Program Outcomes, Program Specific Outcomes, and Course Outcomes at Malabar Medical College Hospital and Research Centre

Malabar Medical College Hospital and Research Centre aligns its program outcomes with those defined by the National Medical Commission (NMC). These outcomes, ratified by the Governing Council, are separately determined for undergraduate (UG) and postgraduate (PG) programs. The teaching and learning methods are meticulously designed to ensure that every student achieves the specified program outcomes.

Undergraduate (UG) Program Outcomes (POs)

The Indian Medical Graduate (IMG) is expected to possess the necessary knowledge, skills, attitudes, values, and responsiveness to function effectively as a first-contact physician in the community, while also being globally relevant.

UG Course Outcomes (COs)

The MBBS course outcomes are specific objectives that every student must achieve to be considered successful. The National Medical Commission defines these outcomes:

a) Competence in diagnosing and managing common health problems at primary, secondary, or tertiary levels using clinical skills based on history, physical examination, and relevant investigations.

b) Ability to practice preventive, promotive, curative, and rehabilitative medicine for commonly encountered health problems.

c) Understanding the rationale for different therapeutic modalities, familiarity with essential drugs and their common side effects.

d) Appreciation of socio-psychological, cultural, economic, and environmental factors affecting health, and development of a humane attitude towards patients.

e) Commitment to continued self-learning and pursuit of further expertise or research in any chosen area of medicine, including action research and documentation skills.

f) Familiarity with the basic factors essential for implementing National Health Programs, including practical aspects.

g) Acquisition of basic management skills in human resources, materials and resource management related to healthcare delivery, general and hospital management, inventory skills, and counseling.

h) Ability to identify community health problems and design, institute, and evaluate corrective measures.

i) Proficiency in communication skills to work effectively as a leading partner in healthcare teams.

j) Competence to work in various healthcare settings.

k) Development of personal characteristics and attitudes essential for professional life, including integrity, responsibility, dependability, and concern for others.

UG Program-Specific Objectives (PSOs)

The MBBS program-specific objectives are as follows:

I. Clinician who provides preventive, promotive, curative, palliative, and holistic care with compassion.
II. Leader and member of the healthcare team, capable of collecting, analyzing, synthesizing, and communicating health data effectively.
III. Effective communicator with patients, families, colleagues, and the community.
IV. Lifelong learner committed to continuous improvement of skills and knowledge.
V. Professional committed to excellence, ethics, responsiveness, and accountability to patients, the community, and the profession.

No	*Subject*	*Program Specific outcome*
1. 1	*Anatomy*	• **PSO1 - Understanding of the gross and microscopic structure and development of the human body:** • This PSO focuses on students acquiring knowledge about both the overall (gross) and detailed (microscopic) anatomy of the human body. It includes understanding how different body parts develop over time. • **PSO2 - Comprehension of normal regulation and integration of the functions of the organs and systems on the basis of structures:** • This PSO emphasizes understanding how the structures of organs and systems relate to their normal functions. It involves grasping the integration of these functions at a physiological level. • **PSO3 - Understanding of the clinical correlation of organs and structures involved and interpret the anatomical basis of the disease presentations:**

		• Here, the focus is on applying anatomical knowledge to clinical scenarios. Students are expected to correlate anatomical structures with clinical conditions and interpret how diseases manifest based on anatomical foundations. • **PSO4 - To instill professionalism by developing communication, leadership skills with ethical and moral values:** • This PSO addresses the development of professional attributes beyond technical knowledge. It includes fostering communication skills, leadership qualities, and cultivating ethical and moral values essential for healthcare professionals. • **PSO5 - To develop life-long learning behavior by acquiring and updating existing knowledge and skills regularly for continuous professional development:** • This PSO emphasizes the importance of ongoing learning and professional growth. It encourages students to adopt a mindset of continuous improvement, staying updated with advancements in the field, and adapting to changes in healthcare practices.
2.	***Physiology***	• **Understanding of normal functioning of various organs and organ systems of the human body:** • This objective focuses on acquiring comprehensive knowledge about how different organs and systems in the human body function under normal conditions. It involves understanding their structure, physiology, and the integration of their functions within the body. • **To understand the pathophysiological basis of disease:** • This objective centers on understanding the

		mechanisms by which diseases develop and how they disrupt normal physiological processes. It involves studying the cellular, molecular, and systemic changes that occur in disease states. • **Distinguish between normal and abnormal data findings obtained as a result of tests which he/she has performed and observed in the laboratory:** • This objective emphasizes the ability to interpret laboratory test results effectively. It involves recognizing and distinguishing between normal and abnormal findings based on the tests performed, which is crucial for accurate diagnosis and patient management.
3.	***Biochemistry***	• **PSO1 - Understand the biochemical basis of health:** • This outcome emphasizes understanding the fundamental biochemical processes that contribute to maintaining health in the human body. It includes knowledge of metabolic pathways, cellular functions, and biochemical homeostasis. • **PSO2 - Understand the biochemical basis of diseases and their complications:** • This PSO focuses on understanding how biochemical imbalances or dysfunctions can lead to various diseases and their associated complications. It involves studying metabolic disorders, biochemical markers of disease, and the biochemical mechanisms underlying pathologies. • **PSO3 - Understand the molecular aspects of cellular events:** • This outcome involves comprehending the molecular processes that govern cellular functions and events. It includes knowledge of cellular signaling, gene expression, protein

		synthesis, and molecular interactions within cells. • **PSO4 - Understand the genetic basis of diseases and their diagnosis:** • This PSO centers on understanding how genetic factors contribute to the development of diseases. It includes knowledge of genetic mutations, inheritance patterns, genetic testing methods, and their applications in diagnosing genetic disorders. • **PSO5 - Understand the nutritional importance in health and diseases:** • This outcome emphasizes understanding the role of nutrition in maintaining health and its impact on disease prevention and management. It includes knowledge of essential nutrients, dietary requirements, nutritional deficiencies, and the biochemical basis of nutrition-related diseases. • **PSO6 - Understand the basis and rationale of biochemical laboratory tests:** • This PSO focuses on understanding the principles behind biochemical laboratory tests used in clinical and research settings. It includes knowledge of test methodologies, biochemical markers, interpretation of test results, and their clinical significance. • **PSO7 - Demonstrate the ability to interpret laboratory investigation results in a clinical context:** • This outcome involves developing the skills to analyze and interpret biochemical laboratory test results in the context of patient care and clinical practice. It includes understanding the significance of abnormal findings, correlating results with patient symptoms, and making informed clinical decisions based on laboratory

