



# Sree Gokulam Medical College & Research Foundation

(A Unit of Foundation of Non-Resident Indians)

Approved by National Medical Commission, Affiliated to Kerala University of Health Sciences

Accredited by NABH & NABL

## Course Outcomes for different courses

**Program: MBBS**

**Course Name: Anatomy**

**Course Code: 101**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
ANA 101.1	Describe and identify macroscopic structures in the human body, correlating with functions & imaging features.	PO1, PO2, PO3, PO4, PO5, PO7
ANA 101.2	Describe anatomical basis for clinical presentations and methods of management; demonstrate testing of nerves, muscles, arterial pulse, movements of joints, etc. on live subject	PO1, PO2, PO3, PO4, PO5
ANA 101.3	Describe, identify and draw microscopic features of tissues and organs in the human body, correlating with functions.	PO1, PO2
ANA 101.4	Describe the process of human development along with basis for congenital anomalies, fundamentals of genetics and anomalies, screening & diagnostic tests.	PO1, PO2, PO4
ANA 101.5	Demonstrate empathetic behaviour towards and proper handling of the cadaver and biological tissue, and knowledge about body donation.	PO4, PO5, PO9



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**Program: MBBS**

**Course Name: Biochemistry**

**Course Code: BIO 102**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
BIO 102.1	Describe the structure, functions and interrelationship of biomolecules in health and diseases	PO1, PO2, PO5
BIO 102.2	Describe the metabolic pathways of biomolecules with regulation, biochemical basis of diseases associated and interpret the laboratory results. Demonstrate good laboratory practice and proper handling of the biological materials	PO1, PO2, PO3, PO4, PO5, PO7, PO8
BIO 102.3	Describe the molecular basis of gene expression, regulation, diseases associated and techniques in molecular biology with clinical applications	PO2, PO4, PO5, PO7
BIO 102.4	Discuss various Organ function Tests and interpret the results of laboratory data	PO1, PO2, PO5, PO6, PO7, PO9
BIO 102.5	Describe the mechanisms involved in the integration of metabolism and homeostasis. Interpret the results of laboratory investigations	PO1, PO2, PO3, PO5, PO6, PO7, PO9



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**Program: MBBS**

**Course Name: Physiology**

**Course Code: PHY 103**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
PHY 103.1	Describe the functions of general physiology, haematology, nerve muscle physiology and Cardiovascular system; perform haematological test, interpret the results and its management and clinical evaluation of the results and functioning of the instruments.	PO1, PO2, PO3, PO4, PO5, PO6
PHY 103.2	Describe the functions of the respiratory system, gastrointestinal system, renal system and skin & temperature regulation; perform clinical examination and functioning of instruments in human experiments and interpret the results and its implication in disease diagnosis.	PO1, PO2, PO3, PO4, PO5, PO6, PO7
PHY 103.3	Describe the physiology of endocrine system, reproductive system and growth and development and interpret the results and its implication in diagnosis of diseases	PO1, PO4, PO5
PHY 103.4	Describe the functions of central nervous system, and special senses and perform the clinical examination and note the findings, abnormalities and its management in correlation with various diseases	PO1, PO2, PO3, PO4, PO5, PO7



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**Program: MBBS**

**Course Name: Microbiology**

**Course Code: MIC 201**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
MIC 201.1	Correlate the natural history, mechanisms and clinical manifestations of infectious diseases as they relate to the properties of microbial agents.	PO1, PO5, PO7
MIC 201.2	Demonstrate appropriate method of sample collection in the performance of laboratory tests in the detection of microbial agents causing infectious diseases.	PO1, PO2, PO3, PO4, PO7, PO8
MIC 201.3	Choose and interpret the appropriate laboratory diagnostic tests and perform and comment on Gram Stain and Acid Fast Stain for the control and prevention of infectious diseases.	PO1, PO5, PO7
MIC 201.4	Discuss the immunological mechanisms in health and disease including vaccination.	PO5
MIC 201.5	Enumerate the principles of infection control measures, antimicrobial stewardship, postexposure prophylaxis and to demonstrate them in accordance to the given clinical situation.	PO2, PO4, PO5, PO6, PO7, PO8, PO9



