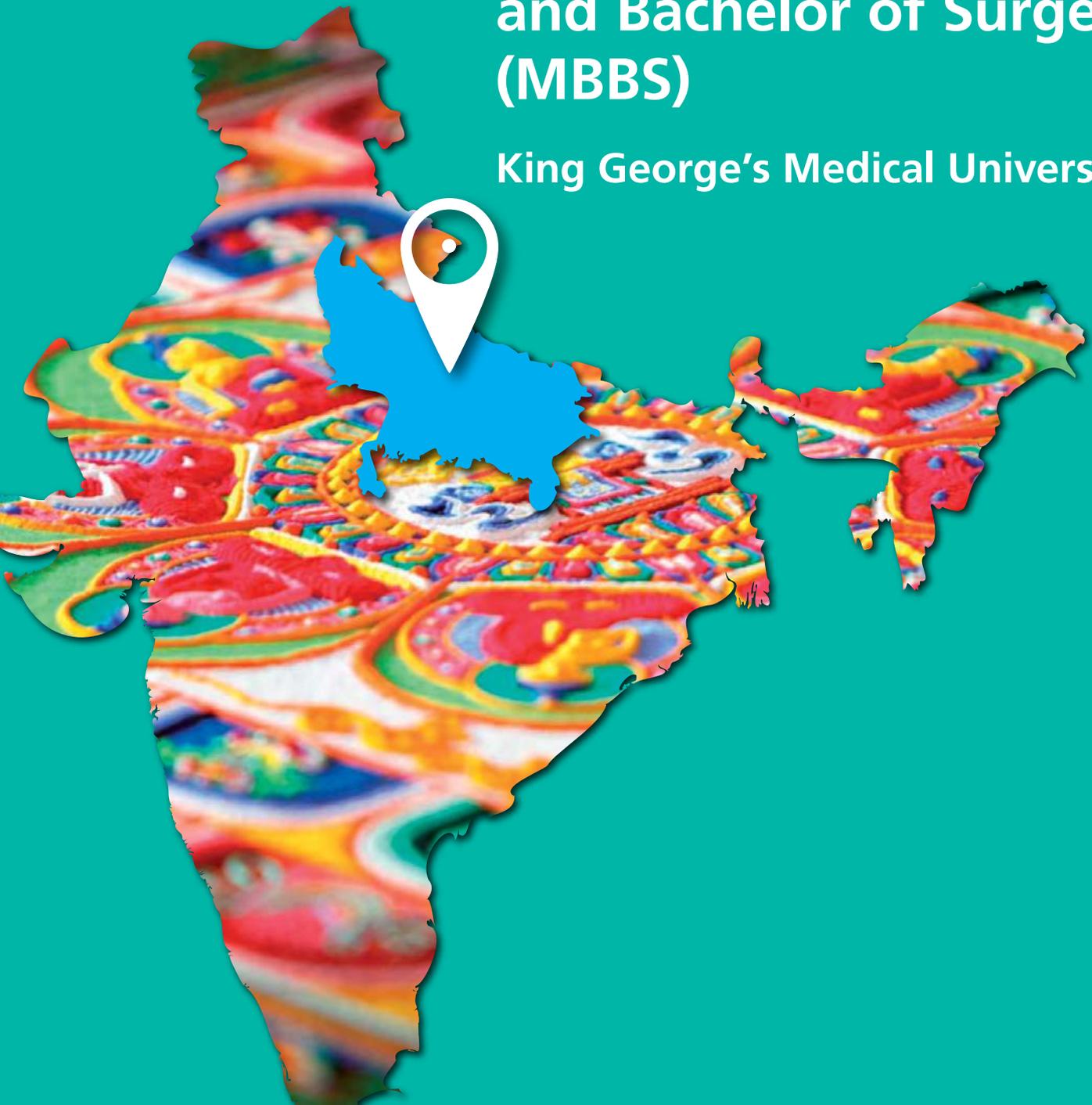


# Tuning

India

**Degree Programme  
Bachelor of Medicine  
and Bachelor of Surgery  
(MBBS)**

**King George's Medical University**



**Degree Programmes Bachelor of Medicine and Bachelor of Surgery (MBBS).  
King George's Medical University**

The degree programme deals with the length, level and definition of the programme in terms of competences and learning outcomes; it also analyses the methodologies for developing the appropriate strategy of teaching, learning and assessing those competences as well as setting up the internal systems for assuring programme quality.

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## Name and level of the programme

### Bachelor of Medicine and Bachelor of Surgery (MBBS)

The existing degree programme is being revised by the addition of a module on Medical Humanities.

Purpose of the programme: Graduate medical curriculum is oriented towards training students to undertake the responsibilities of a physician of first contact who is capable of looking after the preventive, promotive, curative & rehabilitative aspect of medicine.

Level and Duration: It is Bachelor level programme, its total duration is 66 months.

Eligibility: Students who have completed 17 years of age, passed higher secondary examination with physics, chemistry, biology and English and qualified National Eligibility-cum-Entrance Test are eligible to apply for the course. Selection process is through a transparent single window system.

Progression: The programme equips the graduate to function as a first contact physician. The graduates can become specialists by pursuing masters/ post graduate diploma courses in various medical and surgical specialities. Post doctoral programs DM (Doctorate in Medicine)/ Mch (Magister Chirurgiae) can be done after completing the masters degree.

This template describes an elective module added in this program (MBBS). This module is on concepts of Biomedical Ethics. It will begin in the Foundation Course, as the students enter the program, and all the students will take it. Thereafter it will continue as an elective in MBBS curriculum for those who opt for it.

## The social needs of the programme

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The Indian undergraduate curriculum is nationally regulated by the Medical Council of India which defines the degree profile, competences, learning outcomes etc. It was revised in 2019 and made to ensure that students achieve certain competencies so that we create competent physicians of first contact. This will make our program at par with international norms. To be nationally as well as internationally relevant, it is essential that the students have ethical patient care and research practices. In India, MBBS program is of 4.5 years and divided in Hence they must be taught principles and practice of ethics as a standalone topic embedded as an elective within their medical curriculum. Principles of ethics will be imbibed during the foundation course and during early clinical exposure. This will then be taught as an elective in Phase 3 of MBBS course (Block 1). (ref: <https://www.nmc.org.in/wp-content/uploads/2020/08/Electives-Module-20-05-2020.pdf>). Hence there is a necessity for a module in **"Biomedical Ethics"**.

