. Pattern of the prelims examinations should be similar to the University examinations.
3. Internal assessment marks for theory and practical will be converted to out of 50 (theory) +50 (practical). Internal assessment marks, after conversion, should be submitted to university within the stipulated time as per directives from the University.

4. Conversion Formula for calculation of marks in internal assessment examinations

	Theory	Practical
Phase II	100	100
Phase III/I	100	100
Phase III/II	300	300
Total	**500**	**500**
Conversion out of	**50**	**50**
Conversion formula	**Total marks in 6IA theory examinations /10**	**Total marks in 6 IA Practical examinations /10**
Eligibility criteria after conversion	**20**	**20**
	Combined theory + Practical = 50	

5. While preparing Final Marks of Internal Assessment, the rounding-off marksshall done as illustrated in following table.

Total Internal Assessment Marks	Final rounded marks
33.01 to 33.49	33
33.50 to 33.99	34

6. Students must secure at least 50% marks of the total marks (combined in theoryand practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearingat the final University examination of that subject.
7. Internal assessment marks will not to be added to marks of the Universityexaminations and will be shown separately in mark list.

- Remedial measures

A. Remedial measures for non-eligible students

i) At the end of each internal assessment examination, students securing less than 50% marks shall be identified. Such students should be counseled at the earliest and periodically. Extra classes for such studentsmay be conducted, if needed.

ii) If majority of the students found to be weak in a particular area then extra classes must be scheduled for all such students.

iii) Even after these measures, if a student is failed to secure 50% marks combined in theory and practical (40% separately in theory and practical) after prelim examination, the student shall not be eligible for final examination.

iv) Non eligible candidates are offered to reappear for repeat internal assessment examination/s, which must be conducted 2 months before next University examination. Extra classes for such students may beconducted for such students. The pattern for this repeat internal assessment examination shall be similar to the final University examination. Only the marks in this examination shall be considered for deciding the eligibility criteria. Following conversion formula shall be used for converting the marks.

	Theory	Practical
Remedial examination (as per final examination)	**200**	**200**
Conversion out of	**50**	**50**
Conversion formula	**Marks in remedial theory examinations /4**	**Marks in remedial Practical examinations /4**
Eligibility criteria after conversion	**20**	**20**
	Combined theory + Practical = 50	

B. **Remedial measures for absent students**:

v. If any of the students is absent for any of the 6 IA examinations due to any reasons, following measures shall be taken.

vi. The student is asked to apply to the academic committee of the college for reexamination, through HOD, to ascertain the genuineness of the reason for absentee.

vii. If permitted by academic committee, an additional examination for such students is to be conducted after prelims examination. Marks for such additional examination shall be equal to the missed examination.

viii. Even if a student has missed more than one IA examination, he/she can appear for only one additional IA examination. In such scenario, eligibility should be determined by marks obtained in internal assessment examinations for which the candidate has appeared, without changing the denominator of 500.

Internal Assessment Practical Examinations

II MBBS

Internal Assessment - 1General Surgery

Clinical A (30)			OSCE & Viva B (20)		
Long Case	Demonstration of clinical signs	Communication skills	OSCE & Table viva (20)		Grand Total A +B= 50
			OSCE of Psychomotor Skills	Table viva [Surgical pathology, X rays,Instruments, Logbook, Journal]	
20	5	5	10	10	50

Internal Assessment - 2
Orthopaedics and Radiodiagnosis (to be conducted at the end of respectiveclinical postings)

Subject: General Surgery Allied Practical (IA – 2) Examination in Orthopaedics			
Case	**OSCE 1**	**Viva (Surgical Pathology, Radiology, Instruments and Surgical Procedure, Journal / log book)**	**Practical Total**
10	**5**	**10**	**25**

Subject: General Surgery Allied Practical (IA – 2) Examination in Radiodiagnosis			
X-Ray and other diagnostic modalities - Basics	**Viva (Knowledge of legal aspects, radiation protection etc)**	**Journal / log book**	**Practical Total**
15	**5**	**5**	**25**

***** The marks for internal assessment – 2 shall be communicated by orthopedics / Radiology department to General Surgery department immediately after completion of examination and assessment.

III MBBS Part I

Internal Assessment – 3

General Surgery

Clinical A (30)			OSCE & Viva B (20)		
Long Case	Demonstration of clinical signs	Communication skills	OSCE & Table viva		Grand Total A +B= 50
			OSCE of Psychomotor Skills	Table viva [Surgical pathology, X rays,Instruments, Logbook, Journal]	
20	5	5	10	10	50

Internal Assessment – 4
Orthopaedics and Anaesthesia

Subject: General Surgery Allied Practical (IA – 2) Examination in Orthopaedics			
Case	**OSCE 1**	**Viva (Surgical Pathology, Radiology, Instruments and Surgical Procedure, Journal / log book)**	**Practical Total**
10	**5**	**10**	**25**

Subject: General Surgery Allied Practical (IA – 2) Examination in Anesthesia			
OSCE	**Drugs, Instruments**	**Viva**	**Practical Total**
10	**8**	**7**	**25**

* The marks for internal assessment – 4 shall be communicated by orthopedics / Anaesthesia department to General Surgery department immediately after completion of examination and assessment.

III MBBS Part II

Internal Assessment - 5

General Surgery

Clinical A (60)			OSCE & Viva B (40)		
Long Case	**Demonstration of clinical signs**	**Communication skills**	**OSCE & Table viva (40)**		**Grand Total A +B= 100**
			OSCE of Psychomotor Skills	**Table viva [Surgical pathology, X rays,Instruments, Logbook, Journal]**	
40	**10**	**10**	**20**	**20**	**100**

Final practical examinationGeneral Surgery

Seat No.	**Long Case General Surgery including communication skill (60)**		**Short Case 1 General Surgery (30)**		**Short Case2 Ortho (30)**		**General Surgery (60) OSCE # & Table viva**			**Ortho (20)**	**Grand Total**
	Long case	Communication skills *	Short case	Clinical signs demo	Short case	Clinical signs demo	Instruments +Procedure+ Log book	X rays + Surgical Pathology +Journal	OSCE	OSCE (10) + Table (10)	
	50	10	20	10	20	10	20	20	20	20	200

OSCE Stations may include General examinations, Local examinations, psychomotor skills,Communication skills, AETCOM etc.

*Communication skills to be assessed by Kalamazoo Consensus, clinical signs to be assessed by either GLOBAL Rating Scale or OSCE, Psychomotor Skills to be assessed by OSCE with checklist. If the skills aresmall, 2 or 3 skills may be combined.

Format / Skeleton of question paper for 1st & 2nd internal

Assessment Theory Examinations.

Instructions:	**SECTION "A" MCQ** *1) Put ☒ in the appropriate box below the question number once only.* *2) Use blue ball point pen only.* *3) Each question carries **one mark.*** *4) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.*

SECTION "A" MCQ (10Marks)

1. Multiple Choice Questions (Total -10 MCQ of One mark each from General surgery) (1x10=10)

a) b) c) d) e) f) g) h) i) j)

Instructions:
1) *Use **blue/black** ball point pen only.*
2) ***Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
3) ***All** questions are **compulsory**.*
4) *The number to the **right** indicates **full** marks.*
5) *Draw diagrams **wherever** necessary.*

2. Long Answer Question (Any 2 out of 3) (General (2 x 10 = 20

a) b) c)

3. Short answer questions (Any 4 out of 5) (At least2 Clinical reasoning question) (General surgery) (4 x 5 = 20

a) b) c) d) e)

Format / Skeleton of question paper for 3rd & 4th

internalAssessment Theory Examinations. (III MBBS Par I)

Instructions	**SECTION "A" MCQ** *5) Put ✉ in the appropriate box below the question number once only.* *6) Use blue ball point pen only.* *7) Each question carries **One mark.*** *8) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.*	
	SECTION "A" MCQ (10Marks)	
1.	Multiple Choice Questions (Total -10 MCQ of One mark each from General a) b) c) d) e) f) g) h) i) j)	(1x10=10

Instructions:	*1) Use **blue/black** ball point pen only.* *2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.* *3) **All** questions are **compulsory**.* *4) The number to the **right** indicates **full** marks.* *5) Draw diagrams **wherever** necessary.*	
2. Long Answer Question (Any 2 out of 3) (General surgery b) b) c)		(2 x 10 = 20
3. Short answer questions (1 from AETCOM) (General surgery a) b)		(2 x 5 = 10
4. Short answer questions (Any 2 out of 3) (At least 2 Clinical reasoning question) (Orthopaedics) a) b) c)		(2 x 5 = 10

Separate answer sheet for question 4 (SAQ from orthopaedics) may be used for the ease of evaluation.

Format / Skeleton of question paper for 5th

Internal Assessment Theory Examinations. (III MBBS Par II)

Instructions	**SECTION "A" MCQ** *9) Put ☒ in the appropriate box below the question number once only.* *10) Use blue ball point pen only.* *11) Each question carries **One mark.*** *12) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.*

SECTION "A" MCQ

1. Multiple Choice Questions (Total-20MCQ of One mark each - 15 General surgery , 2 orthopaedics, 1 anesthesia, 1 dentistry and 1 radiology) (1 x20=20

a) b) c) d) e) f) g) h) i) j)

k) l) m) n) o) p) q) r) s) t)

SECTION "B" &

Instructions: 1) *Use **blue/black** ball point pen only.*
2) ***Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
3) ***All** questions are **compulsory**.*
4) *The number to the **right** indicates **full** marks.*
5) *Draw diagrams **wherever** necessary.*

SECTION "B"

2 . Long Answer Questions (Structured Case Based) (General Surgery)	(2x15=30
a) b)	
3.Short Answer Questions (Any 3 out of 4) (Any one should be Clinical reasoning), 1 from AETCOM (General Surgery)	(3x5=15
)	

SECTION "C"

4. Short Answer Questions (1 Orthopedics, 1 Anesthesia, 1 Dentistry or Radiodiagnosis)	(4
a) b) c) d)	
5. Long Answer Question (Structured Case Based) (Orthopedics)	(1
a)	

Separate answer sheet for question 5 (LAQ from orthopaedics) may be used for the ease of evaluation.

Format / Skeleton of question paper for University

Theory Examinations. (III MBBS Par II) Paper - I

Instructions

SECTION "A" MCQ

13) Put ☒ in the appropriate box below the question number once only.
14) Use blue ball point pen only.
*15) Each question carries **One mark.***
16) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.

SECTION "A" MCQ (20Marks)

1. Multiple Choice Questions (Total-20MCQ of One mark each) – (General (1 x20=20

a) b) c) d) e) f) g) h) i) j)

k) l) m) n) o) p) q) r) s) t)

SECTION "B" &

Instructions: *1) Use **blue/black** ball point pen only.*
*2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
*3) **All** questions are **compulsory**.*
*4) The number to the **right** indicates **full** marks.*
*5) Draw diagrams **wherever** necessary.*

SECTION "B"

2 . Long Answer Questions (Structured Case Based) (General Surgery) (2x15=30

a) b)

3.Short Answer Questions (Any one should be Clinical reasoning, 1 from AETCOM) (General (3x5=15

a) b) c)

SECTION "C"

4. Long Answer Question (Structured Case Based) (General Surgery) (1

a)

3.Short Answer Questions (General Surgery) (Any 4 out of 5) (4

a) b) c) d) e)

SECTION "A" MCQ

Instruction

17 Pu ☒ in the appropriate box below the question number
) Use blue ball point pen only.
*18 Each question carries **One mark.***
` Students will not be allotted mark if he/she overwrites strikes or put white ink on the

SECTION "A" MCQ

1. Multiple Choice Questions (Total-20MCQ of One mark each - 15 General surgery , 2 (1
orthopedics

a) b) c) d) e) f) g) h)
i) j)

SECTION "B"

Instructions: *Use **blue/black** ball point pen only.*
***Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
*3) **All** questions are **compulsory**.*
*4) The number to the **right** indicates **full***
*5) marks Draw diagrams **wherever***

SECTION "B"

2 . Long Answer Questions (Structured Case Based) (General (2x15=30

a) b)

3.Short Answer Questions (any 5 out of 6) (1 Gen. Surgery, 2 Radiodiagnosis, 2 Anesthesia, 1 (5x5=25

a) b) d) e) f)

SECTION "C"

4. Long Answer Question (Structured Case Based) (Orthopedics) (1

a)

3.Short Answer Questions (Any 2 out of 3) (2

a) b)

Paper wise distribution of topics for Prelim

Annual ExaminationYear: **III-II MBBS**

Subject: **_General Surgery and Allied**

Paper	Section	**Topics**
I	A	MCQs on all topics of paper I of Surgery
	B	Metabolic response to injury, Shock, Blood and blood components,Burns, Wound healing and wound care, Surgical infections, Surgical Audit and Research, Nutrition and fluid therapy, Transplantation, Biohazard disposal, Trauma, Skin and subcutaneous tissue, Developmental anomalies of face, mouth and jaws, Oropharyngeal cancer, Disorders of salivary glands, Endocrine General Surgery: Thyroid and parathyroid, Adrenal glands, Breast, Vascular diseases, Ethics & AETCOM (module 4.3,4.5,4.6)
	C	Abdomen- including Hernia, Peritoneum, GIT tract including esophagus, stomach, small intestine, colon rectum and anal canal,Liver , Spleen, Pancreas, Biliary tract , Minimally invasive Surgery, Pediatric surgery
II	A	MCQs on all topics of the paper II including orthopaedics, anaesthesia, radiology , radiotherapy and dentistry .
	B	Cardio-thoracic - Chest - Heart and Lungs ,Urinary System- Kidneyureter and urinary bladder , Penis, Testis and scrotum, Plastic surgery, Oncology, Investigation of surgical patient, Pre, intra and post-operative management Radiology, Radiotherapy, Anesthesia and pain management , Dentistry
	C	Orthopedics , anaesthesia, radiology , radiotherapy and dentistry

Skills Training

Skill: Skill is the ability to perform a task leading to a specific predefined outcome.Skill may be:

a) Intellectual or cognitive which includes clinical reasoning and decision makingskills,

b) Procedural or psychomotor skills that require manual dexterity and includelaboratory and clinical skills,

c) Communication skills,

d) Team skills including leadership skills.

