



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PROGRAM - MBBS

CBME CURRICULUM

COURSE ASSESSMENT FOR 2019-2020 BATCH

The individual course outcome (CO) attainment for each course was done by assessing the direct attainment taking continuous internal assessment (CIA) and End year examination (EYE) marks as CO assessment tools.

Aspect	Threshold	Weightage	Average performance of students	Overall course direct assessment
Internal Assessment	50%	20%	A	0.20*A+
End year Exam	50%	80%	B	0.80*B = A1

Course Outcome Attainment (Threshold based)

A threshold (target) level was fixed for the CIA and EYE marks of all the courses in each program to calculate the attainment of COs and the Program Outcomes (POs).

Assessment Methods	Attainment Levels	
Internal Assessment	Level 1	$\geq 50\%$ to $< 60\%$ of students scoring more than 50% marks
	Level 2	60% to 70% of students scoring more than 50% marks
	Level 3	More than 70% of students scoring more than 50% marks
End Year Exam	Level 1	$\geq 50\%$ to $< 60\%$ of students scoring more than 50% marks
	Level 2	60% to 70% of students scoring more than 50% marks
	Level 3	More than 70% of students scoring more than 50% marks

Based on the marks obtained assessment table is given below.

Assessment Table

Particulars	Internal Assessment (A)	End Year Exam (B)
Total Number of Students Appeared (N)	145	145
Number of students Scoring above threshold (50%) (P)	140	144
CO Percentage (P/N*100)	96.5 %	98.7%
Attainment Level	3	3
Weightage	0.20*3 =0.6	0.80*3=2.4
Attainment factor (A1) (0.20*A+ 0.80*B) = (A1)	3	

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

Course Outcome Attainment (Direct):

Attainment through Internal Assessment: Substantial i.e. 3

Attainment through Semester Examination: Substantial i.e. 3

Assuming 80% weightage to End year examination and 20% weightage to Internal Assessment, i.e. 80% of 3 + 20% of 3 = 2.4 + 0.6 = 3

Marks based CO attainment:

The course outcomes for all the courses are calculated in terms of percentage using the formula.

$CO_x \text{ in } \% = \frac{\text{Marks obtained by students in } CO_x}{\text{Maximum marks allotted for that course}} \times 100$

Where, $x = [1 \text{ to } N]$, $N = \text{Number of COs}$.

PO-CO ARTICULATION MATRIX FOR MBBS 2019 - 2020 BATCH

HUMAN ANATOMY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
HUMAN ANATOMY	CO.1	Comprehend the normal disposition, clinically relevant interrelationships, functional and cross -sectional Anatomy of the various organs and structures
	CO.2	Identify the gross and microscopic structure and correlate elementary ultra structure of various organs and tissues with the functions as a prerequisite for
	CO.3	Comprehend the basic structure and connections of the central nervous system to analyze the integrative and regulative functions of the organs and systems
	CO.4	Demonstrate knowledge of the basic principles and sequential development of the organs and systems; recognize the critical stages of development and the
	CO.5	Explain the clinical basis of some common clinical procedures i.e. intramuscular and intravenous injection, lumbar puncture and kidney biopsy
	CO.6	Describe the principles of karyotyping and identify the gross congenital anomalies.
	CO.7	Comprehend the principles of newer imaging techniques and interpretation of CT scan, sonogram, MRI & Angiography.
	CO.8	Identify and locate all the structures of the body and mark the topography of the Living Anatomy.
	CO.9	Identify the organs and tissues under the microscope.
	CO.10	Recognize the cadaver as the first teacher and assist in human cadaver dissection.

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	2	3	3	3	2	3
CO2	3	3	3	3	3	2	2	3	3	3	3	3
CO3	3	3	3	3	3	2	3	2	3	3	3	3
CO4	3	3	3	3	3	3	3	2	3	3	3	3
CO5	3	3	3	3	3	3	2	2	3	3	3	3
CO6	3	3	3	3	3	2	2	2	3	3	3	3
CO7	3	2	3	3	2	1	2	2	3	2	3	3
CO8	3	3	2	2	3	3	3	3	2	2	2	3
CO9	2	2	3	3	3	2	2	2	3	2	3	3
CO10	2	3	2	2	3	2	3	3	2	3	2	2
CO	2.8	2.80	2.80	2.80	2.90	2.20	2.40	2.40	2.80	2.70	2.70	2.90

PHYSIOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PHYSIOLOGY	CO.1	Describe the normal functions of all the systems, the regulatory mechanisms and interactions of the various systems for well-coordinated total body
	CO.2	Describe the relative contribution of each organ system in the maintenance of the milieu interior (homeostasis)
	CO.3	Explain the physiological aspects of the normal growth and development and the age-related physiological changes in the organ functions.
	CO.4	Comprehend the physiological principles underlying pathogenesis and treatment of diseases.
	CO.5	Correlate knowledge of physiology of human reproductive system in relation to National Family welfare program.
	CO.6	Analyze the physiological responses and adaptation to environmental stress.
	CO.7	Conduct experiments designed for study of physiological functioning of the hematological, musculoskeletal, alimentary, endocrine, reproductive, renal,
	CO.8	Interpret experimental/investigative data and distinguish between normal and abnormal data derived as a result of clinical examination and tests including
	CO.9	Recognize and get familiar with newer computerized and advanced instruments like


 DEAN
 SRI MUTHUKUMARAN MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3	3
CO3	3	3	3	3	3	2	3	3	2	3	2	3
CO4	3	3	3	3	3	3	2	2	3	2	3	3
CO5	3	3	3	3	3	3	2	2	3	2	3	3
CO6	3	3	3	3	3	3	2	2	2	3	3	3
CO7	3	3	3	3	2	1	2	2	3	2	3	3
CO8	3	3	3	3	2	2	2	3	3	3	3	3
CO9	2	3	3	3	3	2	3	3	2	2	2	3
CO	2.89	3.00	3.00	3.00	2.78	2.44	2.22	2.56	2.67	2.56	2.67	3.00