## Future fields, sectors of employment/occupation of graduates

There is a great demand for medical doctors in India. The World Health Organization recommends a doctor patient ratio of 1:1000. India is much below this. Hence all the undergraduates with a medical degree will either get employment in the public or private sector or can be self-employed. Several hospitals employ a large number of medical students, trainees and interns hoping to meet their staffing needs for physicians. This is true in the light of COVID-19 pandemic.

Most of the medical graduates opt for higher post graduate degrees. Selection for the postgraduate course is through a national competitive examination. The number of seats for post-graduation is less than the number of undergraduates who pass out. Also, merit in the postgraduate examination determines whether or not one gets the subject of his or her choice. So, at the end of all this, a proportion of undergraduates are unable to pursue postgraduate courses.

## 4

# Description of the degree profile in terms of generic and subject-specific competences

### 4.1. Competences and their learning outcomes

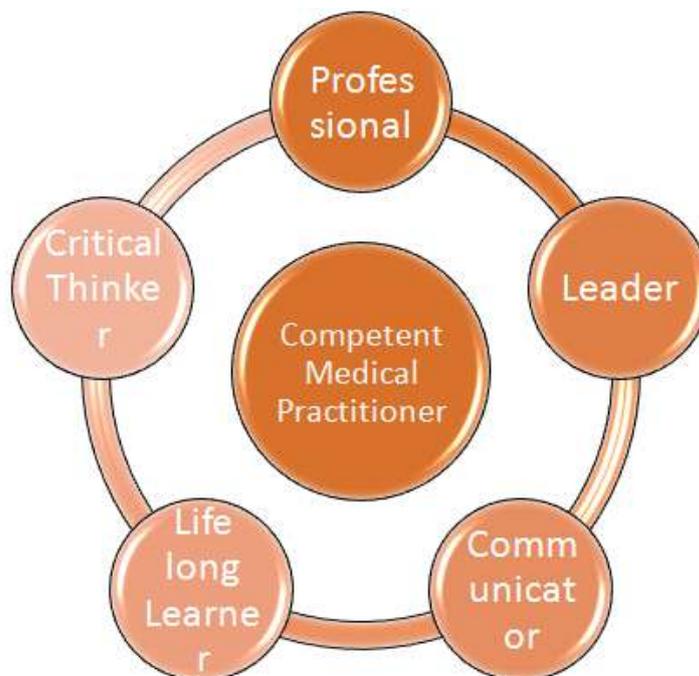
Competencies		Learning outcomes
Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with Compassion ( <b>Specific</b> )	PO1	Differentiate between normal and abnormal human structure, function and development from a molecular, cellular, biologic, clinical, behavioural and social perspective.
	PO2	Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is complete, relevant and contextual.
	PO3	Demonstrate ability to perform a physical examination that is complete, relevant and contextual.
	PO4	Demonstrate effective clinical problem solving, judgment and ability to interpret and integrate available data in order to address patient problems, generate differential diagnoses and develop individualized management plans that include preventive, promotive and therapeutic goals
	PO5	Demonstrate ability to choose and interpret appropriate diagnostic tests, prescribe and safely administer appropriate therapies.
	PO6	Demonstrate ability to provide a continuum of care at the primary and/or secondary level and appropriately refer patients who may require specialized or advanced tertiary care.
	PO7	Demonstrate knowledge of medico-legal, societal, ethical and humanitarian principles that influence health care and maintain accurate, clear and appropriate record of the patient in conformation with legal and administrative frame works.
	PO8	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.
	PO9 CLINICIAN	Demonstrate familiarity with basic, clinical and translational research as it applies to the care of the patient.

Competencies		Learning outcomes
Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession <b>(Specific)</b>	PO10	Practice selflessness, integrity, responsibility, accountability and respect.
	PO11	Abide by prescribed ethical, humanitarian and legal codes of conduct and practice.
	PO12	Demonstrate ability to recognize and manage ethical and professional conflicts.
	PO13	Respect and maintain professional boundaries between patients, colleagues and society.
	PO14	Demonstrate a commitment to the growth of the medical profession as a whole.
Leader and member of the health care team and system <b>(Specific)</b>	PO15	Work effectively and appropriately with colleagues in an inter-professional health care team and function effectively, responsibly and appropriately as a health care team leader in primary and secondary health care settings.
	PO16	Participate effectively in measures that will advance quality of health care and patient safety within the health care system and educate other members of the team.
	PO17	Access and utilize components of the health care system and health delivery in a manner that is appropriate, cost effective, fair and in compliance with the national health care priorities and policies, as well as be able to collect, analyze and utilize health data.
	PO18	Recognize and advocate health promotion, disease prevention and health care quality improvement through prevention and early recognition in a) life style diseases and b) cancers, in collaboration with other members of the health care team.
Communicator with patients, families, colleagues and community <b>(Specific)</b>	PO19	Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients in a language that the patient understands and in a manner that will improve patient satisfaction and health care outcomes.
	PO20	Demonstrate ability to establish professional relationships with patients and families that are positive, understanding, humane, ethical, empathetic, and trustworthy.
	PO21	Demonstrate ability to communicate with patients in a manner respectful of patient's preferences, values, prior experience, beliefs, confidentiality, privacy and shared decision-making.
Lifelong learner committed to continuous improvement of skills and knowledge <b>(Generic)</b>	PO22	Demonstrate ability to perform an objective self-assessment of knowledge and skills, continue learning, refine existing skills and acquire new skills and apply to the care of the patients.
	PO23	Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.
	PO24	Demonstrate ability to search (including through electronic means), and critically evaluate the medical literature and apply the newly gained knowledge in the care of the patient.
	PO25	Be able to identify and select an appropriate career pathway that is professionally rewarding and personally fulfilling.
Critical Thinker <b>(Generic)</b>	PO26	Demonstrate the ability to do research
	PO27	Demonstrate problem solving capacity
	PO28	Demonstrate higher order thinking skill

