

MBBS Programme Outcomes

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

PO 1:

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences. 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. Demonstrate ability to accurately evaluate relevant social and clinical information in the context of the patient's visit.

[This Program outcome is pertinent to University defined Graduate Attributes in area of Patient Care]

PO 2:

Demonstrate knowledge about established and evolving biomedical and clinical sciences. 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.

[This Program Outcome is pertinent to University defined Graduate Attributes in area of Medical and Scientific Knowledge.]

PO 3:

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

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

[This Program outcomes is pertinent to University defined Graduate Attributes in area of Professional excellence & Responsibility]

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. *[This Program outcomes is pertinent to University defined Graduate Attributes in area of Communication Skills.]*

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.

[This Program outcomes is pertinent to University defined Graduate attributes in role of Leader & Member of the health care team & System]

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.

[This Program outcomes is pertinent to University defined Graduate attribute of being a lifelong learner]

PROGRAM – MBBS
PRECLINICAL DEPARTMENT PROGRAM & COURSE OUTCOMES
Course Outcomes

ANATOMY

Goal: The broad goal of the teaching of undergraduate students in Anatomy aims at providing comprehensive knowledge of the gross and microscopic structure and development of human body to provide a basis for understanding the clinical correlation of organs or structures involved and the anatomical basis for the disease presentations.

Course Outcomes (CO)

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

CO 1: Comprehend Dissect and Identify the normal disposition, inter-relationships, gross, functional and applied anatomy of the various structures in the Cadaver. Correlate anatomical basis of common clinical procedures i.e., intramuscular & intravenous injection, lumbar puncture, Hernia repair, Pleural effusion tap, kidney biopsy etc.

CO 2: describe, Identify, Draw the microscopic structures of various tissues, and organs in the human body, and correlate the structure with the functions as a prerequisite for understanding the altered state in various disease processes.

CO 3: Ability to demonstrate the knowledge of the basic principles of embryology including genetic inheritance and stages involved in development of the organs and systems from the time of conception until birth. The student should recognize the critical stages of normal development and the effects of common teratogens, genetic mutations and environmental hazards on it. He/She should be able to explain the developmental basis of the occurrence of major variations, abnormalities and congenital anomalies.

CO 4: Demonstrate different movements of joints and palpate important bony landmarks, vessels and nerves of the body

CO 5: Demonstrate the knowledge and applications of imaging techniques and interpretation of Radiogram, Computerized Tomography (CT) Scan, Magnetic Resonance Imaging and Sonogram. Draw various body sections at different levels.

CO 6: Ability to demonstrate appropriate attitudes in adopting an empathic, holistic approach towards Cadaver. Demonstrate the knowledge of body and organ donation and proper handling of biological tissues

CO 7: To have personal characteristics and attitudes required for professional life including personal integrity, sense of responsibility, dependability, and ability to relate to or show concern for other individuals, working as a team during dissection and practical work.

CO 8: Enumerate and describe professional qualities and roles of a physician. Describe and discuss the commitment to lifelong learning as an important part of physician growth.

CORELATION TO PROGRAM OUTCOME

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	weak	Strong				
CO2	weak	Strong				
CO3	weak	Strong				
CO4	weak	Strong				
CO5	weak	Strong				
CO6			Weak	Moderate		
CO 7				Weak	Moderate	
CO 8					Weak	Moderate

CO-CURRICULUM MAPPING

CURRICULA	COURSE OUTCOME
General Anatomy	CO1
General Embryology	CO3
General Histology	CO2
Gross Anatomy- Upper Limb, Lower Limb, Thorax, Abdomen, Pelvis and Perineum, Head Neck and Face, Neuroanatomy	CO1
Systemic Histology	CO2
Systemic Embryology	CO3
Genetics	CO3
Clinical Anatomy	CO1
Radiological Anatomy	CO5
Surface Anatomy	CO4
AET-COM	CO6, CO7, CO8