BIOCHEMISTRY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
BIOCHEMISTRY	CO.1	Enlist and describe the cell organelles with their molecular and functional organization.
	CO.2	Delineate structure, function and interrelationships of various biomolecules and consequences of deviation from the normal.
	CO.3	Explain the basic enzymology and emphasize on its clinical applications wherein regulation of enzymatic activity is disturbed.
	CO.4	Describe digestion and assimilation of nutrients and consequences of malnutrition.
	CO.5	Describe and integrate metabolic pathways of various biomolecules with their regulatory mechanisms.
	CO.6	Explain the biochemical basis of inherited disorders with their associated sequel.
	CO.7	Describe mechanisms involved in maintenance in water, electrolyte and acid base balance and consequences of their imbalances.
	CO.8	Outline the molecular mechanisms of gene expression and regulation, basic principles of biotechnology and their applications in medicine.
	CO.9	Perform biochemical analysis relevant to clinical screening and diagnosis using conventional techniques / instruments
	CO.10	Analyse and interpret investigative data and apply it in solving scientific and clinical problems and decision making.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	2	3	2	2	2	2	3	3	2	2	3
CO2	3	3	2	3	3	2	2	3	3	2	3	2
CO3	2	2	3	3	2	2	2	3	3	3	3	2
CO4	3	3	2	2	3	2	3	3	3	3	3	3
CO5	2	3	2	3	3	3	2	3	3	3	3	3
CO6	3	2	3	3	2	2	2	3	3	3	3	3
CO7	3	3	3	3	2	3	2	3	3	3	3	3
CO8	3	2	3	3	2	2	3	3	3	2	3	2
CO9	3	2	3	2	3	2	3	3	3	3	3	3
CO10	2	3	2	3	2	3	2	3	3	3	2	3
CO	2.70	2.50	2.60	2.70	2.40	2.30	2.30	3.00	3.00	2.70	2.80	2.70

PHARMACOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PHARMACOLOGY	CO.1	Describe the Pharmacokinetics and Pharmacodynamics of essential and commonly used drugs.
	CO.2	Enlist the indications, contraindications, interactions and adverse reactions of commonly used drugs.
	CO.3	Select and prescribe medications based on clinical conditions, considering pharmacological properties, efficacy, safety, suitability, and cost for common
	CO.4	Integrate the list of drugs of addiction and recommend the management of drug addiction.
	CO.5	Explain pharmacological basis of prescribing drugs in special medical situations such as pregnancy, lactation, infancy, old age, renal damage, hepatic
	CO.6	Explain the concept of rational drug therapy in clinical pharmacology and the principles underlying the concept of 'Essential Drugs'
	CO.7	Evaluate the ethics and modalities involved in the development and introduction of new drugs.
	CO.8	Prescribe drugs for common ailments and identify adverse reactions and drug interactions of commonly used drugs.
	CO.9	Interpret the data obtained from the experiments designed for the study of effect of drugs in various experimental and clinical studies.

SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.10	Analyze the information regarding common pharmaceutical preparations and critically evaluate drug formulations, appraise the Principles of Clinical
--	--------------	---

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	2	3	3	3	3	2	2	3	3	2	3	3
CO2	2	2	3	3	3	3	2	3	3	2	3	3
CO3	2	3	2	2	3	3	2	3	3	2	3	3
CO4	2	3	2	3	2	3	2	3	3	2	3	3
CO5	2	3	2	3	2	3	2	3	3	2	3	3
CO6	2	3	2	2	2	3	3	3	3	3	3	3
CO7	2	3	3	2	2	3	3	2	3	3	3	3
CO8	2	3	3	3	3	3	3	2	3	3	3	2
CO9	2	3	3	2	3	2	3	3	3	2	3	3
CO10	3	3	2	3	2	2	3	2	3	3	3	3
CO	2.10	2.90	2.50	2.60	2.50	2.70	2.50	2.70	3.00	2.40	3.00	2.90

PATHOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PATHOLOGY	CO.1	Describe the structure and ultra structure of a sick cell, causes and mechanisms of cell Injury, cell death and repair, and correlate structural and
	CO.2	Explain the physiological processes of maintenance of homeostasis, mechanisms of their disturbance and its morphological and clinical
	CO.3	Describe the mechanisms and patterns of tissue response to injury so as to understand the pathophysiology of disease processes and their application to
	CO.4	Correlate the gross and microscopic alterations of different organ systems in common disease to the extent needed for understanding disease processes and
	CO.5	Comprehend the steps in neoplastic changes in the body and their effects in order to appreciate need for early diagnosis and management of neoplasia.
	CO.6	Explain the mechanisms of common disease of the organ systems and the hematological disorders and develop a logical approach in their diagnosis and


 DEAN
 SRI MUTHUKUMARAN MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

CO.7	Comprehend the process of blood banking, blood donors & transfusion of blood & blood products, (components).
CO.8	Explain the pathophysiology of infectious diseases in relation with tissue changes and genetic disorders
CO.9	Describe the various immunological reactions in understanding the disease process & tissue transplant
CO.10	Draw a rational scheme of investigations aimed at diagnosing and managing the cases of common disorders.
CO.11	Perform and interpret the routine technical procedures of the diagnostic laboratory tests and correlate with clinical, hematological and morphological
CO.12	Perform the simple bed-side tests on blood, urine and other biological fluid samples

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	2	2	2	2	2	2	2	3	3	3	3
CO2	3	3	3	2	2	2	2	3	3	3	3	3
CO3	3	3	3	3	3	3	2	3	3	3	3	3
CO4	3	3	3	3	3	3	2	3	3	3	3	2
CO5	2	3	2	2	3	2	2	3	3	3	3	3
CO6	2	3	3	3	3	3	3	3	3	2	3	2
CO7	3	3	3	2	3	2	3	2	3	3	3	2
CO8	3	2	2	3	3	3	3	3	3	2	3	3
CO9	2	2	3	2	3	2	2	2	3	3	3	2
CO10	3	3	2	2	2	2	2	3	3	3	3	3
CO11	2	3	3	3	2	3	3	3	3	3	3	3
CO12	2	3	3	3	2	3	2	2	3	3	3	2
CO	2.58	2.75	2.67	2.50	2.58	2.50	2.33	2.67	3.00	2.83	3.00	2.58

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute


Chikkarayapuram, Near Mangadu, Chennai – 600069.