		data.
4.	***Pathology***	• **PSO1: Comprehension of the causes, evolution, and mechanisms of disease:** • This outcome focuses on developing a deep understanding of how diseases originate (causes), progress over time (evolution), and the underlying biological processes (mechanisms) involved. It includes studying etiology, pathogenesis, and the natural history of diseases. • **PSO2: Knowledge of alterations in gross and cellular morphology of organs in disease states:** • This PSO emphasizes understanding the structural changes that occur in organs and tissues at both macroscopic (gross) and microscopic (cellular) levels due to disease processes. It involves recognizing and interpreting pathological changes visible during medical examinations and in laboratory investigations. • **PSO3: Ability to correlate the natural history and structural and functional changes with the clinical manifestations of diseases, their diagnosis, and therapy:** • Here, the focus is on integrating knowledge of disease progression and structural alterations with clinical manifestations (symptoms and signs). Students are expected to correlate these findings to facilitate accurate diagnosis and formulate appropriate therapeutic strategies. • **PSO4: Should be able to function as a team, develop an attitude of cooperation with colleagues. Develop communication skills to convey the diagnosis:** • This PSO addresses the development of interpersonal skills essential for effective teamwork in healthcare settings. It emphasizes cultivating attitudes of cooperation and

		professionalism among colleagues. Communication skills are particularly highlighted for effectively conveying diagnostic information to patients and fellow healthcare providers. • **PSO5: Update newer entities, recent classifications, and diagnostic methodologies using problem-based learning:** • This outcome underscores the importance of staying updated with advancements in medical knowledge and diagnostic practices. Problem-based learning approaches are employed to foster critical thinking and application of new information, including understanding newer disease entities, updated classifications, and diagnostic techniques.
5.	***Pharmacology***	• **Knowing about essential and commonly used drugs and an understanding of the pharmacologic basis of therapeutics:** • This objective focuses on acquiring knowledge about the pharmacology of commonly used drugs. It includes understanding their mechanisms of action, pharmacokinetics (absorption, distribution, metabolism, excretion), pharmacodynamics (effects on the body), and therapeutic uses. • **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:** • This objective emphasizes the practical application of pharmacological knowledge. It involves developing skills to assess clinical conditions, consider the pharmacological properties of drugs (such as their efficacy and safety profiles), and make informed decisions about drug selection and prescription based on patient-specific factors, including suitability and cost-effectiveness.

		• **Knowledge of pharmacovigilance, essential drug concept and list, sources of drug information, and industry-doctor relationships:** • This objective covers broader aspects of pharmacology and pharmaceutical practice. It includes understanding pharmacovigilance (monitoring and reporting adverse drug reactions), awareness of essential drug concepts and lists (identifying vital drugs for public health), accessing reliable sources of drug information (such as drug databases and literature), and understanding the ethical considerations and implications of industry relationships in healthcare.
6.	***Microbiology***	• **Understanding the role of microbial agents in health and disease:** • This objective involves comprehending how microbial agents (such as bacteria, viruses, fungi, parasites) contribute to both health (e.g., microbiota, beneficial roles) and disease (e.g., infections, pathogenic roles). It includes understanding the characteristics, epidemiology, and pathogenesis of various microorganisms. • **Understanding of the immunological mechanisms in health and disease:** • Here, the focus is on understanding the immune system's role in maintaining health and responding to infectious agents. It includes knowledge of immune cells, cytokines, immune responses (innate and adaptive), immunodeficiencies, autoimmune diseases, and hypersensitivity reactions. • **Ability to correlate the natural history, mechanisms, and clinical manifestations of infectious diseases as they relate to the properties of microbial agents:** • This objective involves integrating knowledge

		of microbial properties (e.g., virulence factors, resistance mechanisms) with the natural history and clinical manifestations of infectious diseases. It includes understanding disease transmission, host-pathogen interactions, diagnosis, treatment, and prevention strategies. • **Knowledge of the principles and application of infection control measures:** • This objective focuses on understanding and applying infection control principles to prevent healthcare-associated infections and limit the spread of infectious diseases. It includes knowledge of hygiene practices, sterilization, disinfection, isolation precautions, vaccination, and antimicrobial stewardship. • **An understanding of the basis of choice of laboratory diagnostic tests and their interpretation:** • Here, the focus is on understanding the principles behind selecting appropriate laboratory diagnostic tests for infectious diseases. It includes knowledge of different diagnostic methods (microbiological, serological, molecular), their advantages and limitations, interpretation of test results, and their clinical relevance.
7.	***Forensic Medicine***	• **Understanding of medico-legal responsibilities of physicians in primary and secondary care settings:** • This objective involves understanding the legal obligations and responsibilities that physicians have in both primary (e.g., clinics, outpatient settings) and secondary care settings (e.g., hospitals, specialized care facilities). It includes knowledge of patient rights, consent, confidentiality, documentation, and legal implications of medical decision-making. • **Understanding of the rational approach to the investigation of crime, based on scientific and legal principles:**

		• Here, the focus is on understanding how medical and scientific principles intersect with legal procedures in the investigation of crimes. It includes knowledge of forensic medicine, evidence collection, documentation, and the role of medical professionals in providing expert testimony in legal proceedings. • **Ability to manage medical and legal issues in the case of poisoning/overdose:** • This objective involves developing skills to manage situations involving poisoning or drug overdose from both medical and legal perspectives. It includes recognizing symptoms, providing medical treatment, documenting findings for legal purposes, and understanding the legal implications of such cases. • **Understanding the medico-legal framework of medical practice and medical negligence:** • This objective focuses on understanding the legal framework within which medical professionals practice. It includes knowledge of medical laws, regulations, standards of care, medical malpractice, liability issues, and the consequences of medical negligence. • **Understanding of codes of conduct and medical ethics:** • This objective involves understanding the ethical principles and codes of conduct that govern medical practice. It includes knowledge of patient autonomy, beneficence, non-maleficence, justice, informed consent, confidentiality, and ethical decision-making in clinical and research settings.
8.	***Community Medicine***	• **Understanding of the concept of health and disease:** • This objective focuses on developing a holistic understanding of what constitutes health and