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**Program: MBBS**

**Course Name: Pathology**

**Course Code: PAT 202**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
PAT 202.1	Demonstrate an understanding of basic pathological processes including cell death and injury, inflammation, circulatory disturbances, neoplasia, and the role of genetics, immunity and environmental factors in disease	PO1, PO2, PO5, PO7
PAT 202.2	Correlate pathological processes to pathogenesis, clinical features of common and important diseases. Understand risk factors, ethology, morphology and possible complications of such diseases.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8
PAT 202.3	Understand how pathological processes can be utilised in investigation, management and prevention of diseases.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8
PAT 202.4	Demonstrates the ability to correlate history, structural and functional changes with clinical manifestation of diseases, their diagnosis and management	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8
PAT 202.5	Demonstrate the ability to perform basic laboratory tests and interpret the results of the laboratory tests	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8



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**Program: MBBS**

**Course Name: Pharmacology**

**Course Code: PHA 203**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
PHA 203.1	Describe and apply pharmacological principles of Pharmacodynamics and pharmacokinetics of essential and commonly used drugs. Describe sources of drug information	PO1, PO2, PO5, PO8
PHA 203.2	Describe Pharmacovigilance. Identify, report and manage adverse drug reactions. Describe mechanisms of drug-drug interactions and their clinical importance	PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9
PHA 203.3	Prescribe rationally for common ailments and conduct prescription audit	PO1, PO2, PO3, PO4, PO6, PO8, PO9
PHA 203.4	Select and prescribe drugs in special situations such as pregnancy, lactation, pediatric, geriatric populations and for mass therapy under National health programs	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
PHA 203.5	Demonstrate empathetic behaviour towards patients. Counsel patients regarding safe use and proper handling of medicines. Educate public regarding drugs causing dependence and their health hazards	PO3, PO4, PO6, PO8, PO9
PHA 203.6	Describe the ethics and process of new drug development in clinical practice and animal research studies. Describe the ethical and legal issues involved in new drug development	PO3, PO4, PO5, PO6, PO7, PO8



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**Program: MBBS**

**Course Name: Community Medicine**

**Course Code: COM 301**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
COM 301.1	Explain the fundamental principles of public health, including epidemiology, biostatistics, health promotion, disease prevention and health education.	PO1, PO2, PO3, PO5, PO9
COM 301.2	Conduct comprehensive community health assessments, identify health problems and their risk factors, and plan appropriate interventions to address these issues through public health interventions.	PO1, PO2, PO3, PO7, PO8, PO9
COM 301.3	Appreciate the socio-psychological, cultural, economic, environmental and nutritional factors affecting health and develop humane attitude towards the patients in discharging one's professional responsibilities.	PO1, PO2, PO3, PO5, PO8, PO9
COM 301.4	Understand of planning & Implementation of the National Health Programs including practical aspects of Reproductive and child health, Prevention and control of communicable and non-communicable diseases, Immunization, population control, adhering to professional standards, and advocacy for the rights and welfare of individuals and communities.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
COM 301.5	Understand the principles and components of primary healthcare, including its role in promoting equitable access to healthcare services and improving health outcomes for individuals and communities and be competent to practice preventive, promotive, curative and rehabilitative medicine in respect to the commonly encountered health problems.	PO1, PO2, PO4, PO5, PO6, PO7, PO8
COM 301.6	Understand of principles and practice of conducting research, analysing data, and interpreting results, adhering to ethical principles including confidentiality, informed consent, for evidence-based practice to improve health outcomes.	PO1, PO2, PO3, PO4, PO5, PO7