MICROBIOLOGY

Upon successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
MICROBIOLOGY	CO.1	Describe the characteristics (morphology, cultural characteristics, resistance, virulence factors, incubation period, mode of transmission etc.) of different
	CO.2	List the commercial, opportunistic and pathogenic organisms and explain host parasite relationship and how the different microorganisms can cause human
	CO.3	Explain the various Défense mechanisms of the host against the microorganisms which can cause human infection and the prophylaxis for the
	CO.4	Describe the laboratory diagnosis of microorganisms causing human infections and disease.
	CO.5	Plan and perform the laboratory investigations for the diagnosis of infectious diseases to arrive at the etiological diagnosis of infectious diseases caused by
	CO.6	Perform and interpret immunological and serological tests.
	CO.7	Operate routine and sophisticated instruments in the laboratory, and successfully implement the chosen research methodology

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	2	2	3	2	2	3	3	2	3	2
CO2	3	3	2	2	3	2	2	3	3	3	3	2
CO3	3	2	2	2	2	2	2	3	3	3	3	2
CO4	2	3	3	3	2	3	2	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3	3
CO6	3	2	3	3	3	2	2	3	3	2	3	2
CO7	2	3	3	3	2	2	3	3	3	3	2	3
CO	2.71	2.71	2.57	2.57	2.57	2.29	2.29	3.00	3.00	2.71	2.86	2.43


 DEAN
 SRI MUTHUKUMARAN MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

FORENSIC MEDICINE AND TOXICOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
FORENSIC MEDICINE AND TOXICOLOGY	CO.1	Identify the basic Medico-legal aspects of hospital and general practice and define the Medico-legal responsibilities of a general Physician while rendering
	CO.2	Appreciate the Physician's responsibilities in criminal matters and respect for the codes of Medical ethics.
	CO.3	Describe the general principles of analytical toxicology, diagnose, manage and identify legal aspect of common acute and chronic poisonings.
	CO.4	Describe the Medico-legal aspects and findings of post-mortem examination in cases of death due to common unnatural conditions and poisonings.
	CO.5	Detect occupational and environmental poisoning, prevention and epidemiology of common poisoning and their legal aspects particularly
	CO.6	Make observations and draw logical inferences in order to initiate enquiries in criminal matters and Medico-legal problems
	CO.7	Perform proper Medico-legal examination and documentation/Reporting of Injury and Age.
	CO.8	Conduct examination for sexual offences and intoxication and preserve relevant ancillary materials for medico-legal examination.
	CO.9	Identify important post-mortem findings in common unnatural deaths, perform and interpret findings at post-mortem examination.
	CO.10	Diagnose and treat common emergencies in poisoning and chronic toxicity.
	CO.11	Observe the principles of medical ethics in the practice of his profession.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	2
CO2	2	3	3	3	3	2	2	2	3	3	2	3
CO3	3	3	3	3	3	3	3	3	3	3	3	2
CO4	3	3	3	3	2	3	3	2	3	2	3	3
CO5	3	3	2	3	3	3	3	3	3	3	2	2
CO6	3	2	3	3	3	3	3	3	3	2	3	3
CO7	2	3	3	1	3	3	3	3	3	3	3	2
CO8	3	3	2	3	3	1	3	3	2	3	2	3
CO9	3	2	2	2	3	2	3	2	2	3	2	3
CO10	3	3	3	2	3	2	3	2	3	3	3	2
CO11	2	3	2	3	2	3	3	3	3	3	3	3
CO	2.73	2.82	2.64	2.64	2.82	2.45	2.91	2.64	2.82	2.82	2.64	2.55

OPHTHALMOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
OPHTHALMOLOGY	CO.1	Explain the principles of management of major ophthalmic emergencies and main systemic disease afflicting the eye.
	CO.2	Describe the effects of local and systemic diseases on patient's vision and the necessary action required minimizing the sequelae of such diseases.
	CO.3	Explain the Adverse drug reaction of drugs with special reference to ophthalmic manifestations.
	CO.4	Describe the magnitude of blindness in India and its main causes, the national programme for control of blindness, its implementation at various levels in
	CO.5	Provide eye care education for prevention of eye problems and organize eye camps as a primary health care provider in the primary health centre.
	CO.6	Elicit a history pertinent to general health and ocular status and provide first aid in major ophthalmic emergencies.
	CO.7	Assist in diagnostic procedures such as visual acuity testing, examination of eye. Schiötz tonometry, Staining of Corneal pathology, confrontation,
	CO.8	Diagnose and treat common problems affecting the eye, and interpret ophthalmic signs in relation to common systemic disorders.


 DEAN
 SRI MUTHUKUMAR MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.9	Assist/observe therapeutic procedures such as Subconjunctival injection. Corneal conjunctival foreign body removal, carbolic cautery for corneal
	CO.10	Use effective means of communication with the public and individual to motivate for surgery in cataract and for eye donation and organize eye banks
	CO.11	Establish rapport with his seniors. colleagues and paramedical workers. so as to effectively function as a member of the eye care team.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	2	3	3	2	2	2
CO2	2	3	3	3	3	2	2	2	3	3	2	3
CO3	3	3	3	3	3	3	3	3	3	3	3	2
CO4	3	2	2	2	2	3	2	2	2	2	3	3
CO5	3	3	3	3	3	2	3	3	3	3	2	2
CO6	3	2	3	3	3	3	3	3	3	2	3	3
CO7	2	3	3	1	3	3	3	3	3	3	3	2
CO8	3	2	3	3	3	3	2	2	3	3	3	3
CO9	3	3	3	2	3	2	3	3	2	2	3	2
CO10	2	3	3	2	2	2	2	3	2	2	3	2
CO11	2	3	2	3	2	2	3	2	3	2	3	3
CO	2.64	2.73	2.82	2.55	2.73	2.45	2.55	2.64	2.73	2.45	2.73	2.45