		how diseases manifest. It includes knowledge of physiological, psychological, and social aspects of health, as well as the factors that contribute to disease development. • **Understanding of demography, population dynamics, and disease burden on a national and global scale:** • This objective involves studying population demographics, dynamics, and epidemiological patterns of disease burden. It includes understanding how population factors influence health outcomes and healthcare planning at national and global levels. • **Comprehension of principles of health economics and hospital management:** • Here, the focus is on understanding the economic principles that underpin healthcare delivery and management. It includes knowledge of healthcare financing, resource allocation, cost-effectiveness analysis, and hospital administration. • **Understanding of physical, social, psychological, economic, and environmental determinants of health and disease:** • This objective emphasizes understanding the broad range of factors that influence health and contribute to disease. It includes physical (biological), social (community and societal), psychological (mental health), economic (financial), and environmental (ecological) determinants that impact health outcomes. • **Ability to recognize and manage common health problems, including physical, emotional, and social aspects at individual, family, and community levels in the context of National Health Programs:** • This objective involves developing skills to identify and address prevalent health issues across different levels of society. It includes

		recognizing health problems, conducting assessments, and implementing interventions that consider physical, emotional, and social aspects within the framework of national health policies and programs. • **Ability to recognize, investigate, report, plan, and manage community health problems and emergencies:** • This objective focuses on preparing students to respond effectively to community health challenges and emergencies. It includes skills in identifying health threats, conducting investigations, reporting findings, planning interventions, and managing emergencies to protect and improve public health.
9.	***Otorhinolaryngology***	• **PSO 1:** Understand ENT emergencies and common disorders. • **PSO 2:** Diagnose and manage ENT problems in primary care settings, including emergencies. • **PSO 3:** Perform systematic ENT examinations and basic procedures in primary care. • **PSO 4:** Recognize and refer hearing impairments for specialized rehabilitation. • **PSO 5:** Identify and refer ENT and head/neck malignancies promptly for appropriate treatment. • **PSO 6:** Participate in CME, gain hands-on training, and apply new techniques in practice. • **PSO 7:** Communicate effectively with patients, especially regarding terminal illnesses and advanced treatment options. • **PSO 8:** Detect early hearing loss in newborns, facilitate cochlear implants, and educate on post-implant rehabilitation. • **PSO 9:** Organize public awareness programs on cancer prevention, emphasizing the risks of alcohol

		and tobacco use.
10.	***Ophthalmology***	• **PSO 1:** Understand common causes of visual impairment in the community. • **PSO 2:** Identify and manage ocular emergencies, making appropriate referrals when necessary. • **PSO 3:** Collaborate in team-based care for treating common eye diseases and implementing national health programs in primary care settings. • **PSO 4:** Effectively communicate with patients about blindness and strategies for prevention. • **PSO 5:** Cultivate a lifelong learning mindset by continuously updating skills in managing common eye diseases.
11.	***General Medicine***	**Knowledge:** 1. **Diagnose common clinical disorders with special reference to infectious diseases, nutritional disorders, tropical, and environmental diseases:** o Students are expected to identify and diagnose prevalent medical conditions, including those caused by infections, nutritional deficiencies, and diseases related to tropical and environmental factors. 2. **Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interactions, indications, and contra-indications:** o This outcome focuses on understanding and describing different treatment modalities, particularly drug therapies. It includes knowledge of appropriate dosages, potential side effects, drug interactions, indications for use, and situations where medications should not be used (contra-indications). 3. **Propose diagnostic and investigative procedures and ability to interpret them:** o Students should be able to suggest appropriate diagnostic tests and procedures based on clinical

		indications. They are expected to interpret the results of these investigations to aid in diagnosis and treatment planning. 4. **Provide first-level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required:** o This outcome emphasizes the ability to manage acute medical emergencies effectively at the primary care level. Students should also be able to determine when and how to refer patients to higher levels of care based on clinical urgency and complexity. 5. **Recognize geriatric disorders and their management:** o Students should be able to identify and manage medical conditions specific to elderly patients (geriatric disorders). This includes understanding the unique healthcare needs of older adults and appropriate management strategies. **b.) Skills:** 1. **Develop clinical skills (history taking, clinical examination, and other instruments of examination) to diagnose various common medical disorders and emergencies:** o This outcome focuses on developing practical skills in clinical assessment, including taking comprehensive medical histories, conducting thorough physical examinations, and using diagnostic tools effectively to diagnose medical conditions and emergencies. 2. **Refer a patient to secondary and/or tertiary level of health care after having instituted primary care:** o Students should be able to make informed decisions about referring patients to specialized or advanced levels of healthcare after providing initial primary care interventions. 3. **Perform simple routine investigations:**

		○ Students should be able to conduct basic diagnostic tests and investigations commonly used in clinical practice. This includes laboratory tests, imaging studies, and other diagnostic procedures as appropriate for routine medical evaluations. 4. **Assist with common bedside investigative procedures:** ○ This outcome involves acquiring practical skills in assisting with diagnostic procedures performed at the patient's bedside or in clinical settings. It includes techniques such as venipuncture, electrocardiography (ECG), and other bedside tests.
12.	***Orthopaedics***	• **PSO 1:** Recognize and assess bone injuries, dislocations, and poly-trauma, and provide initial care before referral. • **PSO 2:** Understand the medico-legal aspects related to trauma care. • **PSO 3:** Identify and manage common infections affecting bones and joints in primary care. • **PSO 4:** Recognize common congenital, metabolic, neoplastic, degenerative, and inflammatory bone diseases, and refer patients appropriately. • **PSO 5:** Perform basic orthopedic techniques suitable for a primary care setting.
13.	***Obstetrics & Gynaecology***	• **PSO 1:** Understand the physiology of pregnancy, fetal growth and development; Provide preconception counseling, antenatal care, conduct normal deliveries, and manage postpartum recovery. • **PSO 2:** Identify and manage high-risk pregnancies, abnormal labor, including operative vaginal deliveries, and complications during the postpartum period. • **PSO 3:** Safely prescribe medications during pregnancy and lactation; Counsel couples on birth spacing and provide support in choosing contraception

		methods. • **PSO 4:** Describe the anatomy and physiology of female reproductive organs; Identify, evaluate, and manage common gynecological conditions, cancers, and infertility. • **PSO 5:** Understand demographics and vital statistics related to women's health; Screen and counsel women for the prevention of gynecological cancers. • **PSO 6:** Foster a commitment to lifelong learning by updating knowledge and clinical skills through self-directed learning, reflective writing, seminars, quizzes, Continuing Medical Education (CME), workshops, and conferences.
14.	***Paediatrics***	• Assess and promote optimal growth, development, and nutrition of children and adolescents; identify deviations from normal. • Recognize and provide emergency and routine care for neonates, infants, children, and adolescents; refer as needed. • Identify children with special needs and refer appropriately. • Participate in national child health programs and adhere to Integrated Management of Neonatal and Childhood Illnesses (IMNCI) strategies. • Develop professionalism through effective communication, leadership skills, and ethical values. • Cultivate lifelong learning habits by regularly updating knowledge and skills for continuous professional development.
15.	***General Surgery***	• Understand the structural and functional basis, principles of diagnosis, and management of common surgical problems in adults and children. • Choose, calculate, and administer intravenous fluids, electrolytes, blood, and blood products