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**Program: MBBS**

**Course Name: Forensic Medicine**

**Course Code: FMT 302**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	
FMT 302.1	Identify the Medicolegal aspects of Clinical Practice and to have a basic knowledge about the legal system and legal procedures in India	PO1, PO3, PO4, PO5, PO7, PO8
FMT 302.2	Identify, diagnose & manage common cases of poisoning and perform the medicolegal duties while dealing with a case of poisoning	PO1, PO2, PO3, PO4, PO7, PO8, PO9
FMT 302.3	Certify death and distinguish those case which need clinical investigation and have a basic knowledge about the procedure of medicolegal autopsy	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
FMT 302.4	Determine different types of Injuries, certification of injuries and know their medico legal implications	PO1, PO2, PO3, PO4, PO5, PO7, PO8
FMT 302.5	Practice medicine in a responsible manner, following the basic ethical principles and code of conduct laid down by the National Medical Commission	PO2, PO5, PO6





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**Program: MBBS**

**Course Name: General Medicine**

**Course Code: GNM 401**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
GNM 401.1	Describe the pathophysiologic basis, epidemiological profile, signs and symptoms of disease and their investigations and management	PO1, PO2, PO5
GNM 401.2	Take a detailed clinical history from the patient and analyse the history to arrive at a provisional diagnosis	PO1, PO2, PO3, PO4, PO5, PO6
GNM 401.3	Perform detailed clinical examination of the patient and arrive at a clinical diagnosis	PO1, PO2, PO3, PO4, PO5, PO6
GNM 401.4	Request and interpret appropriate laboratory investigations and initiate cost effective treatment plan	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
GNM 401.5	Identify and manage medical emergencies, independently perform medical procedures and refer when required	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
GNM 401.6	Create and sustain a therapeutic relationship with patients and families and work effectively as a member of a healthcare team to provide quality healthcare	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9



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**Program: MBBS**

**Course Name: General Surgery**

**Course Code: GSG 402**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
GSG 402.1	Understand anatomy and pathophysiology of various regions including head and neck, chest abdomen & extremities. Demonstrates the ability to perform basic surgical skills, clinical examination and communication.	PO1, PO2, PO3, PO4, PO8
GSG 402.2	Diagnose various surgical diseases and provide appropriate care and counselling, prescribe drugs safely and appropriately, identify the high risk patients and refer appropriately.	PO1, PO3, PO4, PO6, PO7, PO8
GSG 402.3	Conduct minor surgical procedures with appropriate sterile precautions and intra operative management	PO1, PO2, PO3, PO4, PO5, PO8
GSG 402.4	Diagnose complications of surgery and provide primary care and refer in a timely manner. Identify critically ill patients and provide primary care and refer in a timely manner. Provide palliative care for the patients with terminal illness in a holistic manner.	PO1, PO2, PO3, PO4, PO5, PO7, PO8
GSG 402.5	Provide first aid to trauma and adhere to advanced trauma life support. Apply medico-legal principles to surgical procedures including casualty management in various surgical procedures	PO1, PO2, PO3, PO5, PO7, PO8
GSG 402.6	Comprehend basics of cancer screening program and counsel. Recognise and diagnose various malignancies and manage appropriately.	PO1, PO2, PO3, PO4, PO5, PO8



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**Program: MBBS**

**Course Name: Obstetrics & Gynaecology**

**Course Code: OBG 403**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
OBG 403.1	Describe anatomy and physiology of the female reproductive system including the development of the embryo and changes in maternal physiology in pregnancy	PO1, PO4, PO8
OBG 403.2	Diagnose pregnancy, carry out antenatal care, provide pre-conceptional counselling. Identify high risk pregnancies and refer appropriately. Prescribe drugs safely and appropriately in pregnancy and lactation	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
OBG 403.3	Conduct normal deliveries using safe delivery practices and Perform early neonatal resuscitation in primary and secondary care settings. Diagnose complications of labor, provide primary care and refer in timely manner. Understand the physiology and care of lactation and newborn	PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9
OBG 403.4	Comprehend basics of MTP, contraception and advice women where required, Apply medico-legal principles as they apply to tubectomy, MTP, PCPNDT, POCSO and other related acts, Perform basic skills of clinical examination and communication of obstetrics and gynaecology	PO1, PO2, PO3, PO4, PO5, PO8, PO9
OBG 403.5	Elicit gynaecology history, perform physical and pelvic examinations, take PAP smear, diagnose and manage common Reproductive tract infections, common gynaecology cancers in primary care	PO1, PO2, PO3, PO5, PO7, PO8, PO9