 DEAN
 SRI MUTHUKUMARAN MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

OTORHINOLARYNGOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
OTORHINOLARYNGOLOGY	CO.1	Describe the anatomy of the external, middle, and inner ear, as well as the nose and throat (ENT).
	CO.2	Describe the basic pathophysiology of common Ear, Nose & Throat (ENT) diseases & emergencies.
	CO.3	Prescribe commonly used drugs for ENT conditions rationally, considering their adverse reactions.
	CO.4	Identify hearing impairment and refer patients to appropriate hearing impairment rehabilitation programs.
	CO.5	Prescribe relevant investigative procedures for common ENT conditions and interpret the results..
	CO.6	Examine & diagnose common ENT problems including pre-malignant & Malignant disorders of the Head & Neck.
	CO.7	Manage ENT problems at first level of care & be able to refer whenever necessary.
	CO.8	Assist / carry out minor ENT procedures like ear syringing, ear dressing, nasal packing.
	CO.9	Assist in certain procedures such as tracheotomy, endoscopy & removal of foreign bodies.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	3	3	3	3	3	2
CO3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	2	3	3	3	3	2	2	2	3	3	2	3
CO5	3	3	2	3	3	3	3	3	3	3	2	2
CO6	3	3	3	3	3	3	3	3	3	2	3	3
CO7	2	3	3	2	3	3	3	3	3	3	3	2
CO8	3	3	2	3	3	2	3	3	2	3	2	3
CO9	3	3	2	3	3	2	3	2	3	3	2	3
CO	2.78	3.00	2.67	2.89	3.00	2.44	2.89	2.78	2.89	2.89	2.56	2.67



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

COMMUNITY MEDICINE

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
COMMUNITY MEDICINE	CO.1	Explain the principles of sociology including demographic population dynamics, identify social factors related to health, disease and disability in the
	CO.2	Outline the demographic pattern of the country and appreciate the roles of the individuals, family, community and socio-cultural milieu in health and
	CO.3	Describe the elements of normal psychology and social psychology, the impact of urbanization on health and disease, observe and interpret the
	CO.4	Describe and apply the principles of practice of medicine in hospital and community settings, health care delivery systems including rehabilitation of
	CO.5	Describe the National Health Programmes with particular emphasis on maternal and child health programmes, family welfare planning and
	CO.6	Describe the epidemiological methods and techniques.
	CO.7	Describe the health information systems, acquire, understand, integrate, apply and manage information in context to health care problems and health care
	CO.8	Describe the principles and components of primary health care, National Rural Health Mission and the national health policies to achieve the goal of "Health
	CO.9	Describe and identify the environmental, bio-waste and occupational hazards and their control, the importance of water and sanitation in human health.
	CO.10	Describe and apply the principles of health economics, health administration, health education in relation to community.
	CO.11	Communicate with patients including history taking and medico social work, Use epidemiology as a scientific tool to make rational decisions relevant to
	CO.12	Organize health care services for vulnerable and disadvantages groups and in case of calamities.
	CO.13	Diagnose and manage common health problems (including communicable and non-communicable diseases), nutritional problems and emergencies at the
	CO.14	Interact with other members of the health care team and participate in the organization of health care services, health advocacy and implementation of
	CO.15	Observe the principles of medical ethics in professional practice and in perform Administrative functions at health centers.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

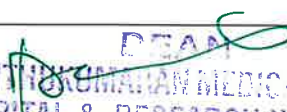
Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3	3
CO3	3	3	3	3	3	2	3	3	2	3	2	3
CO4	3	3	3	3	3	3	2	2	3	2	3	3
CO5	3	3	3	3	3	3	2	2	3	2	3	3
CO6	3	3	3	3	3	3	2	2	2	3	3	3
CO7	3	3	3	3	2	2	2	2	3	2	3	3
CO8	3	3	3	3	3	3	2	2	3	3	3	3
CO9	3	3	3	3	2	3	2	3	3	3	3	3
CO10	2	3	3	3	2	3	2	2	2	3	2	3
CO11	2	3	3	3	3	2	2	2	2	2	2	3
CO12	3	3	3	3	2		2	2	3	3	2	3
CO13	3	3	3	3	3	2	3	3	3	2	2	3
CO14	3	3	3	3	2	2	3	2	3	2	3	3
CO15	3	3	3	3	3	2	2	3	2	3	3	3
CO	2.87	3.00	3.00	3.00	2.67	2.60	2.20	2.40	2.67	2.60	2.60	3.00

GENERAL MEDICINE

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
GENERAL MEDICINE	CO.1	Explain the underlying pathophysiology, epidemiological characteristics, clinical manifestations, diagnostic protocols, and therapeutic approaches for
	CO.2	Describe the common clinical disorders with special reference to infectious diseases. nutritional disorders. geriatric disorders, tropical and environmental
	CO.3	Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interactions, indications and contra-indications
	CO.4	Propose diagnostic and investigative procedures and ability to interpret them;


 DEAN
 SRI MUTHUKUMARAN MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

CO.5	Provide first level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required.
CO.6	Stay updated with the latest advancements in the field of medicine.
CO.7	Apply clinical skills (history taking, clinical examination and other instruments of examination) to diagnose various common medical disorders
CO.8	Refer a patient to secondary and/or tertiary level of health care after having instituted primary care
CO.9	Perform simple routine investigations like hemogram, stool, urine, sputum and biological fluid examinations:
CO.10	Assist the common bedside investigative procedure like pleural tap, Lumbar puncture, bone marrow aspiration/biopsy and liver biopsy.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	3	3	2	3	3	2
CO3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	2	3	2	2	3	2	2	3
CO5	3	3	2	3	3	3	2	3	3	3	2	2
CO6	3	3	3	3	3	2	3	3	3	2	3	3
CO7	2	3	3	2	3	3	3	3	3	3	3	2
CO8	3	3	3	3	3	2	3	3	2	3	2	3
CO9	3	3	3	2	3	3	3	2	3	2	3	2
CO10	2	3	2	2	2	2	2	3	2	3	3	3
CO	2.80	3.00	2.80	2.70	2.80	2.50	2.70	2.80	2.70	2.70	2.70	2.60