Competencies	Learning outcomes
Competent Medical Practitioner who understands and provides preventive, promotive, curative, palliative and holistic care with compassion. <b>(Specific)</b>	Ability to apply knowledge in practical situations, make reasoned decisions
	Elicit, evaluate and interpret patients history, medical records and examination/diagnostic test findings to exclude differential diagnosis
	Perform relevant physical examination and perform basic clinical procedures independently and refer patients for specialized and/or advanced care
Professional who is committed to excellence, is ethical, responsive and accountable to patients community and the profession <b>(Specific)</b>	Practice professionalism
	Apply ethical and humanitarian principles that influence health care
	Integrate health care policies and guidelines into the routine clinical practice
Leader and member of the health care team	Ability to manage crisis and stress effectively, maintain emotional stability and work as a team
	Ability to plan and manage time efficiently
Communicator with patients, families, colleagues and community <b>(Generic)</b>	Communicate compassionately with patients and care givers
Lifelong learner committed to continuous improvement of skills and knowledge	Ability to be a self-motivated life-long learner
	Contribute towards the growth of the medical profession
Critical thinker <b>(Generic)</b>	Ability to be a reflective practitioner
	Acquire problem solving capacity and higher order thinking skill

## Link of competences (degree profile) to the agreed meta-profile

### Metaprofile of Indian Medical Graduate



On comparing with the meta profile given above, the elective proposed addresses the **Generic competencies** like 1. Communicator with patients, families, colleagues and community and 2. Critical thinker as well as **specific competencies** like 1. Competent Medical Practitioner who understands and provides preventive, promotive, curative, palliative and holistic care with compassion and 2. Professional who is committed to excellence, is ethical, responsive and accountable to patients' community and the profession.

Thus, the proposed elective will strengthen the meta profile of the existing MBBS program as it will emphasize on critical thinking, lifelong learning, communication, leadership and

professionalism of medical graduates. Hence immense importance should be given to introducing biomedical ethics into the MBBS degree programme, as an elective for now and later could be incorporated into the main programme as a revision after fine tuning it with feedbacks from stakeholders.

## Programme-Level Learning Outcomes (minimum 1 - maximum 3 per competence/ meta-profile element)

### Competent Indian Medical Graduate

Professional  
Leader  
Communicator  
Lifelong learner  
Critical thinker

Competence/Meta-profile element and the competences it comprises	Generic or Subject-Specific?	Definition of the competence/the meta-profile element – how is it understood in your programme?	Programme-Level Learning Outcomes (minimum 1 - maximum 3 per competence/ meta-profile element)
1. Competent medical practitioner	Specific	Competent Medical Practitioner who understands and provides preventive, promotive curative, palliative and holistic care with compassion.	LO1. Ability to apply knowledge in practical situations, make reasoned decisions and practice evidence based medicine LO2. Elicit, evaluate and interpret patient's history, medical records and examination/diagnostic test findings to exclude differential diagnosis LO3. Perform relevant physical examination and perform basic clinical procedures independently and refer patients for specialized and/or advanced care
2. Professional	Generic	Professional who is committed to excellence, is ethical, responsive and accountable to patients community and the profession	LO4. Practice professionalism LO5. Apply ethical and humanitarian principles that influence health care LO6. Integrate health care policies and guidelines into the routine clinical practice
3. Leader	Generic	Leader and member of the health-care team and system	LO7. Ability to manage crisis and stress effectively, maintain emotional stability and work as a team LO8. Ability to plan and manage time efficiently
4. Communicator	Generic	Communicates with patients, families, colleagues and community	LO9. Communicate compassionately with patients and caregivers
5. Critical thinker	Generic	Ability to do research, be a reflective practitioner by acquiring problem solving capacity and higher order thinking skill	LO10. Ability to do research and be a reflective practitioner LO11. Acquire problem solving capacity and higher order thinking skill
6. Lifelong learner	Generic	Lifelong learner committed to continuous improvement of skills and knowledge	LO12. Ability to be a self-motivated life-long learner LO13. Contribute towards the growth of the medical profession

## 6

# Structure of the programme: units/courses/modules with their learning outcomes and learning, teaching and assessment strategies

The existing MBBS program has been revised to include an elective course on Biomedical Ethics (No. 24). This is in ADDITION to the Foundation course (no. 21 ) and AETCOM module (no. 22 and link to module is pasted ). Those who want to have further in depth knowledge about biomedical ethics will opt for the elective course no. 24. Course 24 will be offered after completion of Phase 1 (of 12 months), Phase 2 (of 12 months) and end of Phase 3 (12 months) of MBBS course. Elective 24 will be offered after 36 months of MBBS course and in the 37 or 38th months, which have been identified for the electives. The revision of this program is given in Course name “concepts of biomedical Ethics” and code 24.