Matrix Depicting Indicators, Data Source and Data Collection

	Course Outcome	Indicators	Data Source	Data collection Method		
				Written	Practical	Observation
Gross Anatomy	CO 1	At least 75% of the students should score 55% marks	Formative and Summative examination	MCQ, SAQ	LAQ, DOAP, Viva, Spots	Logbook, Reflection
Microscopic Anatomy	CO 2		Formative and Summative examination	MCQ, SAQ	LAQ, DOAP, Viva, Spots	Journal
Developmental Anatomy and Genetics	CO 3		Formative and Summative examination	MCQ, SAQ	LAQ, DOAP, Viva, Spots	-
Living Anatomy	CO 4		Formative and Summative examination	-	DOAP, Viva	
Imaging Anatomy	CO 5		Formative and Summative examination		DOAP, Viva	
AET-COM	CO 6, CO7, CO8		Students	SAQ	-	Feedback , Logbook, Reflection

PHYSIOLOGY

COURSE OUTCOMES

At the end of the Course the student should be able to

CO1

Perform a full or focused physical examination on the subject in a logical sequence appropriate for the clinical problem directed from the clinical history. Demonstrate the knowledge of clinical signs

CO2

Demonstrate knowledge about functioning of major organ systems & its physiological basis, dysfunction of organ system in relation to disease process, appropriate diagnostic tests & it's correlation with the clinical presentation, therapeutic recommendations for preventative, curative, and palliative therapies, expansion of medical knowledge through research.

CO3

Demonstrate respect, compassion, accountability and empathy when interacting with peers & other persons in surroundings.

Ability to display doctor-patient relationships demonstrating sensitivity and responsiveness to culture, race/ethnicity, age, socioeconomic status, gender, sexual orientation, spirituality, disabilities, and other aspects of diversity.

Demonstrate ability to behave ethically while interacting with the peers & other persons in the surroundings

CO4

Demonstrate ability to utilize communication strategies involving nonverbal, verbal and written modalities in an organized and clear manner in order to communicate, create rapport, effectively communicate & share relevant information with peers & other persons in the surroundings,

CO5

Demonstrate the ability to work effectively, efficiently & in rational way with his/ her colleagues and other team members, educate & motivate the team members, identify the self & others potential of functioning and ability as a team leader to maximize the outputs.

CO6

- Demonstrates life-long learning skills needed to stay informed of relevant scientific findings.
- Demonstrates reflective practice through self-assessment, ability to analyse one's experiences, ability to identify limitations and areas for self-improvement and further education.
- Demonstrates self-corrective behaviour, self-motivation, and ability to act on plans for self-improvement
- Demonstrates ability to recognize triggers for stress and anxiety, to take care of mental health and wellbeing. Recognizes and identifies when to ask for help.
- Develops a personalized program for physical/mental health

MAPPING OF PROGRAM & COURSE OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO1	Weak	Strong	Weak	Weak	Weak	Weak
CO2	Weak	Strong				
CO3	-	Strong	Strong	Weak	-	Weak
CO 4	Weak	Strong	Weak	Weak	Weak	weak
CO5	-	Strong	Moderate	Weak	Moderate	Weak
CO6	Weak	weak	Strong	weak	Weak	Strong

CURRICULA MAPPING

	Course Outcomes	Indicator	Data Source	Assessment Method		
				Theory	Practical	Observation
Gastrointestinal and Hepatobiliary System	CO1, CO2, CO4, CO5, CO6	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Student's interview, Logbook, Periodic Tests	MCQ, LAQ, SAQ	DOAP, Viva, Spots, OSPE,	Logbook, Periodic Tests, Model Making
Hematology	CO1, CO2 CO5, CO6					
General Physiology	CO1, CO2, CO6					
Physiology of Respiratory System	CO1, CO2, CO6					
Renal Physiology Excretion System	CO1, CO2, CO6					
Neuromuscular System	CO1, CO2, CO6					
Circulatory System and Cardiac Function	CO1, CO2, CO6					
AETCOM	CO2 CO3, CO4, CO5 CO6					
Endocrine System	CO1, CO2, CO6					
Temperature Regulation	CO1, CO2, CO6					
Reproductive System	CO1, CO2, CO6					
Central Nervous System	CO1, CO2 CO3, CO4, CO6					
Peripheral Nervous system	CO1, CO2 CO3, CO4, CO6					

PROGRAM COURSE & OUTCOMES MAPPING
MBBS PROGRAM
PARACLINICAL DEPARTMENTS

PROGRAM OUTCOMES

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

Graduate Attributes: Patient Care

PROGRAMME OUTCOME 1:

Demonstrate ability to provide evidence-based care that is compassionate, respectful of patients' differences, values, and preferences. 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. Demonstrate ability to accurately evaluate relevant social and clinical information in the context of the patient's visit.