 DEAN
 SRI MUTHUKUMAR MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

GENERAL SURGERY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
GENERAL SURGERY	CO.1	Describe aetiology, pathophysiology. principles of diagnosis and management of common surgical problems including emergencies in adult and children.
	CO.2	Define indications and methods for fluid and electrolytes replacement therapy including blood transfusion.
	CO.3	Define asepsis. disinfection and sterilization and recommend judicious use of antibiotics.
	CO.4	Describe common malignancies in the country and their management including prevention.
	CO.5	Enumerate different types of anaesthetic agents. their indications. contraindications. mode of administration, and side effects.
	CO.6	Diagnose common surgical conditions both acute and chronic. in adults and children.
	CO.7	Plan various laboratory tests for surgical conditions and interpret the results.
	CO.8	Identify and manage patients of haemorrhagic, septicaemia and other types of shock.
	CO.9	Be able to maintain patent air-way and resuscitate, monitor patient of head. chest, spinal and abdominal injuries. both in adults and children.
	CO.10	Apply principles of operative surgery including preoperative. operative and post operative care and monitoring.
	CO.11	Provide primary care for a patient of burns and treat open wound including preventive measures against tetanus and gas gangrene.
	CO.12	Diagnose neonatal and paediatric surgical emergencies and provide sound primary care before referring the patient to secondary/tertiary centres, identify

DEAN

SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	2	2	2	3	3	2
CO3	3	3	3	3	2	3	3	3	3	3	3	3
CO4	3	3	3	3	3	2	2	2	3	2	2	3
CO5	3	3	3	3	3	2	2	3	3	3	2	2
CO6	3	3	3	3	2	2	3	3	3	2	3	3
CO7	3	3	3	3	3	3	3	3	3	3	3	2
CO8	3	3	3	2	2	2	2	2	3	2	2	3
CO9	3	3	3	2	3	3	3	3	3	3	3	3
CO10	3	3	3	3	3	2	3	3	3	3	3	3
CO11	3	3	3	3	3	3	3	3	3	3	3	3
CO12	3	3	3	3	3	2	3	3	2	3	2	3
CO	3.00	3.00	3.00	2.83	2.75	2.33	2.67	2.75	2.83	2.75	2.67	2.75

OBSTETRICS AND GYNAECOLOGY

On successful completion of this course, students should be able to

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.

Course	COURSE OUTCOMES	
OBSTETRICS AND GYNAECOLOGY	CO.1	Outline the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it.
	CO.2	Diagnose normal pregnancy, labour, puerperium and manage the problems he is likely to encounter therein.
	CO.3	List of leading causes of maternal and perinatal morbidity and mortality.
	CO.4	Explain the principles of contraception and various techniques employed, methods of medical termination of pregnancy, sterilization and their
	CO.5	Identify the use, abuse and side effects of drugs in pregnancy, peri-menopausal and post-menopausal periods.
	CO.6	Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
	CO.7	Identify common gynecological diseases and management. describe principles of their management.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

CO.8	State the indications, techniques and complications of surgeries like Caesarian section, laparotomy, abdominal and vaginal hysterectomy, vacuum Aspiration
CO.9	Obtain proper history and writing a good case sheet and write a good discharge summary, proper referral letter
CO.10	Examine the patient and arrival at a diagnosis, plan for investigation and treatment
CO.11	Interpret data of investigations like biochemical, histopathological, radiological ultrasound etc.
CO.12	Examine a pregnant woman, recognize high- risk pregnancies and make appropriate referrals.
CO.13	Conduct a normal delivery, plot and interpret a partogram, recognize complications and decision of referral, provide postnatal care, resuscitate the
CO.14	Advise a couple on the use of various available contraceptive devices (student should see at least 5 Cu-T insertions and 5 cases of female sterilization
CO.15	Perform pelvic examination, diagnose and manage common. Gynecological problems including early detection of genital malignancies.
CO.16	Obtain a vaginal cytological smear, perform a post coital test and wet vaginal smear examination for Trichomonas vaginalis, Moniliasis and gram stain for

O CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	3	3	3	3	3	3
CO3	3	3	3	3	2	3	3	3	3	3	3	3
CO4	3	3	3	3	3	2	2	2	3	2	2	3
CO5	3	3	3	3	3	2	2	3	3	3	2	2
CO6	3	3	3	3	2	2	3	3	3	2	3	3
CO7	3	3	3	3	3	3	3	3	3	3	3	2
CO8	3	3	3	3	3	3	3	3	2	3	2	3
CO9	3	3	3	2	2	2	3	3	2	3	2	3
CO10	3	3	3	3	3	3	2	2	2	3	3	2
CO11	3	3	3	2	2	2	3	3	3	3	3	3
CO12	3	3	3	3	3	3	3	2	3	3	3	2
CO13	3	3	3	3	3	2	2	3	3	3	2	2
CO14	3	3	3	3	2	3	3	3	3	2	3	3
CO15	3	3	3	3	3	3	3	3	3	3	3	2



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

O CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO16	3	3	2	3	3	2	3	3	2	3	3	3
CO	3.00	3.00	2.94	2.88	2.69	2.44	2.75	2.81	2.75	2.81	2.69	2.63

PEDIATRICS

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PEDIATRICS	CO.1	Describe the normal Growth and Development during fetal life, Neonatal period, Childhood and Adolescence and the deviations thereof.
	CO.2	Describe the common paediatric disorders and emergencies in terms of epidemiology, etiopathogenesis. clinical manifestations, diagnosis and also
	CO.3	Describe age related requirements of calories, nutrients, fluids dosages of drugs etc. in health and disease.
	CO.4	Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, Poisonings, accidents and child abuse.
	CO.5	Outline national programs related to child health including Immunization programs
	CO.6	Obtain detailed Paediatric and Neonatal history and conduct an appropriate physical examination of children and neonates. make clinical diagnosis,
	CO.7	Perform anthropometric measurements. resuscitate newborn, prepare oral rehydration solution, perform tuberculin test, administer vaccines available
	CO.8	Conduct diagnostic procedures such as lumbar puncture. liver and kidney biopsy. bone marrow aspiration. pleural and ascitic tap.
	CO.9	Distinguish between normal Newborn babies and those requiring special care and institute early care to all newborn babies including care of preterm and
	CO.10	Provide ambulatory care to all not so sick children. identify indications for specialized/ inpatient care and ensure timely referral to those who require