Competency: The habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, attitude, values, and reflection in daily practice for the benefit of the individual and the community being served.

Skill Assessment: A session that assesses the skill of the student including those in the laboratory, bed-side, skills lab, skills station that uses mannequins/ paper cases/simulated patients/real patients as the context demands.

DOAP (Demonstration -Observation - Assistance - Performance): A practical session that allows the student to observe a demonstration, assist the performer, perform in a simulated environment, perform under supervision or perform independently.

The current undergraduate medical education curriculum focuses on competencies and outcomes and gives emphasis to skill development in all phases. The competencies 'Shows How' (SH) or 'Perform' (P) are listed in relation to the skills to be acquired by the learner. The Graduate Medical Education Regulations Part II, 2019 envisages that certain skills are prerequisites for graduation. Therefore, it is necessary for institutions to create skill sessions in which essential/ desirable and certifiable skills are acquired. These skill sessions should be planned during their respective phase in a laboratory/during clinical posting. There should be proper documentation of the process of acquisition of skills. When required, a skills lab may be used to impart training. Skills lab provides a safe training environment in which a learner can be observed and be provided with the feedback necessary to improve. It also allows the learner to do tasks repetitively under supervision till the desired level of competency is achieved.

Salient Principles

The undergraduate medical education program is designed with a goal to create an "Indian Medical Graduate" (IMG) possessing the requisite knowledge, skills, attitudes, values and responsiveness, so that he or she may function appropriately and effectively as a physician of first contact of the community while being globally relevant.

The principles governing skill acquisition have been presented in this module which also facilitate the utilization of 'Skills lab' during the undergraduate training and assessment.

Certifiable Procedural Skills, as given in GMER 2019 are given below:

Table 11 (GMER 2019): Certifiable Procedural Skills:

A Comprehensive list of skills recommended as desirable for Bachelor ofMedicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate

Specialty	Procedure
General Surgery	• Basic suturing (I) • Basic wound care (I) • Basic bandaging (I) • Incision and drainage of superficial abscess (I) • Early management of trauma (I) and trauma lifesupport (D)
Orthopedics	• Application of basic splints and slings (I) • Basic fracture and dislocation management (O) • Compression bandage (I)

Figure II: Approach to competency based skill development

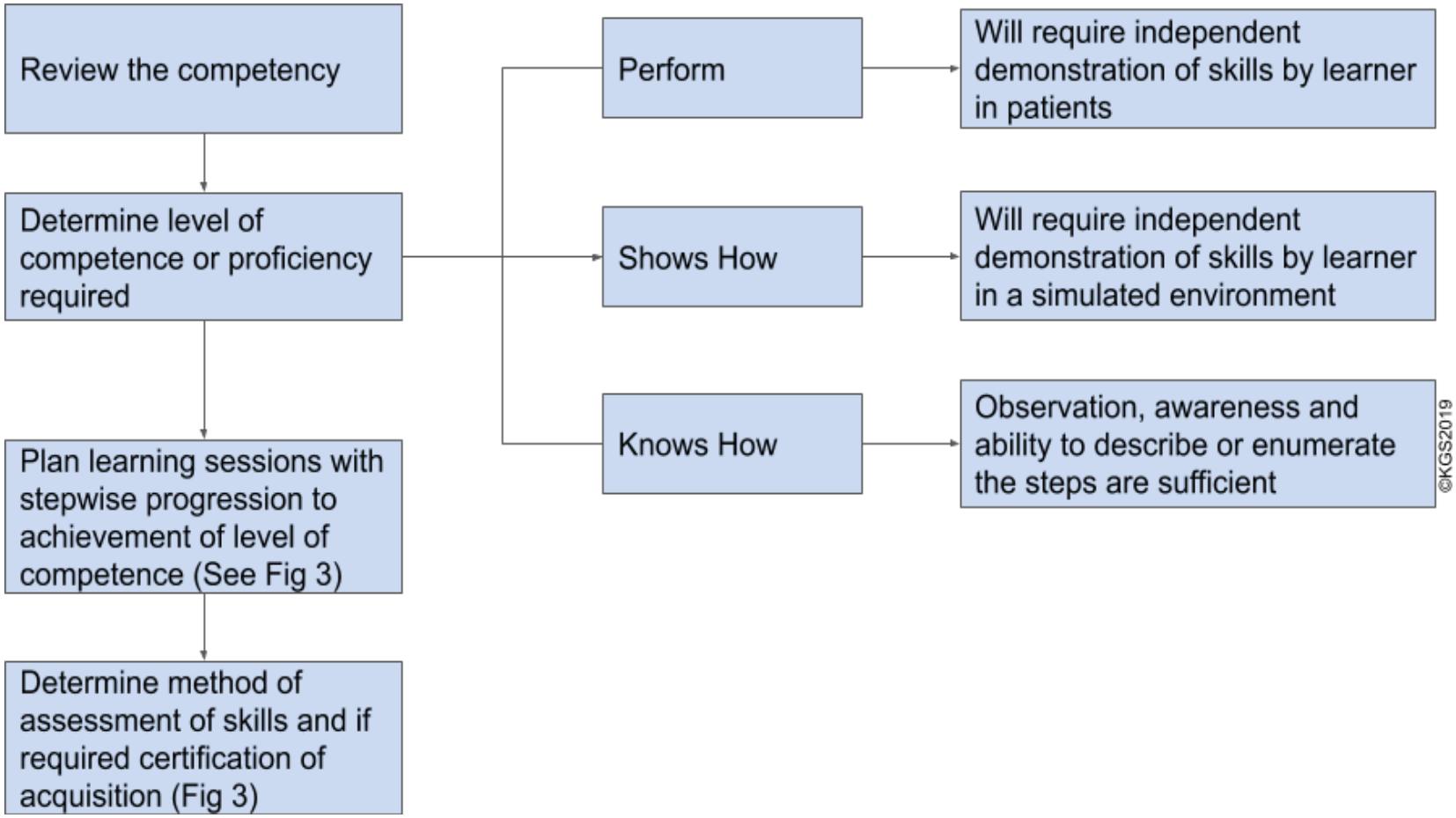
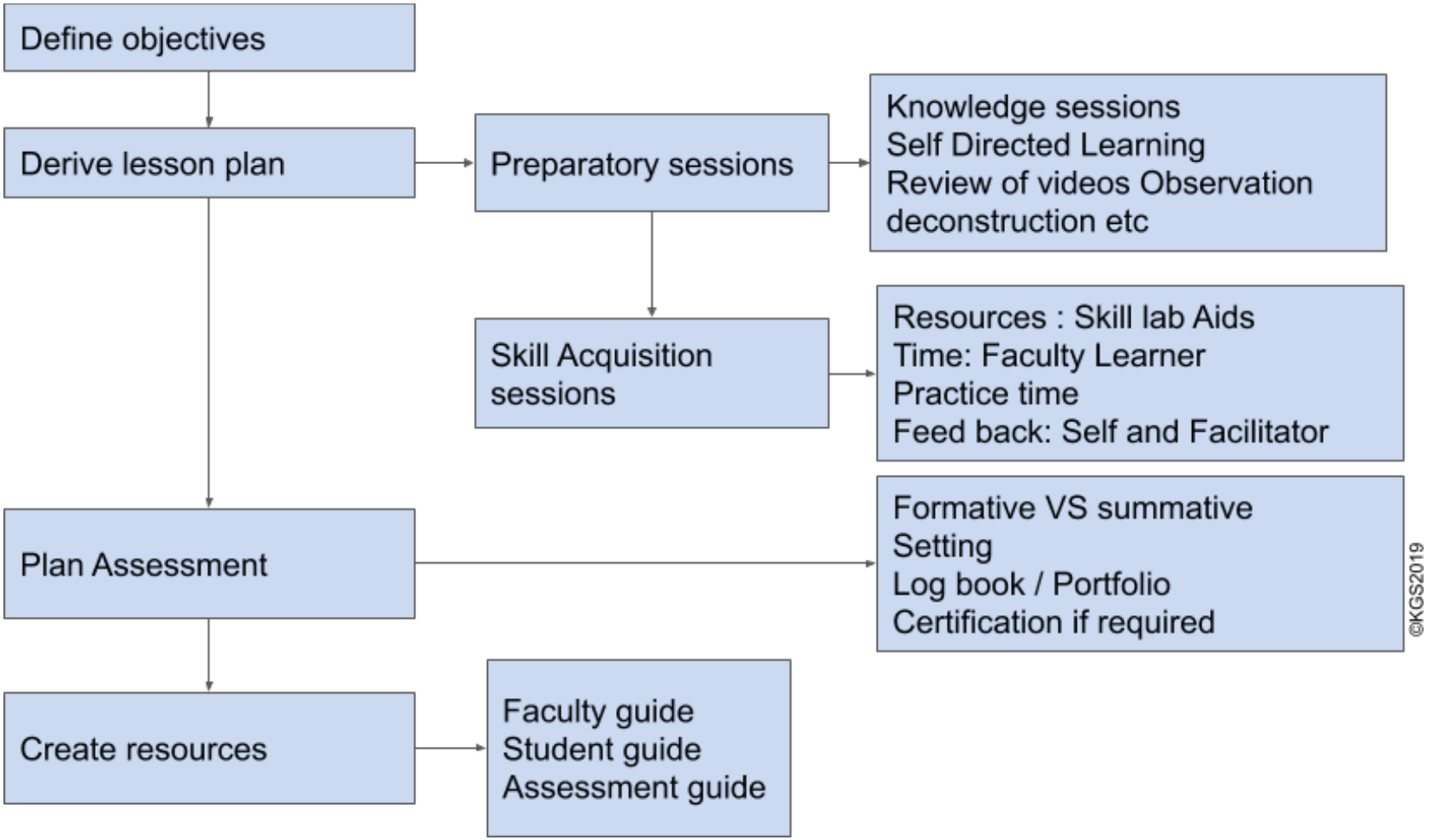


Figure III: Planning a skill session



OBSTETRICS AND GYNECOLOGY

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

GOAL

The broad goal of the teaching of undergraduate students in Obstetrics and Gynaecology is that he/she shall acquire understanding of anatomy, physiology and pathophysiology of the reproductive system & gain the ability to optimally manage common conditions affecting it.

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.

2.Graduate Attributes: Planning Patient Care and problem solving abilities

PO 2:

Demonstrate ability to apply this knowledge to the practice of medicine in routine, emergency and disaster situations.

Demonstrate ability to appraise and assimilate scientific evidence into their own ongoing learning, research, and patient care.

Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences.

3. Graduate Attributes: Professional excellence & Ethics

PO 3:

Demonstrate commitment to the highest standards of professional responsibility towards patient, colleagues, society, growth of medical professional and adhere to universally accepted code of ethics.

Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate Attributes: Communication Skills.

PO 4:

Demonstrate ability to communicate effectively, respectfully, non-judgemental, empathetic manner with patients, their families and colleagues that will improve patient satisfaction ,health care and encourages participation and shared decision-making.

Demonstrate the ability to listen clearly, inform, communicate and educate patients &/ caregivers for the promotion of health, diagnosis of disease and the treatment of illness; advocate for disease prevention, wellness and the promotion of healthy lifestyles including a focus on population health.

5. Graduate attributes: Leader & Member of the health care team & System

PO 5:

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members in a manner to maximize the health delivery potential of the team, considering various roles, responsibilities and competencies of the other health professionals.

Identify the self- potential, functioning ability as a team leader in primary and secondary health care settings, utilize various indicators of the health care system and to promote appropriate, low cost, ethical, fair and qualitative health delivery.

6. Graduate attributes: Life long learner

PO 6:

Demonstrate ability to acquire new knowledge, skills and reflect upon their experience to enhance personal and professional growth and apply the information in the care of the patient.

Demonstrate self-motivation and awareness to their own limitations.

Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.

7. Graduate attributes: Research Aptitude

PO7:

Demonstrate an attitude of inquiry/search/investigation ,scientific and objective effort to uncover facts.

8. Graduate attributes: Societal Responsibilities

PO8 :

Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Course Outcomes :

CO1: To diagnose normal and high-risk pregnancies and efficiently manage the normal pregnancy and the common conditions affecting it.

CO2: To provide appropriate treatment for reproductive tract infections, including sexually transmitted diseases.

CO3: To provide counselling and family welfare services including various methods of contraception and perform medical termination of pregnancy.

CO4: To interpret various laboratory investigations and other diagnostic modalities in Obstetrics and Gynaecology and manage the patient accordingly.

CO5: To perform basic and advanced surgical skills for obstetrical and gynaecological surgeries. Also perform basic obstetrical ultrasound including Doppler.

CO6: To diagnose and manage gynaecological endocrinology conditions, infertility and screengynecological malignancies and manage benign and malignant gynecological conditions.

CO7: To understand the principles of medico legal aspects in obstetrics and gynaecology, which includes knowledge of MTP act, serialization and PCPNDT act.

CO8: To acquire full understanding of research methodologies and use of newer information technologies and keep abreast with advances in the field of Obstetrics & Gynaecology.

CO9: To facilitate learning of medical / nursing students, para medical health workers as a teacher trainer.

CO10: To demonstrate empathy and humane approach towards patients and their families also have good communication with patient and their families, colleagues, senior authorities and other paramedical healthcare providers.

These guidelines are based on NMC recommendations teaching has to be done keeping in mind the goals and objectives to be achieved by medical student.

OBJECTIVES;

A. KNOWLEDGE:

At the end of the course, the student shall be able to:

- Outline the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it.
- Detect normal pregnancy, labour puerperium and manage the problems he/she is likely to encounter therein,
- List the leading causes of maternal perinatal morbidity and mortality.
- Understand the principles of contraception and various techniques employed, methods of medical termination of pregnancy, sterilization and their complications.
- Identify the use, abuse and side effects of drugs in pregnancy, pre-menopausal and post-menopausal periods;
- Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
- Identify common gynaecological diseases and describe principles of their management.
- State the indications, techniques and complications of surgeries like Caesarian Section, laparotomy, abdominal and vaginal hysterectomy, Fathergill's operation and vacuum aspiration for Medical Termination of Pregnancy (MTP).
-

B. SKILLS

At the end of the course, the student shall be able to:

1. Examine a pregnant woman; recognize high-risk pregnancies AND make appropriate referrals
2. conduct a normal delivery, recognize complications and provide postnatal care;
3. Resuscitate the newborn and recognize the congenital anomalies
4. Advise a couple on the use of various available contraceptive devices and assist in insertion and removal of intra-uterine contraceptive devices.
5. Perform pelvic examination, diagnose and manage common gynaecological problems including early detection of genital malignancies;
6. Make a vaginal cytological smear, perform a post coital test and wet vaginal smear examination for Trichomonas vaginalis, Moniliasis and gram stain for gonorrhoea;
7. interpretation of data of investigations like biochemical, histopathological, radiological ultrasound etc.

C. INTEGRATION

The student shall be able to integrate clinical skills with other disciplines and bring about coordination of family welfare programme for the national goal of population control.

D. GENERAL GUIDELINES FOR TRAINING:

1. attendance of a maternity hospital or the maternity wards of a general hospital including
   i. antenatal care the management of the puerperium and a minimum period of 5 months in-patient and out-patient training including family welfare planning
2. of this period of clinical instruction, not less than one month shall be spent as a resident pupil in a maternity ward of a general hospital.
3. during this period, the student shall conduct at least 10 cases of labour under adequate supervision and assist 10 other cases.
4. a certificate showing the number of cases of labour attended by the student in the maternity hospital and/or patient homes respectively, shall be signed by a responsible medical officer on the staff of the hospital and shall state:
   (a) that the student has been present during the course of labour and personally conducted each case, making the necessary abdominal and other examinations under the supervision of the certifying officer who shall describe his official position.
   (b) That satisfactory written histories of the cases conducted including wherever possible antenatal and postnatal observations, were presented by the student and initialed by the supervising officer

(Based on National Medical Council, Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 3; page nos. 102-129)

Integration: Upto 20% of the topics are to be taken in integration with other subjects as per directives.

Second MBBS phase II (from October 2020)Total Teaching hours:

A. Lectures: 25 hours

Serial number	Competency Nos.	Integration	Lecture topics & Subtopics	Hours
1.	OG **2.1**	AN 48.8, 49.1, 49.2, FM 3.18	Anatomy of the female reproductive tract,	1
2.	OG 3.1.		Physiology of menstruation	1
3.	OG 3.1	AN 77.3,77.4	Physiology of gametogenesis, Ovulation, conception, implantation, & reproductive endocrinology	1
4.	OG 4.1	AN 80.3 80.5, 80.6	Early development of embryo and fetus, development of Placenta, amniotic fluid, cord	1
5.	OG 2.1	AN 52. 8, 79.4	Embryology and developmental defects of female genital tract	1
6.	OG 6.1	FM3.19, PY 9.10	Diagnosis of pregnancy	1
7.	OG 7.1	PY 9.8	Physiological changes in pregnancy	1
8.	OG 1.1, 1,2	CM10.1, 10.2	Maternal and perinatal mortality	1
9.	OG- 5.1, 5.2 An 75.5		Preconceptional counseling	1
10.	OG 8.1, 8.2(K), 8.3(K)		Antenatal Care, birth planning, and Obstetric examination	1
11.	OG 8.4, 16.3	AN 75.5	Antenatal screening, genetic counselling and antenatal monitoring of fetal well being	
12.	OG 8.7		Vaccines and medications in pregnancy, Teratology	1
13.	OG 14.1	AN 53.2, 53.3	Fetal skull, pelvis	1
14.	OG 13.1		Labor physiology	1
15.	OG 13.1		Labor mechanism	1
16.	OG 13.1		Management of labor 1st stage with, partogram, intrapartum monitoring of fetal well being and labor analgesia	1
17.	OG 13.1		Management of labor 2nd and third stage	1
18.	OG 19.1		Physiological changes in puerperium, Management of puerperium	1
19.	OG 17.1, 17.2	CM10.3	lactation physiology and management	1
20.	OG 9.5		Hyperemesis , vomiting in pregnancy management	1
21.	1.3, 9.1	AN 78.5	Hemorrhage in early pregnancy (abortions)	1
22.	9.3	AN 78.3	Hemorrhage in early pregnancy (ectopic pregnancy	1
23.	9.4		Hemorrhage in early pregnancy (Molar pregnancy)	1
24.			Recurrent pregnancy loss	1
25.	11.1	AN 80.4	Multifetal pregnancy	1

Third MBBS phase IIITotal Teaching hours :

A. Lectures: **25 hours**

Serial number	CompetencyNos.	Integration	Topics & Subtopics	Hours
1.	OG 12.1		Hypertensive disorders in pregnancy	1
2.	OG 12.1		Hypertensive disorders in pregnancy	1
3.	OG 13.2		Preterm and PROM	1
4.	OG 13.2		Prolonged pregnancy	1
5.	OG 16.3		Intrauterine growth restriction	1
6.			Disorders of amniotic fluid	1
7.			Abnormalities of placenta . cord	1
8.			Intrauterine fetal death	1
9.	OG 10.1		Antepartum hemorrhage 1 Placenta previa	1
10.	OG 10.1		Antepartum hemorrhage 2 Abruption+ vasa previa	1
11.	**OG 12.8**	PA 22.2	Rh negative pregnancy	1
12.	OG 12.2		Anemia (Iron deficiency + Megaloblastic)	1
13.	OG 12.2		Anemia (Others)	1
14.	OG 12.4		Heart disease in pregnancy	1
15.	**OG 12.3**		Diabetes in pregnancy	1
16.	OG 12.5		Infections in pregnancy UTI,(Incl Malaria etc)	1
17.	OG 12.6		Hepatic disorders in pregnancy	1
18.			Thyroid disorders in pregnancy	1
19.			Respiratory disorders in pregnancy including TB, COVID, Flu	1
20.			Viral infections in pregnancy (Viral)	1
21.	OG 12.7 ,27.3		HIV in Obstetrics and Gynecology	1
22.			Gynecological disorders in pregnancy	1
23.			Surgical disorders in pregnancy	1
24.		CM 10.4	National Health programs-I safemotherhood, reproductive and child health	1
25.			National Health programs-II Respectful maternity care, Laqshya guidelines	1

hird MBBS phase IV

Total Teaching hours :

A. Lectures: **70 hours**

Serial number	CompetencyNos.	Integration	Topics & Subtopics	Hours
1.	OG 14.4	FM 3.21	Malpositions: Occipito posterior presentation + DTA	1
2.	OG 14.4		Face, Brow Mechanism of labor in each	1
3.	OG 14.4		Malpresentations Breech	1
4.	OG 14.4		Unstable lie (Transverse/ oblique)	1
5.		AN 79.5,	Congenital anomalies of fetus	1
6.			Shoulder dystocia	1
7.	OG 14.4		Abnormal labor,classification, diagnosis and management.	1
8.	OG 14.1		Types of pelvis, Contracted pelvis, cephalopelvic disproportion	1
9.	OG 14.2		Obstructed labor, Rupture uterus causes, diagnosis and management .	1
10.	OG 15.1		Instrumental vaginal deliveries+ Ref to destructive operations	1
11.	OG 15.1		Cesarean section	1
12.			Pregnancy with previous cesarean section .	1
13.	OG 16.1		Third stage complications PPH	1
14.	OG 16,2		Third stage complications- inversion of uterus, Injuries to birth canal	1
15.	OG 19.1,17.3		Disorders of puerperium	1
16.	OG 13.1		Induction of labor,	1
17.	OG 13.1		Obstetric analgesia	1
18.	23.1		Physiology of Puberty and Abnormal puberty	1
19.	23.2, 23.3		Delayed puberty, precocious puberty	1
20.			Disorders of sexual development	1
21.	OG 23.1		Menstruation and common complaints (Dymenorrhea+ PMDD)	1
22.	OG 24.1, PA 30.9	PA 30.9	Abnormal uterine Bleeding Endometrial polyps , hyperplasia	1
23.	25.1		Amenorhea: Primary/ secondary	1
24.	OG 32.1	PY 9.11	Menopause & management , premature ovarian failure	1
25.	OG 22.1, 22.2	PA 30.6	Leucorrhea , cervical erosion, Cervicitis, vaginitis syndromic management	1