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
1. Human Anatomy	AN1. Demonstrate understanding of the gross and microscopic structure and development of human body, AN2. Demonstrate comprehension of the normal regulation and integration of the functions of the organs and systems on basis of the structure and genetic pattern. AN3. Demonstrate understanding of the clinical correlation of the organs and structures involved and interpret the anatomical basis of the disease presentations.	Didactic lecture, dissection practical classes and small group teaching	Written exam Practical exam Viva voce
2. Physiology	PY1. Demonstrate understanding of the normal functioning of the organs and organ systems of the body, PY2. Demonstrate comprehension of the normal structure and organization of the organs and systems on basis of the functions. PY3. Understanding of age-related physiological changes in the organ functions that reflect normal growth and development, PY4. Understand the physiological basis of diseases.	Didactic lecture, practical classes and small group teaching	Written exam Practical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
3. Biochemistry	BI1. Demonstrate understanding of biochemical and molecular processes involved in health and disease BI2. Demonstrate knowledge of importance of nutrition in health and disease, BI3. Demonstrate understanding of biochemical basis and rationale of clinical laboratory tests, and demonstrate ability to interpret these in the clinical context.	Didactic lecture, practical classes and small group teaching	Written exam Practical exam Viva voce
1. Pathology	PA1. Comprehension of the causes, evolution and mechanisms of diseases, PA2. Knowledge of alterations in gross and cellular morphology of organs in disease states, PA3. Ability to correlate the natural history, structural and functional changes with the clinical manifestations of diseases, their diagnosis and therapy,	Didactic lecture, practical classes and small group teaching	Written exam Practical exam Viva voce
2. Microbiology	MI1. Demonstrate understanding of role of microbial agents in health and disease MI2. Demonstrate understanding of the immunological mechanisms in health and disease MI3. Demonstrate ability to correlate the natural history, mechanisms and clinical manifestations of infectious diseases as they relate to the properties of microbial agents, MI4. Demonstrate knowledge of the principles and application of infection control measures MI5. Demonstrate understanding of the basis of choice of laboratory diagnostic tests and their interpretation, antimicrobial therapy, control and prevention of infectious diseases.	Didactic lecture, practical classes and small group teaching	Written exam Practical exam Viva voce
3. Pharmacology	PH1: Demonstrate knowledge about essential and commonly used drugs and an understanding of the pharmacologic basis of therapeutics, PH2. Demonstrate ability to select and prescribe medicines based on clinical condition and the pharmacologic properties, efficacy, safety, suitability and cost of medicines for common clinical conditions of national importance. PH 3. Demonstrate knowledge of pharmacovigilance, essential medicine concept and sources of drug information and industry-doctor relationship, PH 4. Demonstrate ability to counsel patients regarding appropriate use of prescribed drug and drug delivery systems.	Didactic lecture, practical classes and small group teaching	Written exam Practical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
4. Forensic Medicine	<p>FM1. Demonstrate understanding of medico-legal responsibilities of physicians in primary and secondary care settings.</p> <p>FM2. Demonstrate understanding of the rational approach to the investigation of crime, based on scientific and legal principles.</p> <p>FM3. Demonstrate ability to manage medical and legal issues in cases of poisoning / overdose,</p> <p>FM4. Demonstrate understanding the medico-legal framework of medical practice and medical negligence,</p> <p>FM5. Demonstrate understanding of codes of conduct and medical ethics.</p>	Didactic lecture, practical classes and small group teaching	Written exam Practical exam Viva voce
5. Otorhinolaryngology	<p>EN1. Demonstrate knowledge of the common Otorhinolaryngological (ENT) emergencies and problems,</p> <p>EN2. Demonstrate ability to recognize, diagnose and manage common ENT emergencies and problems in primary care setting,</p> <p>EN3. Demonstrate ability to perform simple ENT procedures as applicable in a primary care setting,</p> <p>EN4. Demonstrate ability to recognize hearing impairment and refer to the appropriate hearing impairment rehabilitation programme.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
6. Ophthalmology	<p>OP1. Demonstrate knowledge of common eye problems in the community</p> <p>OP2. Recognize, diagnose and manage common eye problems and identify indications for referral,</p> <p>OP3. Demonstrate ability to recognize visual impairment and blindness in the community and implement National programmes as applicable in the primary care setting.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
7. Community Medicine	<p>CM1. Demonstrate understanding of physical, social, psychological, economic and environmental determinants of health and disease,</p> <p>CM2. Demonstrate ability to recognize and manage common health problems including physical, emotional and social aspects at individual family and community level in the context of National Health Programmes,</p> <p>CM3. Demonstrate ability to Implement and monitor National Health Programmes in the primary care setting,</p> <p>CM4. Demonstrate knowledge of maternal and child wellness as they apply to national health care priorities and programmes,</p> <p>CM5. Demonstrate ability to recognize, investigate, report, plan and manage community health problems including malnutrition and emergencies.</p>	Didactic lecture, practical classes, community visits, clinical classes and small group teaching	Written exam Practical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
8. Gen Medicine	<p>IM1. Demonstrate understanding of the patho-physiologic basis, epidemiological profile, signs and symptoms of disease and their investigation and management,</p> <p>IM2. Competently interview and examine an adult patient and make a clinical diagnosis,</p> <p>IM3. Appropriately order and interpret laboratory tests,</p> <p>IM4. Initiate appropriate cost-effective treatment based on an understanding of the rational drug prescriptions, medical interventions required and preventive measures,</p> <p>IM 5. Follow up of patients with medical problems and refer whenever required,</p> <p>IM 6. Communicate effectively, educate and counsel the patient and family,</p> <p>IM7. Manage common medical emergencies and refer when required,</p> <p>IM8. Independently perform common medical procedures safely and understand patient safety issues.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
9. Gen. Surgery	<p>SU1. Demonstrate understanding of the structural and functional basis, principles of diagnosis and management of common surgical problems in adults and children,</p> <p>SU2. Demonstrate ability to choose, calculate and administer appropriately intravenous fluids, electrolytes, blood and blood products based on the clinical condition,</p> <p>SU3. Demonstrate ability to apply the principles of asepsis, sterilization, disinfection, rational use of prophylaxis, therapeutic utilities of antibiotics and universal precautions in surgical practice,</p> <p>SU4. Demonstrate knowledge of common malignancies in India and their prevention, early detection and therapy,</p> <p>SU5. Demonstrate ability to perform common diagnostic and surgical procedures at the primary care level,</p> <p>SU6. Demonstrate ability to recognize, resuscitate, stabilize and provide Basic &amp; Advanced Life Support to patients following trauma,</p> <p>SU7. Demonstrate ability to administer informed consent and counsel patient prior to surgical procedures,</p> <p>SU8. Demonstrate commitment to advancement of quality and patient safety in surgical practice.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
10. Paediatrics	<p>PE1. Demonstrate ability to assess and promote optimal growth, development and nutrition of children and adolescents and identify deviations from normal,</p> <p>PE2. Demonstrate ability to recognize and provide emergency and routine ambulatory and First Level Referral Unit care for neonates, infants, children and adolescents and refer as may be appropriate,</p> <p>PE3. Demonstrate ability to perform procedures as indicated for children of all ages in the primary care setting,</p> <p>PE4. Demonstrate ability to recognize children with special needs and refer appropriately,</p> <p>PE5. Demonstrate ability to promote health and prevent diseases in children,</p> <p>PE6. Demonstrate ability to participate in National Programmes related to child health and in conformation with the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) Strategy,</p> <p>PE7. Demonstrate ability to communicate appropriately and effectively.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
11. Obstetrics and Gynaecology	<p>OG1. Demonstrate ability to Provide peri-conceptual counseling and antenatal care,</p> <p>OG2. Identify high-risk pregnancies and refer appropriately,</p> <p>OG3. Conduct normal deliveries, using safe delivery practices in the primary and secondary care settings,</p> <p>OG4. Prescribe drugs safely and appropriately in pregnancy and lactation,</p> <p>OG5. Diagnose complications of labor, institute primary care and refer in a timely manner,</p> <p>OG6. Perform early neonatal resuscitation,</p> <p>OG7. Provide postnatal care, including education in breast-feeding,</p> <p>OG8. Counsel and support couples in the correct choice of contraception,</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
12. Orthopedics	<p>OR1. Demonstrate ability to recognize and assess bone injuries, dislocation and poly-trauma and provide first contact care prior to appropriate referral,</p> <p>OR2. Demonstrate knowledge of the medico-legal aspects of trauma,</p> <p>OR3. Demonstrate ability to recognize and manage common infections of bone and joints in the primary care setting,</p> <p>OR4. Recognize common congenital, metabolic, neoplastic, degenerative and inflammatory bone diseases and refer appropriately,</p> <p>OR5. Demonstrate ability to perform simple orthopaedic techniques as applicable to a primary care setting,</p> <p>OR6. Demonstrate ability to recommend rehabilitative services for common orthopaedic problems across all ages.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
13. T.B. and Chest	<p>CT1. Demonstrate knowledge of common chest diseases, their clinical manifestations, diagnosis and management,</p> <p>CT2. Demonstrate ability to recognize, diagnose and manage pulmonary tuberculosis as contemplated in National Tuberculosis Control programme,</p> <p>CT3. Demonstrate ability to manage common respiratory emergencies in primary care setting and refer appropriately.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
14. Psychiatry	<p>PS1. Demonstrate ability to promote mental health and mental hygiene,</p> <p>PS2. Demonstrate knowledge of etiology (bio-psychosocial-environmental interactions), clinical features, diagnosis and management of common psychiatric disorders across all ages,</p> <p>PS3. Demonstrate ability to recognize and manage common psychological and psychiatric disorders in a primary care setting, institute preliminary treatment in disorders difficult to manage, and refer appropriately,</p> <p>PS4. Demonstrate ability to recognize alcohol/ substance abuse disorders and refer them to appropriate centers,</p> <p>PS5. Demonstrate ability to assess risk for suicide and refer appropriately,</p> <p>PS6. Demonstrate ability to recognize temperamental difficulties and personality disorders,</p> <p>PS7. Assess mental disability and rehabilitate appropriately,</p> <p>PS8. Demonstrate understanding of National and State programmes that address mental health and welfare of patients and community.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
15. Skin and STD	<p>DR1. Demonstrate understanding of the principles of diagnosis of diseases of the skin, hair, nail and mucosa,</p> <p>DR2. Demonstrate ability to recognize, diagnose, order appropriate investigations and treat common diseases of the skin including leprosy in the primary care setting and refer as appropriate,</p> <p>DR3. Demonstrate a syndromic approach to the recognition, diagnosis, prevention, counseling, testing and management of common sexually transmitted diseases including HIV based on national health priorities,</p> <p>DR4. Demonstrate ability to recognize and treat emergencies including drug reactions and refer as appropriate.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
16. Anaesthesia	<p>AS1. Describe and discuss the pre-operative evaluation, assessing fitness for surgery and the modifications in medications in relation to anaesthesia / surgery,</p> <p>AS2. Describe and discuss the roles of Anaesthesiologist as a peri-operative physician including pre-medication, endotracheal intubation, general anaesthesia and recovery (including variations in recovery from anaesthesia and anaesthetic complications),</p> <p>AS3. Describe and discuss the management of acute and chronic pain, including labour analgesia,</p> <p>AS4. Demonstrate awareness about the maintenance of airway in children and adults in various situations,</p> <p>AS5. Demonstrate the awareness about the indications, selection of cases and execution of cardiopulmonary resuscitation in emergencies and in the intensive care and high dependency units,</p> <p>AS6. Choose cases for local / regional anaesthesia and demonstrate the ability to administer the same,</p> <p>AS7. Discuss the implications and obtain informed consent for various procedures and to maintain the documents.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce
17. Radiodiagnosis & Radiotherapy	<p>RA1. Demonstrate understanding of indications for various radiological investigations in common clinical practice,</p> <p>RA2. Demonstrate awareness of the ill effects of radiation and various radiation protective measures to be employed,</p> <p>RA3. Demonstrate ability to identify abnormalities in common radiological investigations.</p> <p>RT1. Demonstrate understanding of clinical presentations of various cancers,</p> <p>RT2. Demonstrate understanding of appropriate treatment modalities for various types of malignancies,</p> <p>RT3. Demonstrate understanding of principles of radiotherapy and techniques.</p>	Didactic lecture, clinical classes and small group teaching	Written exam Clinical exam Viva voce