DEAN
 SRI MUTHUKUMARAN MEDICAL COLLEGE
 HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	2	3	3	3	3	3	3	3
CO2	3	3	3	3	3	2	2	2	3	2	2	3
CO3	3	3	3	3	3	2	2	3	3	3	2	2
CO4	3	3	3	3	2	2	3	3	3	2	3	3
CO5	3	3	2	3	3	3	3	3	2	3	2	3
CO6	3	3	3	3	3	2	2	3	3	3	2	2
CO7	3	3	3	3	2	2	3	3	3	2	3	3
CO8	3	3	3	3	2	3	3	2	3	3	3	3
CO9	3	3	3	3	3	2	3	3	2	3	3	3
CO10	3	3	3	3	3	3	3	3	3	3	3	2
CO	3.00	3.00	2.90	3.00	2.60	2.40	2.70	2.80	2.80	2.70	2.60	2.70


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

OVERALL COURSE ATTAINMENT (DIRECT):

CO CONTRIBUTION TO PROGRAMME OUTCOMES (POS):

OVERALL CO ATTAINMENT

Course name	Total Number of Students Appeared (X)	Number of students Scoring above threshold (Y)	Percentage (Y/X*100)	Threshold based CO attainment level (A1)	Percentage based CO attainment (Average % marks per course)
Human Anatomy	152	152	100	3	65.87
Physiology	152	152	100	3	64.57
Biochemistry	152	152	100	3	61.42
Pharmacology	148	148	100	3	63.5
Pathology	148	148	100	3	62.81
Microbiology	148	148	100	3	65.18
Forensic Medicine & Toxicology	141	141	100	3	61.21
Ophthalmology	141	141	100	3	64.57
Otorhinolaryngology	141	141	100	3	61.45
Community Medicine	141	141	100	3	61.18

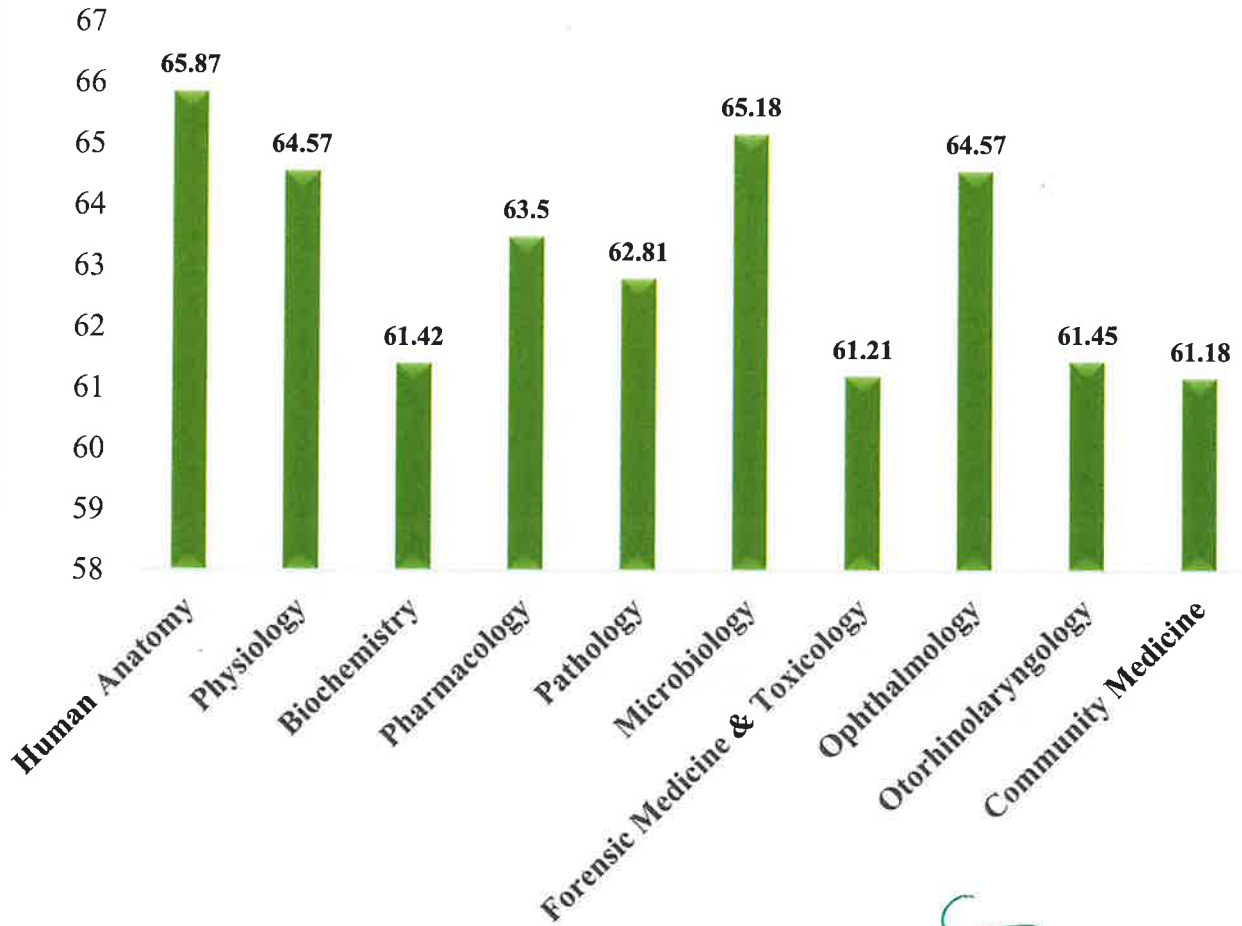

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

Marks Percentage based CO attainment



DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO ATTAINMENT:

The overall PO attainment level of the batch of students was calculated using the formula:

= weighted average value of each PO × overall CO attainment average (A1) /3

PO-CO ARTICULATION MATRIX

Course name	CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Human Anatomy	3	3	2.86	3.00	3.00	2.86	2.14	2.29	2.29	3.00	2.86	2.86	3.00
Physiology	3	3	3.00	3.00	3.00	2.86	2.57	2.14	2.43	2.71	2.57	2.71	3.00
Biochemistry	3	2.00	2.88	2.50	2.63	2.50	2.88	2.38	2.75	3.00	2.38	3.00	2.88
Pharmacology	3	2.67	2.83	2.67	2.50	2.67	2.50	2.17	2.83	3.00	2.83	3.00	2.67
Pathology	3	2.83	2.67	2.50	2.50	2.67	2.33	2.17	3.00	3.00	2.67	3.00	2.33
Microbiology	3	2.73	2.82	2.64	2.64	2.82	2.45	2.91	2.64	2.82	2.82	2.64	2.55
Forensic Medicine & Toxicology	3	2.64	2.73	2.82	2.55	2.73	2.45	2.55	2.64	2.73	2.45	2.73	2.45
Ophthalmology	3	2.78	3.00	2.67	2.89	3.00	2.44	2.89	2.78	2.89	2.89	2.56	2.67
Otorhinolaryngology	3	2.87	3.00	3.00	3.00	2.67	2.60	2.20	2.40	2.67	2.60	2.60	3.00
Community Medicine	3	2.72	2.86	2.75	2.74	2.75	2.49	2.41	2.64	2.87	2.67	2.79	2.73
Average of each PO (Direct attainment)		2.82	3	2.86	3.00	3.00	2.86	2.14	2.29	2.29	3.00	2.86	2.86
Set target		3	3	3	3	3	3	3	3	3	3	3	3

Overall PO attainment of 2019-2020 BATCH:

PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
2.82	3	2.86	3.00	3.00	2.86	2.14	2.29	2.29	3.00	2.86	2.86

DEAN
SRI MUTHUKUMAR MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE

Chikkarayapuram, Near Mangadu,
Chennai-600069.

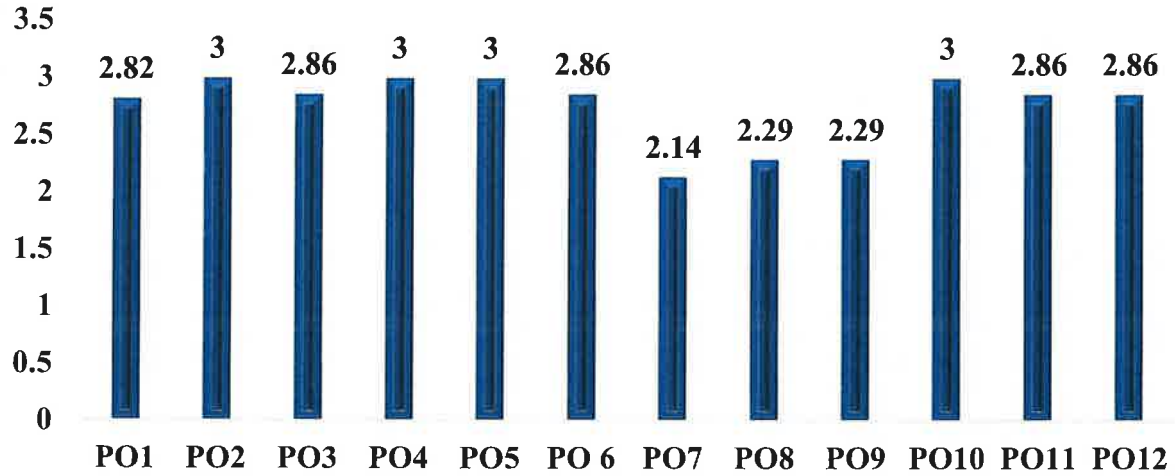


Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

MBBS 2019-2020 BATCH - OVERALL PO ATTAINMENT

OVERALL PO ATTAINMENT (THRESHOLD BASED)



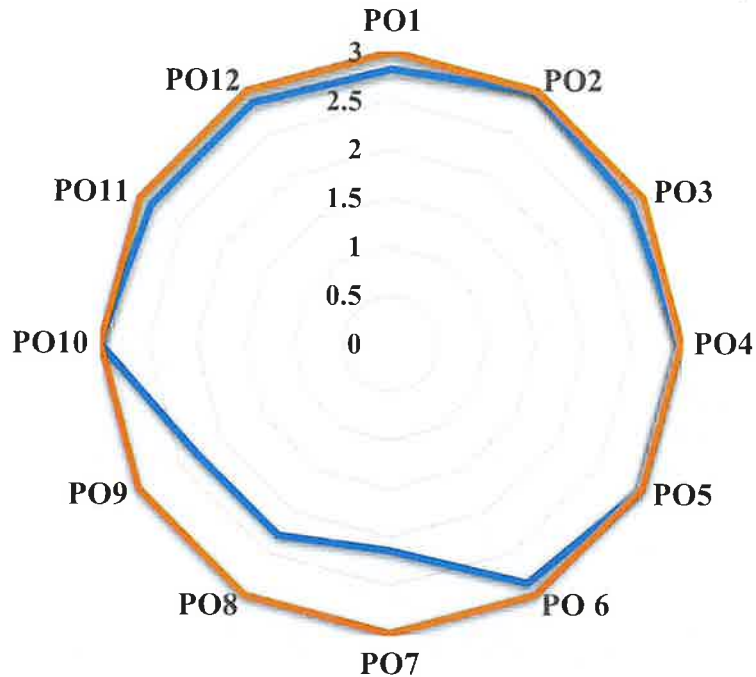

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

MBBS 2019-2020 BATCH - OVERALL PO ATTAINMENT



CORRECTIVE ACTIONS TO IMPROVE PO ATTAINMENT:

PO6: Demonstrate the ability to pursue basic, clinical, and translational research in recent medical advances relevant to patient care, along with a commitment to lifelong learning.

- To enhance the number of research methodology workshops for students, encourage undergraduate students to indulge in minor research projects by providing institutional grants as seed money.

PO7: Communicate effectively, empathetically, and respectfully with patients in a language they understand, enhancing patient satisfaction, trust, and health outcomes.

To organize more of communication skill development programs and emphasize the same in AETCOM modules

PO8: Interpret the national and regional healthcare policies, frameworks, health economics, and systems that impact health promotion, healthcare delivery, disease prevention, and patient safety and apply them in real time practice.

[Signature]
DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

- To conduct seminars on national and regional healthcare policies and orient students on health economics from I year of study.
- To encourage self-directed learning by giving seminars/assignments for students on these topics

PO9: Comprehend the medico-legal, societal, ethical, and humanitarian principles that influence healthcare and apply these principles in professional practice.