26.	OG 27.1,27.4		PID, Chronic pelvic pain ,	1
27.	27.2		Genital tuberculosis	1
28.	OG 30.1, 30.2		PCOS	1
29.	OG 28.1, 28.2	PY 9.12	Infertilty-Cervical & Uterine & Tubal Factors	1
30.	OG 28.3	PH 1.40	Infertilty- Ovulation Factors, Endocrine Factors, Galactorrhoea, Hirsuitism	1
31.	OG 28.4		ART in infertility	1
32.	OG 28.1		Infertility- Male & Unexplained	1
33.	OG 29.1		Benign tumors: Leiomyoma and polyps	1
34.	Pa 30.7. 30.8, OG 26.1	PA 30.7, 30.8	Endometriosis and adenomyosis	1
35.	OG 31.1		Displacements of uterus	1
36.			Urinary incontinence	1
37.	OG 26.2		Genitourinary fistulae	1
38.	26.2		Old healed perineal tear and rectovaginal fistula	1
39.	OG 33.2		Premalignant lesions of the female genital tract , Cervical intraepithelial neoplasia	1
40.	OG 33.3, 33.4		Screening and early detection of women's cancers including breast cancer	1
41.	OG 33.1	PA 30.1	Invasive cervical cancer	1
42.	OG 32.2		Approach to a patient of Post menopausal bleeding,	1
43.	OG 34.1	PA 30.2, PA 30.3	Uterine cancers	1
44.			Benign and malignant Lesions of vulva and vagina	1
45.	OG 34.3	PA 30.5	Gestational trophoblastic neoplasia	1
46.	OG 34,2		Benign ovarian tumors+ including non neoplastic enlargements of ovary	1
47.	OG 34.2	PA 30.4	Malignant ovarian tumors	1
48.		BI 10.2	Principles of Chemotherapy and Radiotherapy in Gynecology	1
49.	21.1		Contraception: male and female barrier methods	1
50.	21.1	PH 1.39	Hormonal contraception	1
51.	21.2		IUDs, PPIUCD program	1
52.	21.1		Female sterilization, postpartum sterlization	1
53.	21.1		Reversal of sterilization male and female	1
54.	21.1		Contracepton in special populations	1
55.	OG 20.1		MTP:Act, first trimester procedures	1
56.	OG 20.2		MTP second trimester procedures	1
57.	18.1, 18.3		Neonatal Asphyxia , , convulsions in the newborn	1

58.			Neonatal resuscitation	1
59.			Neonatal Jaundice + Birth injuries	1
60.	OG 8.8		Imaging in Obstetrics	1
61.			Imaging in gynecology	1
62.		PH 1.41	Pharmacotherapeutics in obstetrics	1
63.			Principles of gyn-surgical care- (pre op)	1
64.			Principles of gyn surgical care-(post op)	1
65.	OG 10.2		Critical care in Obstetrics, appropriate use of blood and blood products, their complication and management	1
66.	20.3	FM 3.13-17	PC PNDT act	1
67.		FM 3.13-17	Examination of the sexual assault survivor	1
68.			Domestic Violence act and role of gynecologist Gender	1
69.			Medicolegal issues related to Obstetrics and gynecology	1
70.			Adoption acts	1

Course Content

Subject: Obstetrics and gynecology Gyn skills

Clinical Postings: phase II 4 weeks – (Mon-Fri)phase III-1 4 weeks – (Mon-sat)

phase III-2 12 weeks – (Mon-sat)

CompetencyNos.	skill	topic	Suggested Teaching learning method	Hours	Student should complete this skill by end of mentioned phase
Phase II					
OG35.1	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excludinginternal examinations (per rectal and per-vaginal) K/S SH	History taking in obstetrics	Bed side clinics	15 hours (1week)	II
OG35.5	Determine gestational age, EDD and obstetric formula K/S SH	Informed consent for examination			
OG35.7	Obtain informed consent for any examination / procedure S SH	obstetric examination and provisional diagnosis	Mannequin/de monstration on patient		
OG35.2.	Arrive at a logical provisional diagnosis after examination K/S SH				
OG36.2	Organise antenatal clinics K/S KH	Antenatal clinic, (set up of OPD) Routine antenatal invesigations, Antenatal care	OPD tour, Demonstrationof the set up and how OPD functioning is carried out	3 hrs	II

OG8.6	Assess and counsel a patient in a simulated environment regarding appropriate nutrition in pregnancy K/S SH	Nutritional counsellingin pregnancy	Case based learning.	3 hrs	II
OG 35.12	History taking in gynecology, demonstrate P/S, P/V examination		Bed side clinic /OPD demonstration, skill lab for PSPV practice	3 hrs	II
OG8.5	Describe and demonstrate pelvic assessment in a modelK/S SH	Maternal pelvis Pelvic assessment Fetal skull	Model,	3 hrs	II
OG8.4	Describe and demonstrate clinical monitoring of maternal and fetal well-being K/S SH	Antepartum monitoring of fetal well being- screening, USG doppler, NST, BPP,	Demonstration	3 hrs	II
OG13.4	Demonstrate the stages of normal labor in a simulatedenvironment / mannequin	Mechanism of labor Management of Labor stage 1 Intrapartum monitoring of fetal well being- Partogram, CTG	Skill lab Models andmannequins Labor room demonstrations	15 hrs	II
OG35.13	Demonstrate the correct technique to perform artificialrupture of membranes in a simulated / supervised environment S SH	ARM			
OG35.14	Demonstrate the correct technique to perform andsuture episiotomies in a simulated/	Management of labor stage 2-			

	supervised environment S SH	Episiotomy			
OG35.16	Diagnose and provide emergency management postpartum hemorrhage in a simulated / guidedenvironment K/S SH	Manage ment of labor stage 3 Emergency management of PPH oxytocics			
	Conduction of 2 exams and feedback			15 hours	
			Phase 2 clinical posting Total	**60 hours(4 weeks mon - fri)**	
Phase III-1					
OG37.6	Observe and assist in the performance of outlet forceps application of vacuum and breech delivery K/S/A/C SH	Forceps and vaccum, breech delivery	Mannequins and models skill lab	3 hrs 3 hrs	III-1
OG36.2	Organise postnatal and well-baby clinics K/S KH	Post natal clinic and well baby clinic. PNC case Normal and abnormal Puerperium,	OPD visit Bed side clinics, case based learning	3 hrs 3 hrs 3 hrs	III-1
OG17.2	Counsel in a simulated environment, care of the breast, importance and the technique of breast feeding S/A/CSH	Breast care, techniqueof breast feeding	Bed side clinic	3 hrs	III-1
OG35.17	Demonstrate the correct technique of urinary catheterisation in a simulated/ supervised environmentS SH	Female urinary catheterizaion	Mannequin/ demonstration, Video demonstration	1 hr	III-1
OG37.4	Observe and assist in the performance of Dilatation &Curettage (D&C) K/S/A/C SH	Dialation and curettage	OT procedure, Video demonstration	2 hrs	III-1

OG37.5	Observe and assist in the performance of Endometrial aspiration - endocervical curettage (EA-ECC) K/S/A/CSH	Endometrial and endocervical curettage	OT procedure, video demonstration	3 hrs	III-1
OG36.1	Plan and institute a line of treatment, which is needbased, cost effective and appropriate for common conditions taking into consideration (a) Patient (b) Disease (c) Socio-economic status (d) Institution/ Governmental guidelines. K/S SH	Cost effective approach	Case based learning	3 hrs	III-1
OG35.4	Demonstrate interpersonal and communication skillsbefitting a physician in order to discuss illness and itsoutcome with patient and family A/C SH	Doctor patient communication	Role play, OPD visit	3 hrs	III-1
OG35.6	Demonstrate ethical behavior in all aspects of medicalpractice. A/C SH	Ethics in medical practise	Case based learning	3 hrs	III-1
OG35.10	Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details. S SH	Referral note	Case based learning	3 hrs	III-1
OG38.4	Assess the need for and issue proper medical certificates to patients for various purposes K/S/A/CKH	Issue Medical certificates	Case based learning	3 hrs	III-1
		Cover 6 cases mentioned in III-2		18 hrs	
	Conduction of 2 exams and feedback			15 hours	
			Phase III-1 clinical posting Total	**72 hours(4 weeks - mon -sat)**	
Phase III-2					
	Revision of all topics in phase II			**45 hrs**	
	Revision of topic 14, 15 from phase III-1			**15 hrs**	

	Obtain history and on basis of examination findings(internal examination excluded) arrive at a logical provisional diagnosis for type of abortion	Abortions	Case based learning	**3 hrs**	
DG35.8	**Write a complete case record with all necessary details S SH**	Case record-…..10 cases over 3 phases, anemia. Drugs used in anemia Preeclampsia, Antihypertensives in prgnancy Eclampsia ,anticonvulsants in pregnancy IUGR,fetal well being tests Multifetal gestation, Breech, prev caesarean, preterm, tocolytics Prolonged labor induction of labor and drugs used in induction	Bed side clinics/ case based learning	**3 hrs** **3 hrs** **3 hrs** **3 hrs** **3 hrs** **3 hrs** **3 hrs** **3 hrs** **6 hrs**	II-1, III-2
DG35.16	**Diagnose and provide emergency management of antepartum in a simulated / guided environment K/S**	placenta previa case	Bed side clinics/ case	**6 hrs**	II-1/2

	SH	abruptio placentae case Emergency management of APH with placenta previa case	based learning		
OG35.11	**Demonstrate the correct use of appropriate universal precautions for self-protection against HIV and hepatitis and counsel patients S SH**	HIV in pregnancy Universal precaution, PPTCT, counselling in HIV	Case based learning Demonstrati on PPTCT centre visit	**3 hrs** **3hrs**	II-2
OG35.3	**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. K/S SH**	Identifying a high risk pregnancy	Case based learning	**3 hrs**	II-2
OG13.5	**Observe and assist the conduct of a normal vaginal delivery S P**	Normal vaginal delivery-2 cases in log book	Labor room	**6 hrs**	II-2
OG37.1	**Observe and assist in the performance of a Caesarean section K/S/A/C SH**	Caesarean section	OT procedure/ video demonstrati on	**3 hrs**	II-2
OG35.9	**Write a proper discharge summary with all relevant information S SH**	Discharge summary..VD, CS, gyne case	Case based learning	**3 hrs**	II-2
OG35.12	**Obtain a PAP smear in a stimulated environment S SH**	PAP smear	Cancer detection OPD/ video demonstrati on	**3 hrs**	II-2
OG36.3	**Demonstrate the correct technique of punch biopsy of uterus in a simulated/ supervised environment S SH**	Cervical biopsy			II-2
OG33.3	**Describe and demonstrate the screening for cervical cancer in a simulated environment K/S**	Cervical cancer screening, VIA, VILI,			II-2

	SH	Colposcopy			
DG35.15	**Demonstrate the correct technique to insert and remove**	Contraception	Mannequin/	**6 hrs**	II-2
	an IUD in a simulated/ supervised environment S SH	methods, Intrauterine contraceptive device insertion and removal	video demonstrati on/ demonstrati on small group		
DG13.4	**counsel on methods of safe abortion.**	Counselling for safe abortion		**3 hrs**	II-2
DG20.2	**In a simulated environment administer informed consent to a person wishing to undergo Medical Termination of Pregnancy S/A/C SH**	Informed consent for MTP, MTP act, forms to be filled	Demonstrati on OT procedure	**3 hrs**	II-2
DG37.7	**Observe and assist in the performance of MTP in the first trimester and evacuation in incomplete abortion K/S/A/C SH**	Suction and evacuation(spontaneous abortion , first trimester MTP)			II-2
DG38.3	**Lap sterilization K/S/A/C KH**	Lap sterilization- 1 case of sterilization	OT procedure/ video demonstrati on	**3 hrs**	II-2
DG19.2	**Counsel in a simulated environment, contraception and puerperal sterilisation S/A/C SH**	Counselling for contraception sterilization. Puerperal sterilization(case based lerning)	Case based learning Family welfare clinic	**3 hrs**	II-2
DG36.2	**Organise family welfare clinics K/S KH**	Family welfare clinic			II-2
DG 35.12	**History taking in gynecology, Reaching a provisional diagnosis**	Gynecology case Vaginitis Fibroid uterus Genital prolapse Infertility	Case based learning	**3 hrs** **3 hrs** **3 hrs** **3 hrs**	I
		Adenexal mass		**3 hrs**	

		Abnormal uterine bleeding(O) Post menopausal bleeding Cancer cervix		**3 hrs** **3 hrs** **3 hrs**	
OG37.2	**Observe and assist in the performance of Laparotomy K/S/A/C SH**	Exploratory laparotomy	OT procedure/ video demonstration	**3 hrs**	II-2
OG37.3	**Observe and assist in the performance of Hysterectomy – abdominal/vaginal K/S/A/C SH**	Vaginal hysterectomy, abdominal hysterectomy	OT procedure/ video demonstration	**6 hrs**	II-2
OG38.1	**Laparoscopy K/S/A/C KH**	laparoscopy	OT procedure/ video demonstration	**3 hrs**	II-2
OG38.2	**Hysteroscopy K/S/A/C KH**	hysteroscopy	OT procedure/ video demonstration	**3 hrs**	II-2
		Revision drugs in obstetrics and gynecology		**3 hrs**	
		Revision instruments		**3 hrs**	
		Revision contraception		**3 hrs**	
		specimen		**3hrs**	
OG18.2	**Demonstrate the steps of neonatal resuscitation in a simulated environment S SH**	Neonatal resuscitation			paeds
		Conduction of exams and feedback And miscellaneous		**24 hrs**	
		Phase III-2 clinical posting Total		**216 hrs(12 weeks mon-sat)**	

Course Content

Obstetrics and Gynecology

(Based on Indian Gazette on CBME and Medical Council of India, Competency basedUndergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 3; page nos. 102-129)

Self directed learning(SDL)

Medical council directs to dedicate 5 hrs in third phase part 1 and 15 hrs in third phase part2 for self directed learning in OBGY.