Graduate Attributes: Medical and Scientific Knowledge.

PROGRAMME OUTCOME 2:

Demonstrate knowledge about established and evolving biomedical and clinical sciences. 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.

3. Graduate Attributes: Professional excellence & Responsibility

PROGRAMME OUTCOME 3:

- i). 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.
- ii). Demonstrate personal attributes of compassion, honesty, integrity, accountability, empathy in patient encounters.

4. Graduate attributes: Communication Skills.

PROGRAMME OUTCOME 4:

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

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

PROGRAMME OUTCOME 5

- i) Demonstrate the ability to work effectively, efficiently & in rational way with his/her colleagues and other team member, 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.
- ii) 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: Lifelong learner.

PROGRAMME OUTCOME 6

- i) 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

DEPARTMENT OF PATHOLOGY

COURSE OUTCOMES

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

CO 1. Describe the structure and ultra-structure of a sick cell, the mechanisms of the cell degradation, cell death and repair

And correlate structural and functional alterations in the sick cell.

CO 2. Explain the Patho physiological processes which governs the maintenance of homeostasis, mechanism of their disturbances and the morphological and clinical manifestation associated with it. Describe the mechanisms and patterns of tissue response to injury to appreciate the Pathophysiology of disease processes and their clinical manifestations.

CO 3. Correlate the gross and microscopic alterations of different organ systems in common diseases to the extent needed to understand disease processes and their clinical significance.

CO 4. Develop an understanding of neoplastic change in the body in order to appreciate need for early diagnosis and further management of neoplasia.

CO 5. Understand mechanisms of common haematological disorders and develop a logical approach in their diagnosis and management.

CO 6. Describe the rationale and principles of technical procedures of diagnostic laboratory tests and perform simple bedside tests on blood, urine and other biological fluid samples. Interpret diagnostic laboratory tests and correlate with clinical and morphological features of diseases.

CO7. Communicate with patient, colleagues regarding utility of diagnostic tests and maintain confidentiality.

MAPPING OF PROGRAM OUTCOMES & COURSE OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	-	Strong	-	-	-	-
CO2	Weak	Strong	-	-	-	-
CO3	Moderate	Strong	-	-	-	-
CO4	Moderate	Strong	Weak	Moderate	-	Moderate
CO5	Strong	Strong	-	-	-	Moderate
CO6	Strong	Strong	Moderate	-	Moderate	Moderate
CO7	Strong	Moderate	Strong	Strong	Strong	-

SYLLABUS MAPPING TO COURSE OUTCOMES

Topics	New CO
General Pathology	CO1, CO2
Neoplasia	CO4, CO7
Hematology	CO5
Clinical Pathology	CO6, CO7
Systemic Pathology	CO3

DATA MATRIX

Syllabus Topic	Course Outcome	Indicators	Data Source	Data collection Method		
				Written	Practical	Observation
General Pathology	CO1, CO2	At least 75% of the students should score 55% marks	Formative and Summative examination	MCQ, LAQ, SAQ	DOAP, Viva, Spots	Journal
Neoplasia	CO4, CO7		Formative and Summative examination	MCQ, LAQ, SAQ	Viva, Spots	Journal
Hematology	CO5		Formative and Summative examination	MCQ, LAQ, SAQ	DOAP, Viva, Spots	Journal
Clinical Pathology	CO6, CO7		Formative and Summative examination	MCQ, SAQ	DOAP, Viva	Journal
Systemic Pathology	CO3		Formative and Summative examination	MCQ, LAQ, SAQ	Viva, Gross Specimen, Histology	Journal

DEPARTMENT OF PHARMACOLOGY

COURSE OUTCOMES

CO1: - Able to choose the appropriate, cost effective drug or therapy and interpret these with clinical context to prescribe rationally.