Course/paper (name and code)	Course/paper learning outcomes	Learning and teaching activities related to each course/paper learning outcome	Assessment activities (formative and summative) related to each course/paper learning outcome
18. Foundation course	<p>FC1 Demonstrate familiarity with the program, profession, institution, health care system, ethics and professional conduct</p> <p>FC2 Demonstrate ability to provide first aid and Basic life support</p> <p>FC3 Demonstrate familiarity with organisational skills, IT skill, language and communication skills needed in the program</p>	Lectures, small group discussions, workshops, field visits.	Reflective writing, log book, OSPE
19. AETCOM ( <a href="https://www.nmc.org.in/wp-content/uploads/2020/01/AETCOM_book.pdf">https://www.nmc.org.in/wp-content/uploads/2020/01/AETCOM_book.pdf</a> )	<p>AE1. Demonstrate the ability to apply principles of bioethics and law as they apply to medical practice and Research</p> <p>AE2 Demonstrate the ability to understand and apply the principles of system based care as they relate to the care of the patient,</p> <p>AE3 Demonstrate the ability to understand and apply empathy and other human values to the care of the patient,</p> <p>AE4 Demonstrate the ability to communicate effectively with patients, families, colleagues and other health care professionals,</p> <p>AE5 Demonstrate the ability to understand the strengths and limitations of alternative systems of medicine,</p> <p>AE6 Demonstrate the ability to respond to events and issues in a professional, considerate and humane fashion,</p> <p>AE7 Demonstrate the ability to translate learning from the humanities in order to further his / her professional and personal growth.</p>	small group discussions, patient care scenarios, workshop, seminars, role plays, lectures	Written exam Clinical exam Viva voce reflective writing
20. Early Clinical exposure	<p>ECE1 Demonstrate the ability to understand the relevance of basic sciences in diagnosis, patient care and treatment,</p> <p>ECE2 Demonstrate the ability to relate to experience of patients as a motivation to learn,</p> <p>ECE3 Demonstrate ability to recognize attitude, ethics and professionalism as integral to the doctor-patient relationship,</p> <p>ECE4 Demonstrate ability to understand the socio-cultural context of disease through the study of humanities.</p>	Clinical charts, case discussions, hospital visits	Written exam Clinical exam Viva voce, reflective writing
21. Concepts of Biomedical Ethics - <b>THIS IS A NEW ADDITION AND REVISION TO THE EXISTING PROGRAM</b>	<p>BE 1 Demonstrate the understanding of basic concepts of biomedical medical ethics</p> <p>BE 2 Demonstrate the understanding of principles of biomedical ethics</p> <p>BE 3 Demonstrate understanding of principles of professionalism</p> <p>BE 4 Demonstrate an understanding of role of ethics in professional growth</p>	Lectures, small group teaching, small group discussions, Self directed learning, reflective writing	Participation in group activities, Written exam, protocol writing, research project, Reflective writing