University leaves it to the discretion of institute to plan the SDL using various methods in which students should be briefed about topic, guided towards learning resources, curiosity, innovation, motivation, competitiveness should be inculcated.

Life long learning capacity should be built.

The record of these SDL sessions should be included in Logbook as reflections of the session

Small group teaching/tutorials

Medical council directs to dedicate 35 hrs in third phase part 1 and 125 hrs in thirdphase part2 for small group teaching/tutorials/ integrated teaching/ seminars in OBGY.

Suggested topics:

Dummy Pelvis 4

Obst specimens 4

Gynec specimens 4X-rays & HSG 2 NST/ CTG 2

Obst Instruments 3

Gynec Instruments 4

Forceps 1

Vacuum 1

Partograph 2

NST, CTG 2

Drugs in obstetrics 3 Gynec drug 2

Contraception 4

Sterilization 2

Minor procedures 2

Apart from this SGT, can comprise of MCQ solving, group seminars, poster making, skitmaking,

Guidelines for Electives:

Medical council directs to dedicate 2 months of elective postingbetween third phase part1 and part2

1. Each college can put up department wise lists of electives depending on facilities nresources available.
2. Electives modules should be designed well in advance with mention on specificlearning objectives, daily work record, report amd assessment of the same.
3. Allotment of electives will be merit based on combined marks of previous 3 yrs.
4. Medical college can have MOU with other hospitals or centers for elective courses to student.
5. Student can opt for doing elective in any other hospital, city or abroad, providedfacility of subject of interest is not available in his/her college, with prior permissionof institute.
6. If opting for elective abroad then one month can be contact program and another month will be online program as for one month of elective student is supposed toattend clinical posting also.
7. Only 10% students will be allowed per subject for outside elective.
8. Student will have to apply to centre where he desires to do elective well in advance, application must go through concerned dept n through institute. The centre where student is doing elective must be government or semi government or teaching institute or center affiliated by university or National association of that subject of country.
9. Responsibility of applying, getting admission, expenses incurred for tuition fees ntravel n stay will have to take care of by student.
10. At the end of electives Student should produce certificate of completing elective term from head of the institution or centre.

AETCOM

Medical council directs to dedicate 28 hrs + 16 hrs SDL in third phase part 2 forAETCOM. Out of these each subject gets 7 hours + 4 hrs SDL
As decided by university OBGY department will cover module 4.2 and 4.7 out of 9 modulesmentioned in AETCOM booklet for phase III part 2.

Internal Assessment

Obst. & Gynaec.

Applicable w.e.f August 2019 onwards examination for batches admittedfrom June 2019 onwards

Phase	IA – 1 -Exam			IA – 2 -Exam		
	Theory (January)	Practical EOP	Total Marks	Theory (May)	Practical	Total Marks
Second MBBS	50	50	100	50	50	100

Phase	IA – 3 Exam			IA – 4 - Exam		
	Theory (January)	Practical EOP	Total Marks	Theory (April)	Practical	Total Marks
Third MBBS Part I	50	50	100	50	50	100

Phase	IA – 5 - Exam			Prelim Examination		
	Theory (May)	Practical EOP (after 8 weeks posting)	Total Marks	Theory (November)	Practical	Total Marks
Third MBBS Part I	100	100	200	100 x 2 papers = 200	200	400

Internal Assessment Practical Examinations

II MBBS

Internal Assessment - 1

OBGY

Subject: OBGY Practical (IA – 1)					
Spotting	OSC E1	OSCE 2	Viva	Journal & log book	Practical Total
10	10	10	10	10	50

OSCE Stations to include Signs of General examinations, Local examinations, Psychomotor skillsand Communication skills

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Subject: OBGY Practical (IA – 2)					
Long Case					
History	Examination	Investigation	Treatment	AETCOM	PracticalTotal
10	10	10	10	10	50

Subject: OBGY Practical (IA – 3)					
Spotting	OSCE1	OSCE 2	Viva	Journal& log book	Practical Total
10	10	10	10	10	50

OSCE Stations to include Signs of General examinations, Local examinations, Psychomotor skillsand Communication skills

Subject: OBGY Practical (IA – 4)					
Long Case					
History	Examination	Investigation	Treatment	AETCOM	Practical Total
10	10	10	10	10	50

Subject: OBGY Practical (IA –5)				
Long Case (Obstetrics)	GynaecologyCase	Family Planning	Journal & log book	Practical Total
50	20	20	10	100

Subject: OBGY Practical (Prelim)								
ANC Case	GynaecologyCase	PNC / Post – Op Case	Family Planning Viva	Obstetrics Table Viva	Gynaec Table Viva	Spotting (2 x 10 spots)	Journal & log book	Practical Total
50	25	20	25	20	20	20	20	200

Subject: OBGY Practical (MUHS Final)							
ANC Case	Gynaecology Case (Diagnosis and discussion)	PNC / Post – Op Case (Diagnosis and discussion)	Family Planning Viva	Obstetrics Table Viva	Gynaec Table Viva	Spotting (4 x 10 spots)	Practical Total
50 *	25	20	25	20	20	40	200

* 10 marks each for history, examination, AETCOM, investigation &treatment

Assessment in CBME is ONGOING PRCESS,No Preparatory leave is permitted.

1. There shall be 6 internal assessment examinations in OBGY.
2. The suggested pattern of question paper for internal assessment, except prelim examination is attached at the end. Pattern of the prelims examinations should be similar to the University examinations.
3. Internal assessment marks for theory and practical will be converted to out of
4. 50 (theory) +50 (practical). Internal assessment marks, after conversion, should be submitted to university within the stipulated time as per directives from the University. **Conversion Formula for calculation of marks in internal assessment examinations.**

	Theory	Practical
Phase II	100	100
Phase III/I	100	100
Phase III/II	300	300
Total	500	500
Conversion out of	50	50
Conversion formula	Total marks in 6 IAtheory examinations /10	Total marks in 6 IAPractical examinations /10
Eligibility criteria after conversion	**20**	**20**
	Combined theory + Practical = 50	

5. While preparing Final Marks of Internal Assessment, the rounding-off marks shall done as illustrated in following table.

Total Internal Assessment Marks	Final rounded marks
33.01 to 33.49	33
33.50 to 33.99	34

6. Students must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination of that subject.
Internal assessment marks will not to be added to marks of the University examinations and will be shown separately in mark list.

7. Remedial measures

A) Remedial measures for non-eligible students

i. At the end of each internal assessment examination, students securing less than 50% marks shall be identified. Such students should be counseled at the earliest and periodically.

ii. Extra classes for such students may be arranged. If majority of the students found to be weak in a particular area then extra classes must be scheduled for all such students. Even after these measures, if a student is failed to secure 50% marks combined in theory and practical (40% separately in theory and practical) after prelim examination, the student shall not be eligible for final examination.

iii. Non eligible candidates are offered to reappear for repeat internal assessment examination/s, which must be conducted 2 months before next University examination. The pattern for this repeat internal assessment examination shall be similar to the final University examination. Only the marks in this examination shall be consideredfor deciding the eligibility criteria. Following conversion formula shall be used for converting the marks.

	Theory	Practical
Remedial examination (as per final examination pattern)	200	200
Conversion out of	50	50
Conversion formula	Marks in remedial theory examinations /4	Marks in remedialPractical examinations /4
Eligibility criteria after conversion	**20**	**20**
	Combined theory + Practical = 50	

B) Remedial measures for absent students:

i. If any of the students is absent for any of the 6 IA examinations due to any reasons, following measures shall be taken.
ii. The student is asked to apply to the academic committee of the college for reexamination, through HOD, to ascertain the genuineness of the reason for absentee.
iii. If permitted by academic committee, an additional examination for such students is to be conducted after prelims examination. Marks for such additional examination shall be equal to the missed examination.
iv. Even if a student has missed more than one IA examination, he/she can appear for only one additional IA examination. In such scenario, eligibility should be determined by marks obtained in internal assessment examinations for which the candidate has appeared, without changing the denominator.

Format for Internal AssessmentTheory Examination
IA – 1, IA – 2, IA – 3 & IA – 4

Question No.	Type of Question	No. of Questions (no. To be solved)	Max. Marks
1.	MCQ	10	10 (1 marks each)
2.	SAQ	6 (Any 5 out of 6)	25 (5 marks for each question x 5questions)
3.	LAQ	1 (Compulsory)	15
		Total	50

Format for Internal Assessment Theory Examination IA – 5

Question No.	Section	Type of Question	No. of Questions	Max. Marks
1.	A	MCQ	20	20 (1 markseach)
2.	B	LAQ	4 (Any 3 out of 4)	45 (15 marksfor each question x 3 LAQ)
3.	C	SAQ	7 (Any 6 out of 7)	30 (5 marks for each question x6 SAQ)
4.	C	SAQ	1 question from AETCOM	5
			Total	100

Format for MUHS Final Theory Examination Paper I & II

QuestionNo.	Section	Type of Question	No. of Questions	Max. Marks
1.	A	MCQ	20	20 (1 markseach)
2.	B	LAQ	4 (Any 3 out of 4)	45 (15 marksfor each question x 3 LAQ)
3.	C	SAQ	7 (Any 6 out of 7)	30 (5 marks foreach question x6 SAQ)
4.	C	SAQ	1 question from AETCOM	5
			Total	100

SKILLS TRAINING

(GMER 2019): Certifiable Procedural Skills: A Comprehensive list of skills recommended as desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate.

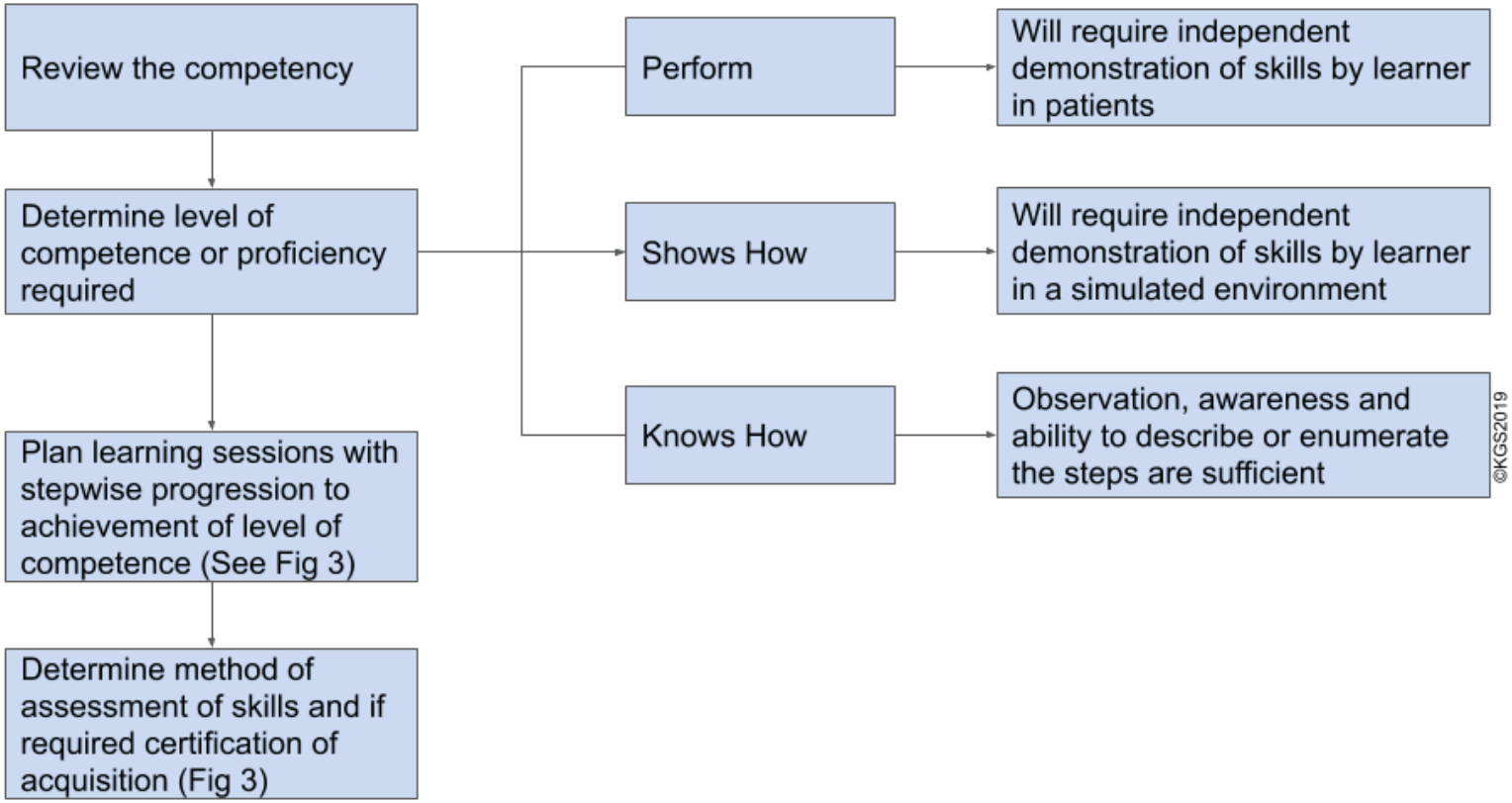
SPECIALITY	PROCEDURE
Gynaecology	Per Speculum (PS) and Per Vaginal (PV) examination (**I**) Visual Inspection of Cervix with Acetic Acid (VIA) (**O**) Pap Smear sample collection & interpretation (**I**) Intra- Uterine Contraceptive Device (IUCD) insertion & removal (**I**)
Obstetrics	Obstetric examination **(I**) Episiotomy (**I**) Normal labor and delivery (including partogram) **(I**)