CO2: - Describe the pharmacokinetics and pharmacodynamics indications, contraindications, interactions and adverse reactions of essential and commonly used drugs.

CO3: - Explain pharmacological basis of prescribing drugs in special medical situations such as pregnancy, lactation, infancy and old age & Integrate the list the drugs of addiction and recommend the management.

CO4: - Demonstrate ability to evaluate the ethics and modalities involved in the development and introduction of new drugs.

CO5: - Demonstrate communication with patient with empathy and ethics on aspects of drug use.

CO6: - Motivate patient with chronic disease to adhere to the prescribed management by the health care provider.

CO7: - Demonstrate how to interact with pharmaceutical representative to get authentic information of drug.

CO8: - Explain to the patient the relationship between cost of treatment and patient compliance.

CO9: - To prepare and explain a list of p-drug for a given condition.

PROGRAM OUTCOMES & COURSE OUTCOMES MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	Strong	Strong	Moderate	Weak	--	--
CO2	--	Strong	Moderate	--	--	--
CO3	--	Strong	--	Weak	--	Moderate
CO4	Moderate	Moderate	Strong	--	Strong	Strong
CO5	--	Strong --	---	Strong	Moderate	Moderate
CO6	Weak	Strong --	--	Strong	Strong	Moderate
CO7	--	Strong --	--	Weak	Strong	Moderate
CO8	--	Moderate	Strong	--	Strong	--
CO9	Moderate	Strong	--	--	Strong	Moderate

SYLLABUS -COURSE OUTCOMES MAPPING

CURRICULUM (TOPICS)	COURSE OUTCOME
General Pharmacology	CO2, CO3, CO5, CO6
Autonomic Nervous system	CO1, CO2, CO3
Central Nervous system	CO1, CO2, CO3
Blood	CO1, CO2, CO3
GIT	CO1, CO2, CO3
Respiratory system	CO1, CO2, CO3
Cardiovascular system	CO1, CO2, CO3
Endocrinology	CO1, CO2, CO3
General Chemotherapy	CO1, CO2, CO3
Systemic Chemotherapy	CO1, CO2, CO3
Experimental Pharmacology	CO5
Clinical Pharmacology	CO7, CO9
AET-COM	CO5, CO6, CO8

DATA MATRIX

Topic	Course Outcomes	Indicator	Data Source	Assessment Method		
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				Theory	Practical	Observation
General Pharmacology	CO2, CO3, CO5, CO6	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Seminar presentations
Autonomic Nervous system	CO1, CO2, CO3	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Seminar presentations
Central Nervous system	CO1, CO2, CO3			MCQ, LAQ, SAQ	Table Exercises, Viva, Spots, OSPE	Journal Record book, Seminar presentations
Blood	CO1, CO2, CO3			MCQ, LAQ, SAQ	Journal Record book, Seminar presentations	
GIT	CO1, CO2, CO3	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal write ups	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Seminar presentations
Respiratory system	CO1, CO2, CO3	At least 75% of the students should score 55% marks		MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Seminar presentations
Cardiovascular system	CO1, CO2, CO3	At least 75% of the students should score 55% marks		MCQ, LAQ, SAQ	Table Exercises, Viva, Spots, OSPE	Journal Record book, Seminar presentations
Endocrinology	CO1, CO2, CO3	At least 75% of the students should score 55% marks		MCQ, LAQ, SAQ	Table Exercises, Viva, Spots, OSPE	Journal Record book, Seminar presentations
General Chemotherapy	CO1, CO2, CO3	At least 75% of the students should score 55% marks		Formative assessment, Tutorial performance, Journal write ups	MCQ, LAQ, SAQ	Table Exercises, Viva,

					Spots, OSPE	
Systemic Chemotherapy	CO1, CO2, CO3	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal write ups	MCQ, LAQ, SAQ	Table Exercises, Viva, Spots, OSPE	Journal Record book, Seminar presentations
Experimental Pharmacology	CO5	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Seminar presentations
Clinical Pharmacology	CO7, CO9	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Seminar presentations
AET-COM	CO5, CO6, CO8	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance; OSPE	MCQ, SAQ	Viva	Journal Record book, Seminar presentations