# 7

## Length of the programme and student workload

The length of the module (Code 24) in the program will be of a total of 90 hours of which 30 hours are in- class and 60 hours outside the classroom. It will be taught in Phase 3.1 (that is of the MBBS course in 4 weeks

On successful completion of the module, certificates will be awarded to the students.

Phase	Subjects taught	Duration	Examination
First Professional MBBS	Foundation Course (1 month) with Basic medical research unit 1 Human Anatomy, Physiology & Biochemistry, Introduction to Community Medicine Early Clinical Exposure Attitude, Ethics, and Communication Module	14 months	University Phase I examination Human Anatomy, Physiology & Biochemistry,
Second Professional MBBS	Pathology, Microbiology, Pharmacology, Forensic Medicine and Toxicology, Introduction to clinical subjects including Community Medicine Basic medical research Unit 2 Basic Medical research Clinical postings Attitude, Ethics & Communication Module (AETCOM)	12 months	University Phase II examination Pathology, Microbiology, Pharmacology,
Third Professional MBBS Part I	General Medicine, General Surgery, Obstetrics & Gynecology, Pediatrics, Orthopedics, Dermatology, Psychiatry, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Respiratory medicine, Radiodiagnosis & Radiotherapy, Anesthesiology Basic Medical Research Unit 3 Clinical subjects /postings • Attitude, Ethics & Communication Module (AETCOM)	13 months	University Phase III Part 1 examination Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine
Electives	Electives, Skills and assessment	2 months	
Third Professional MBBS Part II	General Medicine, Pediatrics, General Surgery, Orthopedics, Obstetrics and Gynecology including Family welfare and allied specialties Basic Medical Research Unit 4 Clinical postings/subjects Attitude, Ethics & Communication Module (AETCOM)	13 months	University Phase III Part 2 examination General Medicine (Including Psychiatry), Pediatrics, General Surgery (Including Anesthesiology), Orthopedics, Obstetrics and Gynecology

## ECTS Credits

				Students' workload hours				
Year	Semester	Course code	Course	Contact hours (Guided Learning, face to face activities, lectures, labs, tutorials, etc)	Independent work (self-learning, non-face-to-face activities, revision, homework, etc)	Others: Continuous Assessment (Test, Quiz, Final Exam)	Total Students' Workload (F+G+H), hours	ECTS Credits (I/30)
<b>Foundation Course</b>								
1 month	1	FC	Foundation Course	160	60	15	235	8
<b>Phase 1</b>								
13 months	1	AN	Anatomy	635	550	25	1210	40
	1	PY	Physiology	95	400	25	920	31
	1	BI	Biochemistry	250	200	25	475	16
	1	CM	Community Medicine	47	50	5	102	3
	1	AETCOM	Attitude Ethics and Communication	30	20	4	54	2
<b>Phase 2</b>								
2	12 months	PA	Pathology	230	350	25	605	20
2		PH	Pharmacology	230	350	25	605	20
2		MI	Microbiology	190	300	25	515	17
2		CM	Community Medicine	105	80	5	190	6
2		FM	Forensic Medicine	40	50	5	95	3
2		AETCOM	Attitude Ethics and Communication	25	18	4	47	2
2		IM	General Medicine	80	45	5	130	4
2		SU	General Surgery	80	45	5	130	4
2		OG	O&G	80	45	5	130	4
2		PE	Pediatrics	27	10	3	40	1
2		OR	Orthopedics	27	10	3	40	1
2		EN	ENT	57	20	3	80	3
2		OP	Ophthalmology	57	20	3	80	3
2		RM	Respiratory Medicine	27	10	3	40	1
2		PS	Psychiatry	27	10	3	40	1
2		RD	Radiology	27	10	3	40	1
2	DR	Dermatology	27	10	3	40	1	