I -Independently performed on patients.

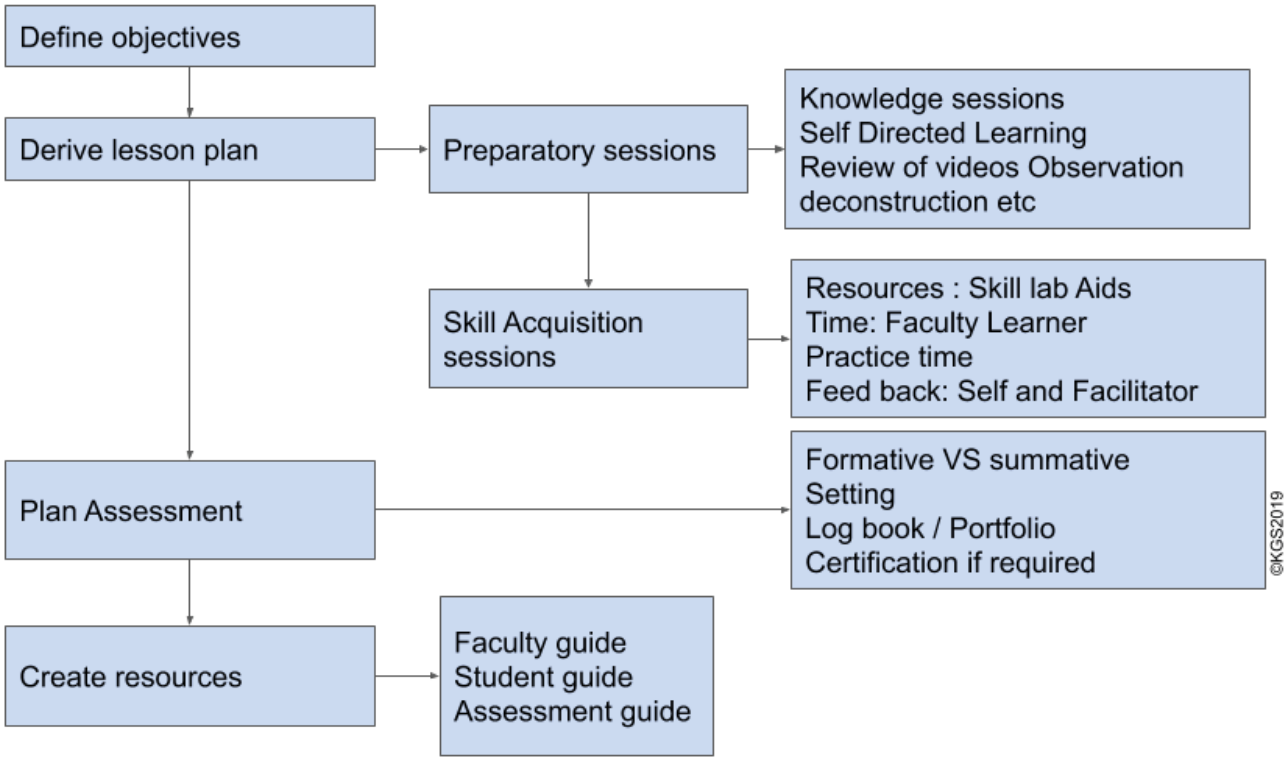
O- Observed in patients or on simulations.

D- Demonstration on patients or simulations and performance under supervision in patients.

Approach to competency based skill development



Planning a skill session



TB & Chest

TUBERCULOSIS AND RESPIRATORY DISEASES:

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

GOAL :

The aim of teaching the undergraduate student in Tuberculosis and Chest Diseases is to impart such knowledge and skills that may enable him/her to diagnose and manage common ailments affecting the chest with the special emphasis on management and prevention of Tuberculosis and especially National Tuberculosis control programme

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.

2.Graduate Attributes: Planning Patient Care and problem solving abilities

PO 2:

Demonstrate ability to apply this knowledge to the practice of medicine in routine, emergency and disaster situations.

Demonstrate ability to appraise and assimilate scientific evidence into their own ongoing learning, research, and patient care.

Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences.

3. Graduate Attributes: Professional excellence & Ethics

PO 3:

Demonstrate commitment to the highest standards of professional responsibility towards patient, colleagues, society, growth of medical professional and adhere to universally accepted code of ethics.

Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate Attributes: Communication Skills.

PO 4:

Demonstrate ability to communicate effectively, respectfully, non-judgemental, empathetic manner with patients, their families and colleagues that will improve patient satisfaction ,health care and encourages participation and shared decision-making.

Demonstrate the ability to listen clearly, inform, communicate and educate patients &/ caregivers for the promotion of health, diagnosis of disease and the treatment of illness; advocate for disease prevention, wellness and the promotion of healthy lifestyles including a focus on population health

5. Graduate attributes: Leader & Member of the health care team & System

PO 5:

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members in a manner to maximize the health delivery potential of the team, considering various roles, responsibilities and competencies of the other health professionals.

Identify the self- potential, functioning ability as a team leader in primary and secondary health care settings, utilize various indicators of the health care system and to promote appropriate, low cost, ethical, fair and qualitative health delivery.

6. Graduate attributes: Life long learner

PO 6:

Demonstrate ability to acquire new knowledge, skills and reflect upon their experience to enhance personal and professional growth and apply the information in the care of the patient.

Demonstrate self-motivation and awareness to their own limitations.

Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.

7. Graduate attributes: Research Aptitude

PO7:

Demonstrate an attitude of inquiry/search/investigation ,scientific and objective effort to uncover facts**.**

8. Graduate attributes: Societal Responsibilities

PO8 :

Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

OBJECTIVES :

(a) **KNOWLEDGE :**

At the end of the course of Tuberculosis and Chest diseases, the student shall be able to:

1) demonstrate sound knowledge of common chest diseases, their clinical manifestations, including emergent situations and of investigative procedures to confirm their diagnosis'
2) demonstrate comprehensive knowledge of various modes of therapy used in treatment of respiratory diseases;
3) describe the mode of action of commonly used drugs, their doses, side-effects/toxicity, indications and contra-indications and interactions.;
4) describe commonly used modes of management including medical and surgical procedures available for treatment of various diseases and to offer a comprehensive plan of management inclusive of National Tuberculosis Control Programme.

(c) **SKILLS** :

The student shall be able to :

1) interview the patient, elicit relevant and correct information and describe the history in chronological order;
2) conduct clinical exami9nation, elicit and interpret clinical findings and diagnose common respiratory disorders and emergencies;
3) perform simple, routine investigative and office procedures required for making the bed side diagnosis, especially sputum collection and examination for etiologic organisms especially Acid Fast Bacilli (AFB), interpretation of the chest x-rays and respiratory function tests;
4) interpret and manage various blood gase4s and PH abnormalities in various respiratory diseases.
5) Manage common diseases recognizing need for referral for specialized care, in case of inappropriateness of therapeutic response;
6) Assist in the performance of common procedures, like laryngoscopic examination, pleural aspiration, respiratory physiotherapy, laryngeal intubation and pneumo-thoracic drainage/aspiration

INTEGRATION :

The broad goal of effective teaching can be obtained through integration with departments of Medicine, Surgery, Microbiology, Pathology, Pharmacology and Preventive and Social Medicine

Lect. 01 : History and introduction.
Lect. 2/3: Pathogenesis and pathology
Lect. 04: Role of host related factors.
Lect. 05: Microbiology of AFB
Lect. 06: Clinical features of pulmonary tuberculosis
Lect. 07: Anti-tuberculous drugs
-Pharmacology & schedules of drug therapy
Lect. 8/9: Resistant tuberculosis
DOTS
Prophylaxis - Drugs / BCG / Tuberculin test.
HIV & TB

Lect 10 Extra - Pulmonary tuberculosis Pleural Effusio Others.
Lect 11/ 12: Revision
Lect. 13: Examination.

Respiratory System :

1. Applied anatomy & Physiology of R.S.
2. Lung function tests
3. Respiratory infections, pneumonias, fungus,
4. Bronchiectasis & lung Abscess.
5. Bronchial Asthma.
6. Lung & Pleural Malignancies.
7. Mediastinum & its disorders.
8. Pleural Diseases
9. Occupational Lung Disease
10. Respiratory emergencies.

Lecture cum Demos (Resp system)

1. Lung function test and blood gas Analysis and Resp. alkalosis & Acidosis.
2. Chest bronchios emphysema
3. Suppurative lung diseases
4. Bronchogenic carcinoma & other malignancies with Mediastinal obstruction
5. Pleural disease - pneumothorax, pyopneumothorax, Pleural

L.C.D. In T.B.

1. Haemoptysis
2. Drug resistance
3. TB & HIV
4.

Psychiatry Syllabus for MBBS Phase II & III-I
(According to NMC'S Competency Based Medical Education (CBME) Curriculum)

PSYCHIATRY

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

Goal

The aim of teaching of the undergraduate student in Psychiatry is to impart such knowledge and skills that may enable him to diagnose and treat common Psychiatric disorders, handle Psychiatric emergencies and to refer complications/unusual manifestation of common disorders and rare Psychiatric disorders to the specialist.

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.

2.Graduate Attributes: Planning Patient Care and problem solving abilities

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Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Course Outcomes :

At the end of the course, an MBBS student should be able to:

1. Understand and explain neuroanatomy and neurophysiology of behavior.
2. Establish rapport with a patient/relative and open an effective communication channel.
3. Obtain psychiatric history from patient and his/her caregiver.
4. Identify and diagnose developmental disorders in children and adolescents.
5. Identify and diagnose common psychiatric diagnoses in adults.
6. Identify and diagnose neurodegenerative disorders in elderly.
7. Explain and educate the caregivers about the diagnosis, treatment plan and prognosis. .
8. Form a treatment plan with the help of members of the healthcare team and ancillary staff
9. Open a dialogue, and intervene early in an individual who is experiencing suicidal ideations.
10. Open a dialogue, and intervene early in an individual who is indulging in substance use disorders.