DEPARTMENT OF MICROBIOLOGY

COURSE OUTCOMES

	Course outcome: At the end of the course the student shall be able to
CO 1	Perform a full or focus on General Microbiology, overview of bacterial infections, demonstrate the knowledge of etiopathogenesis of different micro-organisms
CO 2	Demonstrate knowledge about normal human microbiota, Immunity, National immunization schedule 2020, Epidemiology of infectious diseases , Immunology, and major micro-organisms causing the infection, pathogenesis of the disease,
CO 3	Describe appropriate laboratory diagnostic tests for each microorganism and explain laboratory diagnosis of disease causing infections, epidemiology, prevention and prophylaxis of the disease.
CO 4	Demonstrate knowledge and application of ethics, communication skills and attitudinal behaviour pertinent to confidentiality, privacy, respect for samples and patients with sensitivity and responsiveness to personal, demographic, socioeconomic and other similar diversities. Demonstrate ability to utilize communication strategy in an organized and clear manner to communicate , create report and share relative information. Demonstrate ability to behave ethically while interacting with the peers & other persons in the surroundings & society.
CO 5	Demonstrate the ability to work effectively, efficiently and rationally with peers, colleagues and team members, educate and motivate the team members, identify the self and other potential functioning ability as a team leader to maximize the outputs. Demonstrate knowledge on hospital infection control (HIC), different types of infections, antimicrobial stewardship, and measures to address issues of infection, antibiotic resistance, personal safety and Biomedical waste management
CO 6	Demonstrates life-long learning skills needed to stay informed and updated to meet the unexpected health crisis in future Demonstrates reflective practice through self-assessment ability for self improvement and further education. Demonstrate self corrective behavior, self motivation ability to act on plans for self improvement. Develops a personalized program for physical and mental health.

PROGRAM OUTCOMES & COURSE OUTCOMES MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6
CO 1	Weak	Strong				Moderate
CO 2	Moderate	Strong	Weak			Moderate

CO 3	Moderate	Moderate	Weak	Moderate	Moderate	Moderate
CO 4		Moderate	Strong	Strong	Moderate	Moderate
CO 5		Weak	Strong	Moderate		Moderate
CO 6		Moderate	Moderate		Moderate	Moderate

SYLLABUS-COURSE OUTCOMES MAPPING

SR.NO	TOPIC	CO1	CO2	CO3	CO4	CO5	CO6
1	General Microbiology	Moderate	Weak	Weak	Weak	Weak	
2	Systemic Bacteriology	Moderate	Strong	Moderate	Moderate	Moderate	Moderate
3	Systemic Virology	Moderate	Strong	Moderate	Moderate	Moderate	Moderate
4	General Virology	Moderate	Weak	Moderate	Weak	Weak	
5	General Mycology systemic Mycology opportunistic fungi	Moderate	Strong	Moderate		Moderate	
6	Parasitology	Moderate	Strong	Moderate	Moderate	Moderate	
7	Clinical Microbiology	Weak	Moderate	Moderate	Moderate	Moderate	Moderate
8	Molecular Microbiology techniques	Weak	Weak	Weak	Weak	Moderate	

DATA MATRIX

Topic	Course Outcomes	Indicator	Data Source	Assessment Method		
				Theory	Practical	Observation

General Microbiology (PO1, PO6)	CO1, CO5	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Student's Logbook, Periodic Tests	MCQ, LAQ, SAQ	DOAP, Viva, Spots, OSPE,	Logbook, Model making
Systemic Bacteriology (PO1, PO2, PO6)	CO1, CO2, CO3, CO5, CO6		Formative assessment, Tutorial performance, Mentor-Mentee discussions (UMGS), Logbook, Periodic Tests	MCQ, LAQ, SAQ		Logbook,
General Virology (PO1)	CO1, CO2, CO6		Formative assessment, Tutorial performance, Student's interview, Logbook, Periodic Tests	MCQ, LAQ, SAQ		Logbook, Model making
Systemic Virology (PO1, PO2, PO6)	CO1, CO2, CO3, CO6		Formative assessment, Tutorial performance, Mentor-Mentee discussions (UMGS), Logbook, Periodic Tests	MCQ, LAQ, SAQ		Logbook,
General & Systemic Mycology (PO1, PO2, PO6)	CO1, CO2, CO3, CO4, CO6			MCQ, LAQ, SAQ		Logbook,
Parasitology (PO1, PO2, PO6)	CO1, CO2, CO3, CO4, CO6	At least 75% of the students should score 55% marks		MCQ, LAQ, SAQ	Logbook,	
Clinical Microbiology (PO3, PO4, PO5, PO6)	CO4, CO5, CO6		MCQ, LAQ, SAQ, Project viva	DOAP, Viva, Spots, OSPE,	Logbook, role play	
Molecular Biology techniques (PO2, PO3, PO6)	CO3, CO5		SAQ			