LENGTH OF THE PROGRAMME AND STUDENT WORKLOAD

				Students' workload hours				
Year	Semester	Course code	Course	Contact hours (Guided Learning, face to face activities, lectures, labs, tutorials, etc)	Independent work (self-learning, non-face-to-face activities, revision, homework, etc)	Others: Continuous Assessment (Test, Quiz, Final Exam)	Total Students' Workload (F+G+H), hours	ECTS Credits (I/30)
<b>Phase 3 Part 1</b>								
3	13 months	IM	General Medicine	127	90	5	222	7
3		SU	General Surgery	127	90	5	222	7
3		OG	O&G	127	90	5	222	7
3		PE	Pediatrics	107	70	5	182	6
3		OR	Orthopedics	102	60	5	167	6
3		FM	Forensic Medicine	60	60	10	130	4
3		CM	Community Medicine	190	150	18	358	12
3		DR	Dermatology	53	30	4	87	3
3		PS	Psychiatry	63	40	4	107	4
3		RM	Respiratory medicine	18	15	2	35	1
3		EN	ENT	120	90	6	216	7
3		OP	Ophthalmology	145	100	6	251	8
3		RD	Radiology	18	12	2	32	1
3		AS	Anesthesiology	33	20	5	58	2
3		AETCOM	Attitude Ethics and Communication	19	12	3	34	1
3		CA	Casualty	33	5	3	51	2
3	DE	Dentistry	15	7	3	25	1	
<b>Electives</b>								
4	2 months	EL	Electives	180	100	20	300	10
<b>Phase 3 Part 2</b>								
4	13 months	IM	General Medicine	387	280	25	692	23
4		SU	General Surgery	387	280	25	692	23
4		OG	O&G	387	280	25	692	23
4		PE	Pediatrics	110	105	6	221	7
4		OR	Orthopedics	75	50	6	131	4
4		DR	Dermatology	33	15	3	51	2
4		AETCOM	Attitude Ethics and Communication	25	20	3	48	2

## 8

## Overall consistency of the programme

Unit Level	Degree Programme Level														
		Competence													
		1	2	3	4	5	6								
Units	Unit LOs	Programme level													
		LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO 10	LO 11	LO 12	LO 13	
Course 1- 20 all units	All LOs	✓	✓	✓	✓	✓	✓	✓		✓		✓			
Course 21- 23 – all units	All LOs				✓	✓		✓	✓	✓			✓		
Course 24:															
U1 <i>Basics of ethics</i>	<i>BMR1 Demonstrate the understanding of basic principles of biomedical ethics</i>				✓										
U2 <i>Basics principles of biomedical ethics</i>	<i>BMR 2 Demonstrate the ability to interpret and apply principles of biomedical ethics</i>					✓									
Unit 3 <i>Demonstrates the ability to respond to events and issues in a professional, considerate and humane fashion</i>	<i>BMR 3 Demonstrates the understanding of principles of professionalism</i>				✓	✓						✓			
Unit 4 <i>Demonstrates the ability to translate learning from humanities in order to further his/her professional and personal growth</i>	<i>BMR 4 Demonstrate the ability to use ethics in professional growth and development, medical dilemmas, and in research</i>				✓						✓	✓			

## Internal Quality Control/Enhancement

Feedback will be collected from students and relevant faculty. With this the curriculum as well as the course contents will be upgraded and approvals taken from the academic council of the institution prior to implementation. Students will be encouraged to document their reflections on each of the 4 units of the module. Reflections will be analysed using principles of qualitative analysis and presented to the department of medical education for inputs. 360 degree evaluation will be done by taking feedback from patients, faculty, health care workers to identify attributes of early practitioners of principles of ethics. This will assist in evolving strategies for improving learnings of late imbibers. The Internal Quality Control cell will do independent monitoring of the module and provide feedback.

# Example of Students' Learning Guide

## I. Introduction to the Subject

### 1.1. *Lecturer's contact details (Coordinator)*

Prof. Shally Awasthi

Head Department of Pediatrics and Medical Education.

KGMU

### 1.2. *Contribution to the degree profile*

The Indian undergraduate curriculum has been revised in 2019 and made to ensure that students achieve certain competencies so that we create competent physicians of first contact. This will make our program at par with international norms. To be nationally as well as internationally relevant, it is essential that the students have ethical patient care and research practices. Hence, they must be taught principles and practice of ethics as a standalone topic embedded as an elective within their medical curriculum. Principles of ethics will be imbibed during the foundation course, early clinical exposure and throughout their MBBS program from Phase 1 to 3. However, for consolidation and in-depth learning an elective is planned module in '**Biomedical Ethics**'. This can be opted in the 37<sup>th</sup> or 38<sup>th</sup> month of the MBBS course. Electives are also the mandate of National medical Commission of India.

### 1.3. *Competences to be developed*

#### **Competence 1**

***Competent Medical Practitioner who understands and provides preventive, promotive, curative palliative and holistic care with compassion.***

Ethics 1 Demonstrate the understanding of basic principles of biomedical ethics

**(Specific competency)**

## **Competence 2**

***Professional who is committed to excellence, is ethical, responsive and accountable to patients' community and the profession***

Ethics 2 Demonstrate the ability to understand and apply empathy and other human values to the care of the patient

**(Specific competency)**

## **Competence 4**

***Communicator with patients, families, colleagues and community***

Ethics 3 Demonstrate the ability to respond to events and issues in a professional, considerate and humane fashion.

**(Generic competency)**

## **Competence 6**

***Critical thinker***

Ethics 4: Demonstrate the ability to translate learning from the humanities in order to further his / her professional and personal growth.