		appropriately based on clinical conditions. • Apply principles of asepsis, sterilization, disinfection, rational use of prophylaxis, therapeutic utilities of antibiotics, and universal precautions in surgical practice. • Know common malignancies in India, including their prevention, early detection, and therapy. • Perform common diagnostic and surgical procedures at the primary care level. • Recognize, resuscitate, stabilize, and provide basic life support to trauma patients. • Administer informed consent and counsel patients before surgical procedures. • Commit to advancing quality and patient safety in surgical practice.
16.	***Psychiatry***	• Understand normal human behavior, including learning, motivation, personality, and intelligence. • Differentiate between normal and abnormal behavior. • Classify and recognize clinical manifestations of psychiatric disorders across all ages. • Plan and implement appropriate management for a range of psychiatric disorders. • Apply rational therapeutic approaches in treating psychiatric conditions. • Promote mental health and hygiene practices.
17.	***Pulmonary Medicine***	• Knowledge of common respiratory diseases, their clinical manifestations, diagnosis, and management. • Ability to recognize, diagnose, and manage pulmonary tuberculosis in accordance with the National Tuberculosis Control Program. • Capability to manage common respiratory

		emergencies in a primary care setting and refer patients appropriately.
18.	***Dermatology***	• Understand the principles of diagnosing diseases affecting the skin, hair, nails, and mucosa. • Recognize, diagnose, order appropriate investigations, and treat common skin diseases, including leprosy, in a primary care setting; refer as necessary. • Apply a syndromic approach to recognize, diagnose, prevent, counsel, test, and manage common sexually transmitted diseases, including HIV, according to national health priorities. • Recognize and manage dermatological emergencies, including drug reactions; refer as needed.
19.	***Radiology***	• Understand the indications for various radiological investigations commonly used in clinical practice. • Identify abnormalities in common radiological investigations. • Be aware of the potential ill effects of radiation and employ appropriate radiation protective measures.

Postgraduate (PG) Program Outcomes

The objectives for postgraduate programs are specific and defined by the National Medical Commission. These objectives are adopted as specified, ensuring that all students pursuing a postgraduate course achieve the defined outcomes.

1	***MD in Community Medicine***	**1) Developing a Skilled Cadre of Medical Professionals** The program aims to create a cadre of medical professionals proficient in: • Applying principles of Public Health and Community Medicine. • Utilizing applied epidemiology to address health challenges. • Contributing significantly to the formulation of National Health Policies and Programs.

		• Adopting a systems approach for overall human development. **2) Standardizing Teaching and Training Approaches** The goal is to standardize teaching and training methods at the postgraduate level for Community Medicine to ensure consistency and excellence in education and practice. **3) Research Competency** The program emphasizes developing strong research skills, including the ability to: • Formulate relevant and impactful research questions. • Perform thorough literature searches. • Design and conduct studies using appropriate methodologies and tools. • Manage data collection and analysis effectively. • Produce comprehensive and insightful research reports. These objectives ensure that graduates are well-equipped to address public health challenges, contribute to policy-making, and advance medical research, thereby enhancing the health and well-being of the community.
2	***MD in Anatomy***	**1) Awareness of Contemporary Advances** • Is aware of the latest developments and contemporary advances in the field of Anatomy. **2) Competency in Anatomy** • Has acquired the competencies in Anatomy necessary for practice at all levels of the health system. **3) Participation in National Health Education Programs** • Is capable of discharging responsibilities and actively participating in National Health Education Programs. **4) Research Methodology** • Is oriented to and proficient in the principles of research methodology.

		5) Educational Skills • Has acquired the skills to educate medical and paramedical professionals effectively. **6) Communication Skills** • Is skilled in effectively communicating with students and colleagues across various medical and paramedical fields. **7) Interdisciplinary Integration** • Has acquired the ability to integrate anatomy with other disciplines as needed. **8) Teaching Innovation** • Possesses the qualities of a good teacher, capable of innovative teaching methodologies. **9) Management and Leadership** • Demonstrates adequate management skills to function effectively as a leader of a team engaged in teaching and research. These objectives ensure that graduates are well-prepared to contribute to the medical field through advanced knowledge, effective teaching, robust research, and strong leadership skills.
3	***MD in Anesthesia***	**1) Theoretical Knowledge** • **Basic Sciences**: The student should have a solid understanding of basic sciences such as Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Pharmacology, Statistics, and Physics as they apply to Anaesthesia. • **In-depth Knowledge**: The student should acquire comprehensive knowledge, including recent advances in Anaesthesia. • **Procedural Competence**: The student should be fully conversant with bedside procedures (both diagnostic and therapeutic) and should have knowledge of the latest diagnostic and therapeutic procedures available, including radiological methods. **2) Teaching**

		• **Teaching Methodology**: The student should learn and develop competence in the basic methodology of teaching medical and paramedical students. • **Modern Teaching Tools**: The student should be familiar with the latest teaching modes, including computer and PowerPoint presentations, simulator training, and evidence-based medical education. **3) Attitude Development** • **Communication Skills**: The student should develop an attitude that fosters appropriate communication with colleagues, enabling effective functioning in a group setting within the Operating Room and Intensive Care Unit. • **Leadership**: The student should develop the ability to function as a leader in the operating room. These objectives aim to ensure that postgraduate students in Anaesthesia are well-rounded, knowledgeable, and skilled in both theoretical and practical aspects, are proficient educators, and possess the necessary communication and leadership skills to excel in their field.
4	***MD in Biochemistry***	**1) Acquisition of Knowledge** • The student should be able to clearly explain the concepts and principles of biochemistry and cell biology. • The student should understand the correlations of these principles with cellular and molecular processes involved in health and disease. **2) Teaching and Training** • The student should be capable of effectively teaching undergraduate students in medicine and allied health science courses to ensure they become competent healthcare professionals. • The student should contribute to the training of postgraduate students. **3) Diagnostic Services** • The student should be able to set up, supervise, and manage a diagnostic laboratory in Biochemistry within a hospital setting. • The student should ensure quality control in the laboratory and provide reliable support services. • The student should offer consultation services to clinicians for