FORENSIC MEDICINE & MEDICAL TOXICOLOGY

COURSE OUTCOMES

	At the end of the course, the student shall be able
CO1	To understand professional misconduct; prevent unethical acts; understand the duties and rights of patients during treatment; ability to provide informed consent, giving first aid in any poisoning cases. To identify the basic Medico-legal aspects of hospital and general practice
CO2	To define the Medico-legal responsibilities of a general physician while rendering community service either in a rural primary health centre or an urban health centre. To possess medio-legal knowledge related to causes of death by any means including injuries and toxicology
CO3	• To Explain the physician's responsibilities in criminal matters and respect for the codes of Medical ethics
CO4	o Shall have ability to elicit findings related to medico-legal cases, with utmost care to reserve patients right while issuing medico-legal certificates
CO5	To detect occupational and environmental poisoning, prevention and epidemiology of common poisoning and their legal aspects particularly pertaining to Workmen's Compensation Act
CO6	To regularly gain knowledge related to recent changes in laws and apply this during medico-legal work

PROGRAM OUTCOMES & COURSE OUTCOMES MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	Strong	Strong	Moderate	Moderate	Weak	Weak

CO2	Strong	Strong	Strong	Weak	Weak	Weak
CO3	Strong	Weak	Strong	Weak	Moderate	Weak
CO4	Moderate	Moderate	Moderate	Strong	Strong	Moderate
CO5	Moderate	Strong	Moderate	Moderate	Strong	Strong
CO6	Strong	Strong	weak	Weak	Weak	Strong

SYLLABUS-COURSE OUTCOMES MAPPING

	Topic	CO1	CO2	CO3	CO4	CO5	CO6
1	Legal Procedure	W	W	S	M	W	S
2	Medical Law and Ethics	S	W	M	W	W	S
3	Identification	W	S	M	S	M	W
4	Medicolegal Autopsy	W	S	W	S	W	W
5	Death and its causes	W	S	W	S	W	W
6	Postmortem changes	W	M	W	W	W	M
7	Mechanical injuries	W	W	S	W	W	M
8	Regional injuries	W	W	S	W	W	W
9	Medicolegal Aspects of Wounds	W	W	S	S	W	W
10	Thermal deaths	W	M	W	M	W	W
11	Starvation	W	M	W	W	W	W
12	Mechanical Asphyxia	M	W	M	W	W	W
13	Anesthetic and Operative Deaths	W	W	W	W	S	W
14	Impotence and Sterility	W	W	W	M	W	W
15	Virginity, Pregnancy and Delivery	M	W	W	W	W	W
16	Abortion	W	W	S	W	W	W
17	Sexual Offences	S	W	W	S	W	W

18	Infant Deaths	W	W	W	W	W	S
19	Blood Stains	W	W	W	M	W	W
20	Artefacts	W	M	W	W	W	W
21	Forensic Science Laboratory	W	M	W	W	M	W
22	Forensic Psychiatry	W	S	W	S	W	W
23	General Toxicology	S	W	W	W	S	W
24	Agricultural Poisons	W	W	W	W	S	W
25	Corrosive Poisons	W	W	W	M	W	W
26	Metallic Poisons	W	W	W	W	W	W
27	Inorganic Irritant Poisons	W	W	W	W	S	W
28	Organic Irritant Poisons	W	W	W	W	S	W
29	CNS Depressants	W	W	W	S	W	W
30	Psychotropic drugs	W	W	W	M	W	W
31	Deliriant Poisons	M	M	W	W	W	W
32	Drug Dependence and Abuse	W	W	S	W	W	W
33	Spinal Poisons	W	M	W	W	W	W
34	Cardiac Poisons	W	W	W	W	W	W
35	Asphyxiants	M	W	W	W	S	W
36	Miscellaneous Poisons	W	W	W	M	W	W
37	Food Poisoning	W	W	W	W	S	W