**(Generic competency)**

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## II. Student Work Plan

### 2.1. Distribution of activities and workload

Competence	Contents	Activities-Resources-Documentation	Estimated work time		Completion and/or submission deadlines
			Contact hours	Independent work	
<b>COMPETENCY 1</b> <b>Competent Medical Practitioner who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.</b> Ethics 1 Demonstrate the understanding of basic principles of biomedical ethics <b>(Specific)</b>	Unit 1: Basics of Ethics-1 (during foundation course)				
	1. Introduction to ethics	Lecture	2.0 hours	4 hours	
	2	Small Group Teaching (SGT), group work	4.0 hours	6 hours	
	Total		6 hours	10hours	
	Evaluation	Case based multiple choice questions			Within One week of last session of Unit 1
<b>COMPETENCY 2</b> <b>Professional who is committed to excellence, is ethical, responsive and accountable to patients community and the profession</b> Ethics 2 Demonstrate the understanding and application of empathy and other human values to the care of the patient <b>(Specific)</b>	Unit 2: Principles of Biomedical Ethics				
	1. Interpretation and application of principles of biomedical ethics	Lecture	1 hour	2 hours	
		SGT, group work	1 hour	1 hours	
	2. Understanding basic human values	Lecture	1 hour	2 hours	
		Small group discussions	2 hours	2 hours	
	3. Principles and practice of empathy	Lecture	1 hours	1 hour	
Small group discussions		1 hours	2 hours		
	Total		7 hours	10 hours	
	Evaluation	Case based multiple choice questions			Within One week of last session of Unit 2

Competence	Contents	Activities-Resources-Documentation	Estimated work time		Completion and/or submission deadlines
			Contact hours	Independent work	
<b>COMPETENCY 4</b> <b>Communicator with patients, families, colleagues and community</b> Ethics 3 Demonstrate the ability to respond to events and issues in a professional, considerate and humane fashion <b>(Generic)</b>	Unit 3: Principles of Professionalism				
	1. Introduction to Professionalism	Lecture	1 hour	2 hours	
		SGT, group work	1 hour 30 mins	3 hours	
		DOAP session	1 hour 30 mins	2 hours	
	2. Demonstrate how to demonstrate to events and issues	Small group discussions	1 hours	4 hours	
	Lecture	1 hours	3 hours		
	3. Principles of humanities pertinent to practice of medicine	SGT, group work	2 hours	4 hours	
	Total		8 hours	20 hours	
	Evaluation	Case based multiple choice questions			Within One week of last session of Unit 2
<b>COMPETENCY 6</b> <b>Competence 6</b> <b>Critical thinker</b> Ethics 4: Demonstrate the ability to translate learning from the humanities in order to further his / her professional and personal growth <b>(Generic)</b>	Unit 4: Ethics in professional growth				
	A				
	1. Introduction to strategic professional development	Lecture	1 hour	2 hours	
		SGT and group work	1 hour	3 hours	
		Lecture	1 hour	2 hours	
2. Ethical dilemmas in medical profession	Small group discussions	2 hours	4 hours		
B					
3. Ethics in Biomedical research	Lecture	2 hours	2 hours		
	SGT, group work	4 hours	7 hours		
	Total		10 hours	20 hours	
	Evaluation	Case based multiple choice questions, seminars, reflective writing	30	60	Within One week of last session of Unit 4
<b>Total</b>			<b>30%</b>	<b>70%</b>	<b>100%</b>

## 2.2. Summary

Type of activities	Contact hours	Independent work	Total
Theoretical learning	10 hours	20 hours	30 hours
Practical activities and assessment	20 hours	40 hours	60 hours
<b>Total</b>	<b>30 hours (1 credit unit)</b>	<b>60 hours (2 Credit unit)</b>	<b>90 hours or 3 Credit units</b>

## III. Assessment System

### 3.1. Table of assessment

Competence	Assessment technique	Grade
<p><b>COMPETENCY 1</b>  <b>Competent Medical Practitioner who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.</b>            Ethics 1 Demonstrate the understanding of basic principles of biomedical ethics</p>	Group participation Case based MCQs	20 marks 60 marks 20 marks
<p><b>COMPETENCY 2</b>  <b>Professional who is committed to excellence, is ethical, responsive and accountable to patients' community and the profession</b>            Ethics 1 Demonstrate the understanding of basic principles of biomedical ethics            Ethics 2 Demonstrate the ability to understand and apply empathy and other human values to the care of the patient</p>	Group participation Case based MCQs Reflective writing assessment by guide	20 marks 60 marks 20 marks
<p><b>COMPETENCY 4</b>  <b>Communicator with patients, families, colleagues and community</b>            Ethics 3 Demonstrate the ability to respond to events and issues in a professional, considerate and humane fashion            Ethics 4: Demonstrate the ability to translate learning from the humanities in order to further his / her practice</p>	Group participation Critical appraisals (2) Reflective writing assessment by guide	20 marks 60 marks 20 marks
<p><b>COMPETENCY 6</b>  <b>Critical thinker</b>            Ethics 4: Demonstrate the ability to translate learning from the humanities in order to further his / her professional and personal growth</p>	Group participation Reflective writing assessment by guide Case Based MCQs	20 marks 20 marks 60

### 3.2. Observations of assessment

Participation in any two group activity will be assessed by the facilitator. Each activity will fetch a max of 20 marks

Securing 35% for each Competence is mandatory

### 3.3. Summary of assessment

Competence	Continuous assessment	Final assessment	Total
Competence 1	20 (participation in group activities 20)	80 (MCQ test 60 and Reflective writing 20)	100
Competence 2	20 (participation in group activities 20)	80 (MCQ test 60 and Reflective writing 20)	100
Competence 4	20 (participation in group activities 20)	80 (Critical appraisals 60 Reflective writing 20)	
Competence 6	20 (participation in group activities 20)	80 (Seminar presentation 60 and Reflective writing 20)	
Total	30	70	100
<b>Total</b>	<b>30%</b>	<b>70%</b>	<b>100%</b>

Grade A - 90% and above

Grade B - 75 % - 89%

Grade C - 60% - 74%

Grade D- 45% - 59%

Grade E- 35% - 44%

Grade F- 34% and below

**Completion certificates with grades specified will be awarded to students securing Grade A- Grade E.**