OBJECTIVES:

a. KNOWLEDGE:

At the end of the course, the student shall be able to:

1. Comprehensive nature and development of different aspects of normal human behavior like learning, memory, motivation, personality and intelligence;
2. Recognize differences between normal and abnormal behavior;
3. Classify psychiatric disorders;
4. Recognize clinical manifestations of the following common syndromes and plan their appropriate management of organic psychosis, functional psychosis, schizophrenia, affective disorders, neurotic disorders, personality disorders, psycho physiological disorders, drug and alcohol dependence, psychiatric disorders of childhood and adolescence;
5. Describe rational use of different modes of therapy in psychiatric disorders.

b. SKILL

The Student shall be able to:

1. Interview the patient and understand different methods of communications in patient-doctor relationship;
2. Elicit detailed psychiatric case history and conduct clinical examination for assessment of mental status;
3. Define, elicit and interpret psycho-pathological symptoms and signs;
4. Diagnose and manage common psychiatric disorders;
5. Identify and manage psychological reactions and psychiatric disorders in medical and surgical patients in clinical practice and in community setting.

c. INTEGRATION:

Training in Psychiatry shall prepare the students to deliver preventive, promotive, curative and re-habilitative services for the care of patients both in the family and community and to refer advanced cases for a specialized Psychiatry / Mental Hospital. Training should be integrated with the departments of Medicine, Neuro-Anatomy, Behavioral and Forensic Medicine.

COURSE CONTENT

III MBBS, PART-I

Subject: PSYCHIATRY

Based on National Medical Commission, Competency based Undergraduate curriculum for the Indian Medical Graduate,

1. Total Teaching hours:

A. Lectures: hrs.

B. Self-directed learning: hrs.

C. Practical/T/SGT: hrs.

LIST OF LECTURE/PRACT/TUT/SEM/SDL/SGT SCHEDULE - PHASE- I

1.PSYCHIATRY

Sr. No	Topic	Competency No.	Integration
1	ON TYPES OF MEMORY	PS 2.3	
2	Enumerate and describe the pharmacologic basis and side effects of drugs used in bipolar disorders. Enumerate the appropriate conditions for specialist referral in patients with bipolar disorders	PS 7.6 PS7.7	
3	Enumerate and describe the magnitude and etiology of psychosomatic disorders. Describe the treatment of psychosomatic disorders including behavioural, psychosocial and pharmacologic therapy. Enumerate and describe the pharmacologic basis and side effects of drugs used in psychosomatic disorders. Enumerate the appropriate conditions for specialist referra	PS 12.1 PS 12.4 PS 12.6 PS 12.7	
4	Describe the magnitude and etiology of alcohol and substance use disorders. Describe the treatment of alcohol and substance abuse disorders including behavioural and pharmacologic therapy. Enumerate and describe the pharmacologic basis and side effects of drugs used in alcohol and substance abuse. patients with alcohol and substance abuse disorders Enumerate the appropriate conditions for specialist referral in	PS 4.1 PS 4.4 PS 4.6 PS 4.7	
5	Enumerate and describe the magnitude and etiology of psychosexual and gender identity disorders. Describe the treatment of psychosexual and gender identity disorders including behavioural, psychosocial and pharmacologic therapy	PS 13.1 PS 13.4	
6	SEMINAR ON INTELLIGENCE (Describe and discuss intelligence quotient and its measurement	PS15.2	
7	Describe the aetiology and magnitude of psychiatric illness in the elderly. Describe the therapy of psychiatric illness in elderly including psychosocial and behavioural therapy	PS16.2 PS16.3	
8	Enumerate and describe the recognition and clinical presentation of psychiatric emergencies (Violent behaviour) discussion.	PS17.1	

	Describe the initial stabilisation and management of psychiatric emergencies. Enumerate the appropriate conditions for specialist referral in patients with psychiatric emergencies	PS17.2 PS17.3	
09	Enumerate the indications for modified electroconvulsive therapy	PS18.2	
10	Describe the concept and principles of preventive and Community mental health promotion (positive mental health); and community education Define stress and describe its components and causes Describe the role of time management, study skills, balanced diet and sleep wake habits in stress avoidance Describe the principles of personality development and motivation. Define and distinguish normality and abnormality	PS19.5 PS2.1 PS2.2 PS2.4 PS2.5	
11	Describe the growth of psychiatry as a medical specialty, its history and contribution to society	PS 3.1	
12	Define and describe the principles and components of learning memory and emotions	2.3	
13	Enumerate, describe and discuss important signs & symptoms of common mental disorders. Describe and discuss biological, psychological & social factors & their interactions in the causation of mental disorders	3.2 PS 3.6	
14	Classify and describe the magnitude and etiology of depression Describe the treatment of depression including behavioural and pharmacologic therapy	6.1 PS 6.4	
15	-Enumerate, elicit, describe and document clinical features in patients with depression	PS 6.2	
16	Enumerate and describe the pharmacologic basis and side effects of drugs used in depression. Enumerate the appropriate conditions for specialist referral in patients with depression.	PS 6.6 PS 6.7	
17	Classify and describe the magnitude and etiology of bipolar disorders. Describe the treatment of bipolar	PS 7.1 PS 7.4	
18	Enumerate, elicit, describe and document clinical features in patients with bipolar disorders	PS 7.2	
19	Enumerate and describe the magnitude and etiology of Generalised anxiety disorders. Enumerate, elicit, describe and document clinical features in patients with anxiety disorders. Describe the treatment of Generalized anxiety disorders including behavioural and pharmacologic therapy. Enumerate and describe the anxiety disorders Enumerate the appropriate conditions for specialist referral in Generalizedof drugs used in Generalized anxiety disorderspharmacologic basis and side effects	PS 8.1 PS 8.2 PS 8.4 PS 8.6 PS 8.7	
20	Enumerate and describe the magnitude and etiology of Panic disorder and phobia. Describe the treatment of Panic disorder and phobia including behavioural and pharmacologic therapy., Enumerate and describe the pharmacologic basis and side effects of drugs used in panic disorder and phobia Enumerate the panic disorder and phobiaappropriate conditions for specialist referral in	PS 8.1 PS 8.4 PS 8.6 PS 8.7	
21	Enumerate and describe the magnitude and etiology of stress related disorders Descri be the treatment of stress related disorders including behavioural and psychosocial therapy. Enumerate and describe the pharmacologic basis and side effects of drugs used in stress related disorders. Enumerate the appropriate disorderconditions for specialist referral in stress	PS 9.1 PS 9.4 PS 9.6 PS 9.7	

22	Enumerate, elicit, describe and clinical patients with stress related disorders	SGT PS 9.2	
23	Enumerate and describe the magnitude and etiology of somatoform, dissociative and conversion disorders. Describe the treatment of somatoform disorders including behavioural, psychosocial and pharmacologic therapy. Enumerate and describe the pharmacologic basis and side effects of drugs used in somatoform, PS patients with somato form dissociative and conversion disorders Enumerate the appropriate conditions for specialist referral indissociative and conversion disorders.	PS 10.1 PS 10.4 PS10.6 10.7	
24	Enumerate, elicit, describe and document clinical features in patients with magnitude and etiology of psychosomatic disorders	SGT ON PS 12.2	
25	Enumerate and describe the magnitude and etiology of personality disorders. Describe the treatment of personality disorders including behavioural, psychosocial and pharmacologic therapy. Enumerate and describe the pharmacologic basis and side effects of drugs used in personality disorders discussion. Enumerate the appropriate conditions for specialist referral	PS 11.1 PS 11.4 PS 11.6 PS11.7	
26	Enumerate and describe common organic psychiatric disorders, magnitude, etiology and clinical features Enumerate and describe the essential investigations in patients with organic psychiatric disorders Enumerate the appropriate conditions for specialist referral in patients with psychiatric disorders. Describe, discuss and distinguish psychotic & non-psychotic group (Mood, Anxiety, Stress related) disorders	PS 3.7 PS 3.8 PS 3.11 PS 3.12	
27	Classify and describe the magnitude and etiology of schizophrenia & other psychotic disorders Describe the treatment of schizophrenia including behavioural and pharmacologic therapy. Enumerate and describe the pharmacologic basis and side effects of drugs used in schizophrenia Enumerate the appropriate conditions patients with psychotic disorders for specialist referral in	PS 5.1 PS 5.3 PS 5.5 PS 5.6	
28	Enumerate, elicit, describe and document clinical features, positive symptoms	SGT ON PS 5.2	
29	SEMINAR ON NDPSA (Describe and discuss the basic legal and ethical issues in psychiatry)	PS19.3	
30	Enumerate and describe the pharmacologic basis and side effects of drugs used in psychosexual and gender identity disorders Enumerate the appropriate conditions for specialist referral	PS13.6 PS13.7	
31	Enumerate and describe the magnitude and etiology of psychiatric disorders occurring in childhood and adolescence. specialist referral in children and adolescents with psychiatric disorders	PS14.1 PS14.3, PS14.5 PS14.6	
32	Describe the aetiology and magnitude of mental retardation. Describe and discuss intelligence quotient and its measurement. Describe the psychosocial interventions and treatment used in mental retardation	PS15.1 PS15.2 PS15.4	

33	Describe depression in elderly	SGT ON PS16.1	
34	Enumerate the appropriate conditions for specialist referral in psychiatric disorders in the elderly	PS16.5	
35	Enumerate and describe the recognition and clinical presentation of psychiatric emergencies (Suicide, Deliberate Self Harm) SUICIDE DOs AND DONTs Describe the initial stabilisation and management of psychiatric emergencies. Enumerate the appropriate conditions for specialist referral in patients with psychiatric emergencies	PS17.1 PS17.2 PS17.3	
36	Enumerate the indications and describe the pharmacology, dose nd side effects of commonly use drugs in psychiatric disorders	PS18.1	
37	SEMINAR ON CLASSIFICATION OF ANTIPSYCHOTICS		
38	ANTIDEPRESSANTS	SGT	
39	Enumerate and describe the principles and role of psychosocial interventions in psychiatric illness including psychotherapy, behavioural therapy and rehabilitation	PS18.3	
40	Describe the relevance, role and status of community psychiatry	PS19.1	
41	Describe and discuss the basic legal and ethical issues in psychiatry Enumerate and describe the salient features of the prevalent mental health laws in India	PS19.3 PS19.4	
42	Describe the objectives strategies and contents of the National Mental Health Ac	SGT ON PS19.2	
43	Enumerate and describe the identifying features and the principles of participatory management of mental illness occurring during and after disasters	PS19.6	

PHASE II - CLINICAL POSTING (02 wks)

Lecture – Cum – Demonstration, at appropriate places.

SR.NO	TOPIC
1	History Taking- General
2	MSE 1
3	MSE 2
4	Delirium
5	Depression
6	Alcohol use disorder
7	Stress and anxiety
8	Dementia
9	Psychosis and Schizophrenia
10	Intellectual disability disorder

PHASE III - CLINICAL POSTING (02 wks)

Lecture – Cum – Demonstration, at appropriate places

SR NO	TOPIC
1	Elicit, present and document a history in patients presenting with a mental disorder PS 3.3
2	Perform, demonstrate and document a mental status examination PS 3.5
3	Elicit, describe and document clinical features of alcohol and substance use disorders PS 4.2
4	Describe the initial stabilisation and management of a violent patient PS 17.2
5	Enumerate the indications for modified electroconvulsive therapy PS 18.2
6	Delirium and its management PS 3.5
7	Suicide - the dos and don'ts and how and when to intervene PS 17.2
8	Enumerate, elicit, describe and document clinical features inpatients with psychiatric disorders occurring in childhood and adolescence PS 14.2
9	Breaking the news to family - psycoeducation 3.9, 4.5
10	Psychotic and neurotic spectrum disorders, symptoms and initial itervention PS 14.2,4.3,5.2,5.3
11	Normal sleep, sleep hygiene and Sleep wake disorders PS2.2
12	Enumerate, elicit, describe and document clinical features in patients with magnitude and etiology of psychosexual and gender identity disorders PS 13.2

DERMATOLOGY, VENEREOLOGY & LEPROSY

Vision

- To become a world class dynamic institution of education, research and training to develop globally competitive professional and socially responsible human resource.

Mission

- To ensure globally relevant quality higher education and skill enhancement for providing required trained manpower to the nation & the world.
- To promote symbiotic relations with industry, academic & research institutions and community to meet the expectations of various stakeholders.
- To engage in interdisciplinary research and innovate for furtherance of knowledge, technology and growth.
- To put in place dynamic technocracy for effective use of emerging trends in curriculum development, andragogy, evaluation and system management.
- To provide an environment for holistic evolution of the learners as human, socially responsible and conscious of sustainable ecosystem.

Goal

The aim of teaching the Undergraduate students in Dermatology, S.T.D. and Leprosy is to impart such knowledge and skills that may enable him to diagnose and treat common ailments and to refer rare diseases or complications and unusual manifestations of common diseases to the specialist.