DATA MATRIX

Topic	Course Outcomes	Indicator	Data Source	Assessment Method		Observation
				Theory	Practical	
Legal Procedure	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students	Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall

Medical Law and Ethics	C01, CO2, C03, C04, C05 ,C06	should score 55% marks	Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Magazine making activity, Seminar presentations
Identification	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Table Exercises,	
Medicolegal Autopsy	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots, OSPE	Journal Record book, Wall Magazine making activity, Seminar presentations
Death and its causes	C01, CO2, C03, C04, C05 ,C6		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	
Postmortem changes	C01, CO2, C03, C04, C05 ,C6		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Mechanical injuries	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Table Exercises, Viva, Spots, OSPE	
Regional injuries	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ		
Medicolegal Aspects of Wounds	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ		Journal Record book, Wall Magazine making activity, Seminar presentations
Thermal deaths	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ		
Starvation	C01, CO2, C03, C04, C05 ,C6		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Mechanical Asphyxia	C01, CO2, C03, C04, C05 ,C6	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	OSPE, Table Exercises, Viva, Spots,	
Anesthetic and Operative Deaths	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	
Impotence and Sterility	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students		MCQ, LAQ, SAQ	Viva, Spots	

Virginity, Pregnancy and Delivery	C01, CO2, C03, C04, C05 ,C06	should score 55% marks		MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Abortion	C01, CO2, C03, C04, C05 ,C06			MCQ, LAQ, SAQ	Viva, Spots	
Sexual Offences	C01, CO2, C03, C04, C05 ,C6	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal write ups	MCQ, LAQ, SAQ	Table Exercises, Viva, Spots, OSPE	
Infant Deaths	C01, CO2, C03, C04, C05 ,C6			MCQ, LAQ, SAQ	Viva, Spots	
Blood Stains	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Artefacts	C01, CO2, C03, C04, C05 ,C06			MCQ, LAQ, SAQ	Viva, Spots	
Forensic Science Laboratory	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	
Forensic Psychiatry	C01, CO2, C03, C04, C05 ,C06			MCQ, LAQ, SAQ	Viva, Spots	
General Toxicology	C01, CO2, C03, C04, C05 ,C6		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	
Agricultural Poisons	C01, CO2, C03, C04, C05 ,C6			MCQ, LAQ, SAQ	Viva, Spots	
Corrosive Poisons	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Metallic Poisons	C01, CO2, C03, C04, C05 ,C06			Viva, Spots		
Inorganic Irritant Poisons	C01, CO2, C03, C04, C05 ,C06		Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	
Organic Irritant Poisons	C01, CO2, C03, C04, C05 ,C06			Viva, Spots		
CNS Depressants	C01, CO2, C03, C04, C05 ,C6				Viva, Spots	

Psychotropic drugs	C01, CO2, C03, C04, C05 ,C6				Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Deliriant Poisons	C01, CO2, C03, C04, C05 ,C06				Viva, Spots	
Drug Abuse & Dependence	C01, CO2, C03, C04, C05 ,C06				Viva, Spots	
Spinal Poisons	C01, CO2, C03, C04, C05 ,C06				Viva, Spots	
Cardiac Poisons	C01, CO2, C03, C04, C05 ,C06	At least 75% of the students should score 55% marks	Formative assessment, Tutorial performance, Journal	MCQ, LAQ, SAQ	Viva, Spots	Journal Record book, Wall Magazine making activity, Seminar presentations
Asphyxiants	C01, CO2, C03, C04, C05 ,C6				Viva, Spots	
Miscellaneous Poisons	C01, CO2, C03, C04, C05 ,C6				Viva, Spots	
Food Poisoning	C01, CO2, C03, C04, C05 ,C6				Viva, Spots	