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**Program: MBBS**

**Course Name: Paediatrics**

**Course Code: PED 404**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
PED 404.1	Assess and promote optimal nutrition, growth, development of children and adolescents; identify and manage deviations from normal	PO1, PO2, PO3, PO4, PO5, PO7, PO8
PED 404.2	Recognise the emergencies, demonstrate the ability to triage, provide emergency care, routine ambulatory care and referral care for the neonates, infants, children and adolescents as may be appropriate	PO1, PO2, PO3, PO4, PO5, PO6, PO7
PED 404.3	Recognise children with special needs, refer and rehabilitate appropriately	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9
PED 404.4	Participate in National programs related to child health	PO1, PO2, PO3, PO7, PO8, PO9
PED 404.5	Effectively communicate with the health care team, child and the family members	PO3, PO4, PO5, PO6, PO7, PO8
PED 404.6	Perform procedures in children of all ages in the primary care setting	PO1, PO2, PO3, PO4, PO5, PO6, PO7



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**Program: MBBS**

**Course Name: ENT (Otorhinolaryngology)**

**Course Code: ENT 405**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
ENT 405.1	Describe the anatomy & physiology of ear, nose, paranasal sinuses, oral cavity, pharynx and larynx.	PO1, PO2, PO5
ENT 405.2	Describe the clinical features, diagnosis and treatment of common ear, nose, head and neck problems.	PO1, PO2, PO3, PO4, PO5
ENT 405.3	Elicit history and examine patients with problems related to ear, nose, throat, head and neck	PO1, PO2, PO3, PO4
ENT 405.4	Interpret radiological, haematological, audiological and endoscopic investigations in common ENT diseases	PO1, PO2, PO4, PO5, PO7
ENT 405.5	Comprehend the management of deafness and cancer. Understand the various regulations and programs in India in relation to the above.	PO1, PO6, PO7, PO8, PO9



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**Program: MBBS**

**Course Name: Ophthalmology**

**Course Code: OPH 406**

After completion of this course, the learner should be able to:

CO No.	Course Outcome	Mapped PO
OPH 406.1	Describe the physiology of vision and demonstrate the steps in performing the visual acuity assessment and describe the types and methods of correcting refractive errors. Describe the anatomy and identify the microscopic features of eye ball and ocular adnexa correlating with functions and imaging features. Describe the development of human eye and the basis for congenital anomalies.	PO1, PO2, PO5
OPH 406.2	Describe the symptoms and demonstrate & document the signs and management of diseases of conjunctiva, cornea, sclera, anterior chamber, iris, pupil and lens	PO1, PO2, PO3, PO4, PO5, PO7
OPH 406.3	Describe the symptoms and demonstrate and document the signs and management of the diseases of vitreous, retina, optic nerve and choroid.	PO1, PO2, PO3, PO4, PO5, PO7
OPH 406.4	Describe the symptoms and demonstrate & document the signs and management of the diseases of lids, lacrimal apparatus, extra ocular muscles and orbit	PO1, PO2, PO3, PO4, PO5, PO7
OPH 406.5	Demonstrate empathetic behavior towards patients and counsel patients and family about cataract surgery and eye donation and discuss the rehabilitation of vision and visual loss in patients.	PO3, PO4, PO5, PO8, PO9
OPH 406.6	Describe the evaluation and enumerate the steps involved in the stabilization, initial management and indication for referral in a patient with ocular injury.	PO2, PO4, PO5, PO6, PO7, PO9