Programme Outcomes

At the end of MBBS program, the Indian Medical Graduate should be able to:

1. Graduate Attributes: Medical and Scientific Knowledge.

PO 1 :

Demonstrate knowledge of normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.

Demonstrate knowledge about established and evolving biomedical and clinical sciences.

Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.

2.Graduate Attributes: Planning Patient Care and problem solving abilities

PO 2:

Demonstrate ability to apply this knowledge to the practice of medicine in routine, emergency and disaster situations.

Demonstrate ability to appraise and assimilate scientific evidence into their own ongoing learning, research, and patient care.

Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences.

3. Graduate Attributes: Professional excellence & Ethics

PO 3:

Demonstrate commitment to the highest standards of professional responsibility towards patient, colleagues, society, growth of medical professional and adhere to universally accepted code of ethics.

Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate Attributes: Communication Skills.

PO 4:

Demonstrate ability to communicate effectively, respectfully, non-judgemental, empathetic manner with patients, their families and colleagues that will improve patient satisfaction ,health care and encourages participation and shared decision-making.

Demonstrate the ability to listen clearly, inform, communicate and educate patients &/ caregivers for the promotion of health, diagnosis of disease and the treatment of illness; advocate for disease prevention, wellness and the promotion of healthy lifestyles including a focus on population health

5. Graduate attributes: Leader & Member of the health care team & System

PO 5:

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members in a manner to maximize the health delivery potential of the team, considering various roles, responsibilities and competencies of the other health professionals.

Identify the self- potential, functioning ability as a team leader in primary and secondary health care settings, utilize various indicators of the health care system and to promote appropriate, low cost, ethical, fair and qualitative health delivery.

6. Graduate attributes: Life long learner

PO 6:

Demonstrate ability to acquire new knowledge, skills and reflect upon their experience to enhance personal and professional growth and apply the information in the care of the patient.

Demonstrate self-motivation and awareness to their own limitations.

Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.

7. Graduate attributes: Research Aptitude

PO7:

Demonstrate an attitude of inquiry/search/investigation ,scientific and objective effort to uncover facts**.**

8. Graduate attributes: Societal Responsibilities

PO8 :

Demonstrate accountability in fulfilling their duty for the benefit of the entire society.

9. Graduate attributes: Awareness towards Environment and sustainability

PO9 :

Demonstrates responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Objectives

a. Demonstrate good knowledge of common skin diseases, clinical manifestations, bed side investigations with special emphasis on clinical diagnosis.
b. Demonstrate comprehensive knowledge of various modes of topical therapy.
c. Describe the mode of action of commonly used dermatological drugs, their doses, side effects, toxicity, indications and contraindications and interactions.
d. Describe commonly used modes of managements including the medical and surgical procedure available for the treatment of various diseases and to offer a comprehensive plan of management for a given disorder.

Knowledge

Must Know:

1. Principles of diagnosis
2. Pyodermas
3. Scabies and pediculosis
4. Fungal infections- dermatophytosis, candidiasis
5. Papulosquamous disorders-psariasis, lichen planus, pityriaisisrosea
6. Viral infections- herpes simplex, chicken pox, herpes zoster, warts, malluscumcontagiosum
7. Dermatitis and eczema
8. Tuberculosis of the Skin
9. Pruritis, ulticaria/angioedema, drug eruptions (fixed drug eruptions, erythema multiforme, Stevens Johnson syndrome, toxic epidermal necrolysis)
10. Vesiculobullous disorders-pemphigus, Bullous Pemphigoid, Dermatitis Herpetiformis.
11. Leprosy-clinical features, diagnosis, complications and management.

12. Syphilis-primary and secondary
13. Donovanosis, chancroid, lymphogranulomavenerum, and HIV infection.
14. Gonorrohoea and Non gonococcal urethritis
15. Basic concepts of topical therapy
16. Commonly used systemic drugs-mode of action, their doses, side effects, toxicity, indications, contraindications and interactions.
17. Cosmetology, Lasers and Lights, Dermatosurgery,
18. SARS COVID-19 infection

Desirable to know:

1. Acne, alopecia, ichthyosis, vitiligo, pellagra, phrynoderma
2. Benign and malignant tumors of the skin
3. Congenital syphilis and other minor STDs.
4. Collagen vascular disorders-lupus erythematous, scleroderma, dermatomyositis.

Skills

Must have

1. History taking and examination skill to come to a clinical diagnosis
2. To demonstrate anesthesia in skin patches and to recognize thickened nerves
3. Simple Bedside Clinical tests and investigative procedures such as gram staining. KOH examination, tissue smear, Giemsa stained smear, slit skin smear for AFB.
4. To take a skin biopsy for diagnostic purposes.
5. Skills to manage common dermatological disorders and emergencies.

Desirable to know

1. Patch testing
2. Dark ground microscopy
3. HIV Counseling

Integration

COURSE CONTENT

III MBBS, PART-I

Subject: DERMATOLOGY, VENEREOLOGY & LEPROSY

Based on National Medical Commission, Competency based Undergraduate curriculum for the

Indian Medical Graduate,

1. Total Teaching hours: 30

A. Lectures: **20 hrs.**

B. Self-directed learning: **05 hrs.**

C. Practical/T/SGT: **05 hrs.**

LIST OF LECTURE/PRACT/TUT/SEM/SDL/SGT SCHEDULE - PHASE- I

DERMATOLOGY,VENEREOLOGY & LEPROSY

Sr. No	Topic	Competency No.	Integration
	Lectures		
1	Describe Structure & functions of skin with its appendages.	AN 4.2	Anatomy
2	Describe etiology,microbiology,pathogenesis,natural history,clinical features, presentations & complications of Scabies. Enumerate & describe Pharmacology of Pharmacatherapeutics used in Scabi	DR 5.1& 5.3	
3	Describe etiology, pathogenesis & diagnostic features of Pediculosis.	DR 6.1	
4	Describe etiology,microbiology,pathogenesis,clinical presentations ,diagnostic features of Dermatophytes in adults & children.Describe Pharmacology,action & adverse effects of antifungal therapy	DR 7.1 & 7.3	
5	Enumerate & describe the treatment modalities for Lichen Planus.	DR 4.2	
6	Describe the etiology,microbiology,pathogenesis,clinical presentations & diagnostic features of common Viral infections of the skin in adults & children.Enumerate & describe Pharmacology,administration & adverse reaction of Pharmacotherapies for common viral illnesses of the skin.	DR 8.1 & 8.7	
7	Identify and distinguish Herpes simplex, Herpes zoster & Varicella from other skin lesions.Identify & differentiate Scabies & Pediculosis from other skin lesions. Identify & distinguish Viral Warts & Molluscum Contagiosum from other skin lesions.	DR 8.2, 8.3,5.2, 6.2,8.4 & 8.5	
8	Enumerate the causative & the risk factors of Acne. Describe the treatment and preventive measures for various kinds of Acne.	DR 1.1 & 1.3	
9	Enumerate indications,describe the procedure & perform a Tzanck smear. Identify Candida species in Fungal scrapings & KOH mount.	DR 8.6 & 7.2	
10	Describe pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of Pyoderma.	DR 15.3	

11	Identify & distinguish Folliculitis, Impetigo & Carbuncle from other skin lesions.Identify Staphylococcus on a Gram stain. Enumerate the indications for surgical referral.Distinguish Bulla from Vesicles. Demonstrate the Tzanck test, Nikolsky sign & Bulla spread sign. Calculate the body surface area of involvement of vesiculobullous lesions.	DR 15.1, 15.2 & 15.4,13.1,13.2 & 13.3	
12	Identify & distinguish Psoriatic lesions from other causes. Demonstrate Grattage test	DR 3.1 & 3.2	
13	Enumerate the indications for and describe the various modalities of treatment of Psoriasis including topical, systemic & phototherapy.	DR 3.3	
14	Identify & distinguish Lichen Planus lesions from other causes.	DR 4.1	
15	Describe etiopathogenesis of Eczema. Classify & grade Eczema. Enumerate & describe pharmacology, indications & adverse reactions of drugs used in treatment of Eczema.	DR 12.1,12.3 & 12.4	
16	Enumerate, identify & describe various cutaneous findings in vitamin A, vitamin B complex, vitamin C & Zinc deficiency. Enumerate the cutaneous features of Type 2 Diabetes & Hypo/ Hyperthyroidism.	DR 17.1,17.2,17.3 ,17.4,18.1 & 18.2	
17	Identify Eczema and differentiate it from Lichenification & Define Erythroderma. Enumerate & causes of Erythroderma. Exfoliative dermatitis. Identify & distinguish Fixed Drug Eruptions & Stevens-Johnson Syndrome from other skin lesions. Identify & distinguish skin lesions of SLE & Raynaud's phenomenon.	DR 12.2,12.5,12.6 , 12.7, 16.1 & 16.2	
18	Describe the etiology, pathogenesis & clinical precipitating features & classification of Urticaria & Angioedema. Enumerate the indications & describe the pharmacology, indications & adverse reactions of drugs used in Urticaria & Angioedema.	DR 14.1 & 14.5	
19	Identify & grade various common types of Acne. Identify &distinguish Urticaria from other skin lesions. Demonstrate Dermographism. Identify &distinguish Angioedema from other skin lesions	DR 1.2,14.2,14.3 & 14.4	
20	Identify & differentiate Vitiligo from other causes of hypopigmented lesions.Describe the treatment of Vitiligo	DR 2.1 & 2.2	
21	Classify,describe the epidemiology,etiology,microbiology,pathogenesis,clinical presentations & diagnostic features of Deprosy.Describe pharmacology,administration & adverse reactions of pharmacotherapies for various classes of Leprosy based on National guidelines.Describe treatment of leprosy based on WHO guidelines.	DR 9.1,9.5,9.6	
22	numerate & describe complications of Leprosy and its management,including understanding disability & stigma. Enumerate,describe & identify Lepra reactions & supportive measures & therapy of Lepra reactions.	DR 9.7 & 9.4	
23	Demonstrate clinical features of leprosy including an appropriate neurologic examination.Observe performance of a Slit skin smear in patients with Leprosy	DR 9.2 & 9.3	
24	Identify and classify Syphilis based on presentation & clinical manifestations.Enumerate & describe pharmacology & adverse reactions of pharmacotherapies for Syphilis.Describe prevention of congenital Syphilis	DR 10.1,10.3 & 10.4	
25	Identify Spirochaete in a dark ground microscopy. Identify & distinguish dermatological manifestations of HIV, its complications, opprtunistic infections & adverse reactions	DR 10.2 & 11.2	
26	Describe etiology,diagnostic clinical features & differential diagnosis of Non syphilitic sexually transmitted diseases(Chancroid,Donovanosis & LGV). Describe pharmacology of drugs used in treatment of Non syphilitic STDs.	DR 10.6,10.7 & 10..8	

PHASE II - CLINICAL POSTING (02 wks)

Lecture – Cum – Demonstration, at appropriate places

Sr.No.	Topics
1	History Taking- General
2	History Taking In Leprosy
3	History Taking In STD
4	Investigation in Dermatology
5	Bacterial & Fungal Infection
6	Vesicobullous Disorders
7	Psoriasis & Erythroderma
8	Vasculitis
9	Disorders of Hair
10	Disorders of Nail
11	Vitiligo
12	Lichen Planus
13	Adverse Drug Reactions
14	HIV

PHASE III – PART I CLINICAL POSTING (02 wks)

Sr. No.	Topics
1	Primary and secondary skin lesions
2	Cutaneous bacterial infections
3	Cutaneous fungal infections
4	Cutaneous viral infections
5	Scabies and Pediculosis
6	Acne vulgaris and Rosacea
7	Psoriasis and Lichen Planus
8	Pigmentary disorders
9	Urticaria and Angioedema
10	Disorders of Hair and Nails
11	Eczema and Contact dermatitis
12	Bedside investigations in dermatology

PHASE III – PART II CLINICAL POSTING (02 wks)

Sr. No.	Topics
1	Primary and secondary skin lesions
2	Cutaneous bacterial infections
3	Cutaneous fungal infections
4	Cutaneous viral infections
5	Scabies and Pediculosis
6	Acne vulgaris and Rosacea
7	Psoriasis and Lichen Planus
8	Pigmentary disorders
9	Urticaria and Angioedema
10	Disorders of Hair and Nails
11	Eczema and Contact dermatitis
12	Bedside investigations in dermatology

D.Y. PATIL EDUCATION SOCIETY

[Deemed to be University], Kolhapur

Re-accredited by NAAC with 'A' Grade