		diagnostic tests in biochemistry and assist in interpreting laboratory results. **4) Research** • The student should be able to plan and carry out a research project from inception to publication. • The student should pursue academic interests and engage in continuous life-long learning to gain more experience in biochemistry. • The student should eventually be able to guide postgraduates in their thesis work. These objectives ensure that postgraduate students in Biochemistry are well-equipped with comprehensive knowledge, effective teaching skills, proficiency in managing diagnostic services, and strong research capabilities, enabling them to contribute significantly to the field of biochemistry and healthcare.
5	***MD in Dermatology***	**1) Knowledge of Basic Sciences** • The student should have a solid understanding of basic sciences such as Anatomy, Physiology, Biochemistry, Microbiology, Pathology, and Pharmacology as they apply to dermatology. **2) In-depth Subject Knowledge** • The student should acquire comprehensive and up-to-date knowledge in Dermatology, Venereology, and Leprosy, including recent advances in the field. **3) Proficiency in Bedside Procedures** • The student should be fully conversant with diagnostic and therapeutic bedside procedures and knowledgeable about the latest diagnostic and therapeutic options available. **4) Practical and Procedural Skills** • The student should acquire practical and procedural skills pertinent to Dermatology, Venereology, and Leprosy. **5) Clinical Management and Investigation** • The student should be able to critically evaluate, initiate investigations, and clinically manage cases in Dermatology,

		Venereology, and Leprosy using relevant investigations. **6) Prevention and Rehabilitation** • The student should plan and advise on measures for the prevention and rehabilitation of patients with various dermatological conditions. **7) Implementation of National Health Programs** • The student should be able to ensure the effective implementation of National Health Programs, particularly those related to sexually transmitted diseases (STD) and leprosy. **8) Research and Professional Skills** • The student should acquire training in research methodology, professionalism, attitude, and communication skills. **9) Teaching Skills** • The student should learn basic teaching methodologies and develop competence in teaching medical and paramedical students. **10) Problem-Solving Skills** • The student should acquire problem-solving skills to address and manage challenges in the field of dermatology effectively. These objectives aim to ensure that postgraduate students in Dermatology, Venereology, and Leprosy are well-prepared with extensive knowledge, practical skills, teaching abilities, and research capabilities, enabling them to excel in their field and contribute to healthcare effectively.
6	***MD in General Medicine***	**1) Efficient Practice Backed by Scientific Knowledge** • The student should practice General Medicine efficiently, supported by a solid foundation of scientific knowledge, including basic sciences and practical skills. **2) Diagnosis and Management** • The student should be able to diagnose and manage the majority of conditions in internal medicine, both clinically and

		with the help of relevant investigations. **3) Empathy and Ethical Standards** • The student should exercise empathy and a caring attitude, maintaining professional integrity, honesty, and high ethical standards. **4) Comprehensive Treatment Planning** • The student should plan and deliver comprehensive treatment using principles of rational drug therapy. **5) Prevention and Rehabilitation** • The student should plan and advise measures for the prevention and rehabilitation of patients within the specialty of internal medicine. **6) Emergency Management** • The student should manage emergencies efficiently by providing Basic Life Support (BLS) and Advanced Life Support (ALS) in emergency situations. **7) Referral to Specialists** • The student should recognize conditions that may be outside their area of specialty/competence and refer patients to appropriate specialists. **8) Documentation Skills** • The student should demonstrate skills in documenting case details, including epidemiological data. **9) National Health Programs** • The student should play an active role in the implementation of National Health Programs. **10) Research Methodology and Clinical Epidemiology** • The student should demonstrate competence in the basic concepts of research methodology, clinical epidemiology, and

		the preventive aspects of various diseases. **11) Teaching Motivation** • The student should be a motivated teacher, eager to share knowledge and skills with colleagues, juniors, and other learners. **12) Continuing Education** • The student should show a keen interest in continuing education, whether in a teaching institution or in practice, using appropriate learning resources. **13) Medico-Legal Responsibilities** • The student should be well-versed in their medico-legal responsibilities. **14) Research and Auditing** • The student should undertake audits, use information technology tools, and carry out both basic and clinical research with the aim of publishing and presenting their work at scientific forums. **15) Recognition of Mental Health Conditions** • The student should be able to recognize mental conditions characterized by self-absorption and reduced ability to respond to the outside world (e.g., autism), abnormal functioning in social interaction, repetitive behavior, poor communication, etc. These objectives ensure that postgraduate students in Internal Medicine are comprehensively trained in clinical practice, research, teaching, and ethical standards, enabling them to provide high-quality care and contribute meaningfully to the medical community.
7	***MD in Microbiology***	**1) Competence as a Clinical Microbiologist** • The student should demonstrate competence in the practice of clinical microbiology.

		2) Effective Interaction with Allied Departments • The student should interact effectively with allied departments, providing services in both basic and advanced laboratory investigations. **3) Application in Clinical Settings** • The student should demonstrate the application of microbiology in various clinical settings to solve diagnostic and therapeutic problems and implement preventive measures. **4) Role in Hospital Infection Control** • The student should play a pivotal role in hospital infection control, including the formulation of antibiotic policies and the management of biomedical waste. **5) Collaborative Research Skills** • The student should acquire skills in conducting collaborative research in microbiology and allied sciences. **6) Clinical/Experimental Research** • The student should conduct clinical and experimental research that has significant implications for human health and patient care. **7) Effective Communication Skills** • The student should demonstrate effective communication skills necessary for the practice of clinical microbiology and for teaching undergraduate students. **8) Establishing Microbiological Services** • The student should be able to establish good clinical microbiological services in hospitals and communities, covering bacteriology, virology, parasitology, immunology, and mycology. **9) Teaching Assignments** • The student should be able to plan, execute, and evaluate

		teaching assignments in medical microbiology. **10) Research Planning and Execution** • The student should plan, execute, analyze, and present research work in medical microbiology. **11) Skills for Collaborative Research** • The student should acquire various skills necessary for collaborative research. **12) Participation in Academic Activities** • The student should participate in workshops, seminars, journal clubs, and demonstrations in allied departments. **13) Upholding the Prestige of the Discipline** • The student should uphold the prestige of the discipline of clinical microbiology among the medical fraternity. These objectives aim to ensure that postgraduate students in Clinical Microbiology are thoroughly trained in clinical practice, research, teaching, and inter-departmental collaboration, enabling them to provide high-quality microbiological services and contribute significantly to healthcare and medical education.
8	***MD in Pathology***	1) Diagnose routine and complex clinical problemson the basis of histopathology (surgical pathology) and cytopathology specimens, blood and bone marrow examination and various tests
9	***MD in Paediatrics***	• **Recognizes Health Needs and Professional Obligations:** • **Understanding:** Professionals must be attuned to the health needs of infants, children, and adolescents, aligning their practice with national health policies and ethical standards. • **Application:** This involves recognizing specific health requirements at various stages of childhood and adolescence and ensuring that interventions and care adhere to ethical and policy guidelines. • **Competencies in Pediatrics:** • **Community and Health System Practice:** Professionals

		should possess the necessary skills to provide pediatric care effectively at all levels, from community settings to more advanced health care facilities. • **Competencies Include:** Diagnosis, treatment, and management of common pediatric conditions, understanding growth and development, and applying preventive health measures. • **Effective Communication Skills:** • **Communication with Children and Families:** Professionals must be adept at engaging with children and their families, providing clear, compassionate, and age-appropriate communication. • **Community Engagement:** Effective communication also extends to interacting with the broader community to promote health education and awareness. • **Awareness of Advances in Medical Sciences:** • **Keeping Updated:** Staying informed about the latest research, technological advancements, and best practices in pediatric care is crucial for providing high-quality care. • **Application:** This means integrating new knowledge into practice to improve patient outcomes and incorporating contemporary methods into routine care. • **Principles of Research Methodology:** • **Research Orientation:** Understanding and applying research methodologies are important for evidence-based practice. • **Application:** This involves knowing how to design, conduct, and interpret research studies, and using research findings to inform clinical practice and policy. • **Skills in Educating Professionals:** • **Education and Training:** Professionals should be capable of teaching and mentoring medical and paramedical staff, contributing to the development of their skills and knowledge. • **Methods:** This can include conducting workshops, providing lectures, and offering hands-on training. • **Recognition and Collaboration for Mental Health Conditions:** • **Identification of Mental Health Issues:** Professionals must

		be able to identify signs of mental health conditions in children and adolescents. • **Collaboration:** Effective management often requires working with psychiatrists and child psychologists to ensure comprehensive care and treatment for mental health issues.
10	***MD Pharmacology***	• **Acquisition of Knowledge:** • **Pharmacology and Therapeutics:** o **Concepts and Principles:** Students should have a thorough understanding of pharmacology, including the mechanisms of drug action, pharmacokinetics (how drugs are absorbed, distributed, metabolized, and excreted), and pharmacodynamics (the effects of drugs on the body). o **Drug Development:** Knowledge of the drug development process is crucial, which includes preclinical research, clinical trials, regulatory approval, and post-market surveillance. • **Drugs and Cosmetics Act:** o **Regulatory Framework:** Understanding the legal framework governing the development, approval, and marketing of pharmaceuticals and cosmetics is essential. This includes knowledge of the regulations for drug safety, efficacy, and quality control. • **Clinical Trial Procedures:** o **Clinical Trials:** Students should be able to explain the phases of clinical trials, from Phase I (safety and dosage) to Phase IV (post-marketing surveillance), and the procedures involved in conducting and evaluating trials. • **Teaching and Training:** • **Undergraduate Education:** o **Teaching Competence:** Students should be able to effectively teach MBBS students and those in allied health science courses (like Dentistry and Nursing). This includes developing and delivering lectures, creating practical sessions, and providing constructive feedback. o **Competency Development:** The goal is to ensure that students become competent healthcare professionals who can apply their knowledge in clinical settings. • **Training Postgraduates:**

		○ **Guidance:** Students should also be capable of contributing to the training of postgraduate trainees, guiding them through complex clinical cases and research projects, and helping them develop their skills and knowledge. • **Research:** • **Research Project Management:** ○ **From Planning to Publication:** Students should be able to design, conduct, and complete research projects, whether basic or clinical. This involves formulating research questions, designing studies, collecting and analyzing data, and publishing findings in scientific journals. • **Life-Long Learning:** ○ **Continuous Improvement:** Engaging in continuous learning and staying updated with advancements in the field is crucial. This includes pursuing additional academic interests and adapting to new developments. • **Guiding Postgraduates:** ○ **Mentorship:** Experienced students or professionals should be able to mentor postgraduate students through their research projects, offering guidance on research design, methodology, and thesis writing.
11	***MD Psychiatry***	1. Recognize the role of mental health in meeting national health needs. 2. Uphold ethical standards in psychiatric teaching and practice. 3. Identify social, economic, biological, and emotional factors affecting mental health. 4. Determine how environmental factors influence mental health. 5. Implement appropriate diagnostic, therapeutic, and rehabilitative measures for mental illness. 6. Conduct thorough histories, ethical physical exams, and evaluations for accurate diagnosis. 7. Perform necessary investigative and therapeutic procedures for psychiatric patients. 8. Recommend and interpret laboratory and imaging tests effectively. 9. Develop and deliver comprehensive treatment plans using rational drug therapy. 10. Plan rehabilitation strategies for patients with chronic psychiatric conditions. 11. Manage psychiatric emergencies efficiently and

		empathetically. 12. Use advanced communication skills for explaining management, providing counseling, and delivering health education. 13. Apply evidence-based practices in psychiatry. 14. Demonstrate a solid understanding of research methodology and epidemiology. 15. Implement national mental health programs responsibly and effectively. 16. Understand and apply the principles of essential and rational drug use. 17. Be aware of legal issues related to psychiatric practice. 18. Recognize special considerations in Child, Adolescent, and Geriatric Psychiatry. 19. Understand research methodology, plan ethical projects, interpret findings, and apply them clinically. Be proficient in accessing information and basic statistics. 20. Learn effective teaching methods to educate medical students, health professionals, and the public.
12	***MD Radiodiagnosis***	• **Skill Development in Diagnostic and Interventional Imaging:** • **Conduct Imaging Studies:** Train students to perform a range of diagnostic and interventional imaging procedures, including both conventional techniques (like X-rays and CT scans) and advanced modalities (such as MRI and PET scans). • **Interpret Imaging Studies:** Equip students with the expertise to accurately analyze and interpret imaging results, ensuring correct diagnosis and effective treatment planning. • **Research and Teaching Proficiency:** • **Organize Research:** Develop students' abilities to design, conduct, and manage research projects in the field of radiology. This includes formulating research questions, designing studies, and analyzing data. • **Conduct Research:** Foster skills in conducting original research, contributing to advancements in radiology and imaging sciences. • **Teaching Activities:** Train students to teach and mentor others in radiology, including medical students, residents, and other healthcare professionals. This involves preparing educational materials, delivering lectures, and supervising practical training.

		• **Understanding Medical Ethics and Legal Aspects:**
		
		  • **Medical Ethics:** Ensure that students are well-versed in the ethical considerations specific to radiology and imaging, such as patient consent, confidentiality, and the responsible use of imaging technologies.
		  • **Legal Aspects:** Familiarize students with the legal issues related to imaging and intervention, including regulatory compliance, documentation, and legal responsibilities associated with radiological practices.

13	***MS Otorhinolaryngology***	• **Ethical Practice:**
		
		  • **Patient-Centered Care:** Practice the specialty with a focus on ethical principles, considering the needs and well-being of individual patients.
		  • **Community and Public Health:** Ensure that practices align with broader community health needs and public health standards.
		
		• **Understanding Basic Sciences:**
		
		  • **Integration of Knowledge:** Demonstrate a thorough understanding of basic sciences relevant to the specialty and apply this knowledge effectively in clinical settings.
		
		• **Diagnosis and Management:**
		
		  • **Clinical Proficiency:** Diagnose and manage a wide range of conditions within the specialty, using both clinical judgment and relevant diagnostic investigations.
		
		• **Health Promotion and Disease Management:**
		
		  • **Comprehensive Care:** Plan and implement strategies for health promotion, disease prevention, curative interventions, and rehabilitation specific to the specialty of ENT (Ear, Nose, and Throat).
		
		• **Cognitive Skills Evaluation:**
		
		  • **Formative and Summative Assessment:** Exhibit cognitive abilities and practical knowledge in ENT and related fields during evaluations and assessments.

		• **National Health Programs:**
		
		  • **Role in Public Health Initiatives:** Contribute effectively to the implementation of National Health Programs, fulfilling assigned roles and responsibilities.
		
		• **Research Competence:**
		
		  • **Research Methodology:** Demonstrate proficiency in basic research methodologies and the ability to write a thesis and research papers, contributing to the field's knowledge base.
		
		• **Learning and Teaching Skills:**
		
		  • **Educational Skills:** Develop strong skills in learning, communication, and teaching to effectively educate peers, students, and other healthcare professionals.
		
		• **In-Depth Knowledge and Integration:**
		
		  • **Specialty Knowledge:** Acquire detailed knowledge of the specialty, including recent advances, and integrate this into clinical practice.
		
		• **Latest Diagnostics and Therapeutics:**
		
		  • **Up-to-Date Practice:** Stay current with the latest diagnostic and therapeutic advancements in the specialty to provide the best possible care.

14	***MS Obstetrics and Gynaecology***	• **Comprehensive Maternal Care:**
		
		  • **Antenatal, Intranatal, and Post-natal Care:** Deliver high-quality care throughout the pregnancy journey, from antenatal (before birth) to intranatal (during labor) and post-natal (after birth), managing both normal and complicated cases.
		
		• **Complicated Pregnancy Management:**
		
		  • **Complex Cases:** Provide effective care for pregnant women with complicated pregnancies, addressing both medical and obstetric challenges.
		
		• **Neonatal Care:**

		• **Normal and High-Risk Neonates:** Offer appropriate care for neonates, including those with high-risk conditions, ensuring their health and well-being. • **Obstetrical Ultrasound:** • **Ultrasound Skills:** Perform obstetrical ultrasounds for normal and abnormal pregnancies, including Doppler studies to assess blood flow and fetal health. • **Emergency Management:** • **Obstetrical and Gynecological Emergencies:** Manage all types of obstetric and gynecological emergencies effectively, making referrals when necessary for specialized care. • **Gynecological Care:** • **Gynecological Issues:** Provide quality care for gynecological problems, including screening and managing gynecological cancers, even during pregnancy. • **Infertility and Assisted Reproductive Techniques:** • **Infertility Evaluation:** Conduct thorough evaluations of infertile couples and have comprehensive knowledge of assisted reproductive techniques, such as ovulation induction, in vitro fertilization (IVF), intra-cytoplasmic sperm injection (ICSI), gamete donation, and surrogacy. Understand the legal and ethical aspects of these procedures. • **Fertility Regulation Counseling:** • **Contraceptive Counseling:** Offer counseling and manage fertility regulation methods, including reversible and irreversible contraception and emergency contraception. • **Management of Spontaneous Abortion and MTP:** • **Abortion and Termination of Pregnancy:** Provide care for women experiencing spontaneous abortion or seeking medical termination of pregnancy (MTP), managing any related complications effectively.
15	***MS Ophthalmology***	1. **Basic Ophthalmology Knowledge:** o Understand eye anatomy, function, and common

		disorders. 2. **Clinical Practice:** o Manage routine ophthalmic issues independently and seek help when needed. 3. **Environmental and Epidemiological Awareness:** o Recognize how the environment affects eye health and know common ophthalmic diseases. 4. **Integrated Disease Management:** o Combine preventive, curative, and rehabilitative measures in eye care. 5. **Rural Eye Care:** o Address common eye problems in rural settings effectively. 6. **Mobile Ophthalmic Units:** o Know the function and components of Mobile Ophthalmic Units. 7. **Current Developments:** o Stay updated on recent advancements in ophthalmology. 8. **Educational Program Planning:** o Develop and implement ophthalmology education programs using modern teaching methods. 9. **Research Skills:** o Identify research problems, conduct studies, and evaluate data critically. 10. **Logical Reasoning and Evidence Assessment:** o Draw conclusions logically and assess evidence for reliability and relevance. 11. **Medico-Legal Knowledge:** o Understand basic medico-legal aspects of ophthalmology. 12. **Patient Counseling and Consent:** o Effectively counsel patients and obtain informed consent.
16	***MS Orthopaedics***	• **Theoretical and Practical Knowledge:** • **Cognitive Domain:** Acquire in-depth theoretical knowledge. • **Psychomotor Domain:** Develop practical and clinical skills. • **Attitudes and Communication Skills:** • **Affective Domain:** Cultivate professional attitudes and effective communication skills.

		• **Research and Thesis Writing:**
		
		  • **Scholarly Activity:** Write theses and review research activities.
		
		• **Research Methodology Training:**
		
		  • **Practice-Based Learning:** Gain skills in research methodology and evidence-based practice.
		
		• **Professionalism:**
		
		  • **Professional Conduct:** Demonstrate high standards of professionalism.
		
		• **Teaching Skills:**
		
		  • **Educational Competence:** Develop effective teaching skills.

17	***MS in General Surgery***	1. **Diagnosis and Management:**
		  o Diagnose and manage common surgical conditions effectively.
		2. **Surgical Care:**
		  o Provide comprehensive preoperative, postoperative, and follow-up care.
		3. **Referral and Urgent Care:**
		  o Identify when urgent surgical intervention is needed and refer appropriately.
		4. **Patient Counseling:**
		  o Counsel patients and families about surgery, including risks and benefits.
		5. **Emergency Resuscitation:**
		  o Administer and coordinate emergency resuscitation in acute surgical situations, including trauma.
		6. **Disaster Response:**
		  o Organize and manage relief efforts in mass disaster situations, including triage.
		7. **National Health Programs:**
		  o Participate effectively in National Health Programs, particularly Family Welfare Programs.
		8. **Ethics and Legal Responsibilities:**
		  o Uphold medico-legal and ethical standards in practice and minimize medical errors.
		9. **Continuous Learning:**
		  o Stay updated on recent advances and new techniques in

		surgery. 10. **Informed Consent:** o Obtain informed consent before performing surgical procedures. 11. **Surgical Audit and Record Keeping:** o Conduct regular surgical audits and maintain accurate records. 12. **Academic Participation:** o Engage in departmental academic activities, including seminars, case discussions, and journal clubs, and keep a logbook. 13. **Basic Sciences Knowledge:** o Demonstrate understanding of basic sciences related to the specialty. 14. **Prevention and Rehabilitation:** o Advise on and plan preventive and rehabilitative measures for surgical patients. **Research:** 1. **Research Methodology:** o Understand basic research concepts, plan projects, and use library resources. 2. **Statistics Knowledge:** o Acquire fundamental knowledge of statistics. **Teaching:** 1. **Teaching Competence:** o Learn teaching methods and develop skills to educate medical and paramedical students. **Professionalism:** 1. **Patient Care and Integrity:** o Exhibit integrity, accountability, respect, and compassion in patient care, and commit to continuous professional development. 2. **Ethical Principles:** o Adhere to ethical principles, including confidentiality and informed consent. 3. **Cultural Sensitivity:** o Show sensitivity and responsiveness to patients' diverse backgrounds and needs.

18	***MD Respiratory Medicine***	**Clinical Competence:** • **Diagnosis and Management:** Accurately diagnose and manage a broad range of respiratory conditions, including chronic diseases (e.g., asthma, COPD), acute conditions (e.g., pneumonia, pulmonary embolism), and sleep disorders (e.g., sleep apnea). • **Procedural Skills:** Perform essential procedures such as bronchoscopy, spirometry, and arterial blood gas analysis. **2. Patient Care:** • **Comprehensive Management:** Provide holistic care that includes preoperative, operative, and postoperative management for respiratory conditions. • **Chronic Disease Management:** Develop and implement long-term management plans for chronic respiratory diseases, focusing on improving quality of life. **3. Diagnostic Proficiency:** • **Interpretation of Tests:** Interpret diagnostic tests such as chest X-rays, CT scans, pulmonary function tests, and blood gas analyses effectively. • **Utilization of Advanced Diagnostics:** Apply advanced diagnostic techniques when necessary, including advanced imaging and molecular diagnostics. **4. Evidence-Based Practice:** • **Research Integration:** Utilize current research and evidence-based guidelines to inform clinical decision-making and treatment plans. • **Critical Appraisal:** Critically appraise and apply scientific literature relevant to respiratory medicine. **5. Emergency Response:** • **Acute Care Management:** Recognize and manage respiratory emergencies (e.g., acute respiratory distress syndrome, status asthmaticus) efficiently. • **Resuscitation Skills:** Perform and coordinate emergency resuscitation measures as needed.

		6. Preventive Care: • **Disease Prevention:** Implement and advise on preventive measures to reduce the risk of respiratory diseases, including vaccination and lifestyle modifications. • **Health Promotion:** Educate patients on smoking cessation, pollution avoidance, and other respiratory health-promoting behaviors. **7. Patient and Family Education:** • **Effective Communication:** Provide clear and empathetic communication to patients and their families about respiratory conditions, treatment options, and lifestyle changes. • **Counseling Skills:** Offer counseling on managing chronic conditions and navigating the healthcare system. **8. Professionalism and Ethics:** • **Ethical Practice:** Adhere to ethical principles in patient care, including informed consent, patient confidentiality, and respectful interactions. • **Professional Development:** Demonstrate commitment to ongoing professional development and staying current with advancements in respiratory medicine. **9. Research Skills:** • **Research Methodology:** Understand basic research methodology and design, and conduct or participate in research projects relevant to respiratory medicine. • **Data Analysis:** Analyze and interpret research data and contribute to scholarly work through publications and presentations. **10. Teaching and Training:** • **Educational Activities:** Develop and deliver educational content related to respiratory medicine for medical students, residents, and other healthcare professionals. • **Mentorship:** Provide guidance and support to trainees and colleagues in the field of respiratory medicine.

The program outcomes for the MBBS Course (UG Program) reflect the various paths graduates may pursue after completing their degree. These outcomes highlight the students' preparedness for higher education, employment in various sectors, and further training. Here's a refined summary:

Program Outcomes for MBBS Graduates

1. **Pursuit of Higher Studies:**
    - **Advanced Education:** Graduates may opt for advanced studies, including certificate or degree courses, available both in India and internationally. Many graduates pursue these opportunities to deepen their knowledge and specialization.
2. **Employment in Healthcare Services:**
    - **Government or Private Sector:** Graduates often seek employment in government (State/Central) or private sectors (corporate hospitals or individual practices). Government service positions may include quotas for in-service candidates, allowing for further specialization after serving for 3-5 years.
3. **Preparation for Competitive Examinations:**
    - **Postgraduate Entrance Preparation:** Graduates who do not succeed in their initial attempt at competitive postgraduate entrance exams may enroll in intensive coaching programs for NEET-PG. This preparation aims to enhance their chances of securing a postgraduate position of their choice.

These outcomes illustrate the diverse opportunities and pathways available to MBBS graduates, emphasizing their readiness to advance in their careers through further education, employment, or additional training.