- To organize invited lectures focused on medico-legal, societal, ethical, and humanitarian principles from I year of study.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumar Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

MBBS PROGRAM
COURSE ASSESSMENT FOR 2018-19 BATCH

The individual course outcome (CO) attainment for each course was done by assessing the direct attainment taking continuous internal assessment (CIA) and End year examination (EYE) marks as CO assessment tools.

Aspect	Threshold	Weightage	Average performance of students	Overall course direct assessment
Internal Assessment	50%	20%	A	0.20*A+
End year Exam	50%	80%	B	0.80*B = A1

Course Outcome Attainment (Threshold based)

A threshold (target) level was fixed for the CIA and EYE marks of all the courses in each program to calculate the attainment of COs and the Program Outcomes (POs).

Assessment Methods	Attainment Levels	
Internal Assessment	Level 1	$\geq 50\%$ to $< 60\%$ of students scoring more than 50% marks
	Level 2	60% to 70% of students scoring more than 50% marks
	Level 3	More than 70% of students scoring more than 50% marks
End Year Exam	Level 1	$\geq 50\%$ to $< 60\%$ of students scoring more than 50% marks
	Level 2	60% to 70% of students scoring more than 50% marks
	Level 3	More than 70% of students scoring more than 50% marks

Based on the marks obtained assessment table is given below.

Assessment Table

Particulars	Internal Assessment (A)	End Year Exam (B)
Total Number of Students Appeared (N)	150	150
Number of students Scoring above threshold (50%) (P)	140	148
CO Percentage (P/N*100)	93.3%	98.7%
Attainment Level	3	3
Weightage	$0.20*3 = 0.6$	$0.80*3 = 2.4$
Attainment factor (A1) (0.20*A+ 0.80*B) = (A1)	3	



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

Course Outcome Attainment (Direct):

Attainment through Internal Assessment: Substantial i.e. 3

Attainment through Semester Examination: Substantial i.e. 3

Assuming 80% weightage to End year examination and 20% weightage to Internal Assessment, i.e.

$$80\% \text{ of } 3 + 20\% \text{ of } 3 = 2.4 + 0.6 = 3$$

Marks based CO attainment:

The course outcomes for all the courses are calculated in terms of percentage using the formula.

$$\text{CO}_x \text{ in } \% = \text{Marks obtained by students in CO}_x / \text{Maximum marks allotted for that course} * 100$$

Where, x= [1 to N], N= Number of COs.

PO-CO CORRELATION MATRIX FOR MBBS 2018-2019 BATCH

HUMAN ANATOMY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
HUMAN ANATOMY	CO.1	Explain the development and gross and microscopic structure of the human body, understanding the normal regulation and integration of organ and system functions based on structural and genetic patterns.
	CO.2	Describe the identifying features of microscopic structures and correlate the elementary ultrastructure of various organs and tissues.
	CO.3	Identify and locate all body structures, map the topography of living anatomy, and recognize organs and tissues under a microscope.
	CO.4	Identify and locate all body structures, map the topography of living anatomy, and recognize organs and tissues under a microscope.
	CO.5	Describe the clinical applications of common procedures such as intramuscular and intravenous injections, lumbar punctures, and kidney biopsies.
	CO.6	Explain the principles of imaging techniques like ultrasound, computerized tomography, and plain and contrast X-rays, and their applications in diagnosing disease states.
	CO.7	Recognize the cadaver as the first teacher and assist in human cadaver dissection.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	2	3	3	3	2	3
CO2	3	3	3	3	3	2	2	3	3	3	3	3
CO3	3	3	3	3	3	2	3	2	3	3	3	3
CO4	3	3	3	3	3	3	3	2	3	3	3	3
CO5	3	3	3	3	3	3	2	2	3	3	3	3
CO6	3	3	3	3	3	2	2	2	3	3	3	3
CO7	3	2	3	3	2	1	2	2	3	2	3	3
CO	3.00	2.86	3.00	3.00	2.86	2.14	2.29	2.29	3.00	2.86	2.86	3.00

PHYSIOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PHYSIOLOGY	CO.1	Describe the normal functioning of body organs and organ systems, their interactions, physiological responses for maintaining homeostasis, and adaptations to internal and external environmental changes.
	CO.2	Describe the physiological functions of the organ systems of the body and articulate them with the pathogenesis of diseases.
	CO.3	Explain the age-related physiological changes in organ functions and how they reflect normal growth and development.
	CO.4	Diagnose conditions based on clinical symptoms and signs, and interpret laboratory test results including serum electrolytes, pH, osmolarity, blood gases, pulmonary function tests, renal function tests, and cardiac function tests.
	CO.5	Interpret investigative data in case scenarios related to common disorders of the hematological, musculoskeletal, alimentary, endocrine, reproductive, renal, cardiovascular, respiratory, and neurological systems.
	CO.6	Perform tests and calculate hematological indices, assess ventilatory function using spirometers and peak flow meters, measure blood pressure, record ECGs, and conduct clinical examinations of organ systems.
	CO.7	Correlate disease manifestations with physiological mechanism derangements and infer the rationale for treatment.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	2	3	3	3	2	3
CO2	3	3	3	3	3	2	2	3	3	3	3	3
CO3	3	3	3	3	3	2	3	3	2	3	2	3
CO4	3	3	3	3	3	3	2	2	3	2	3	3
CO5	3	3	3	3	3	3	2	2	3	2	3	3
CO6	3	3	3	3	3	3	2	2	2	3	3	3
CO7	3	3	3	3	2	1	2	2	3	2	3	3
CO	3.00	3.00	3.00	3.00	2.86	2.29	2.14	2.43	2.71	2.57	2.71	3.00

BIOCHEMISTRY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
BIOCHEMISTRY	CO.1	Describe the molecular and functional organization of cells and their components.
	CO.2	Explain the biochemical and molecular processes involved in health and disease, including mechanisms for maintaining body fluid and pH homeostasis.
	CO.3	Describe the regulatory pathways of macromolecule metabolism and their clinical significance.
	CO.4	Explain the role of nutrition in health and disease, including the digestion and assimilation of macronutrients.
	CO.5	Explain the biochemical basis of environmental health hazards, inherited diseases, metabolic disorders, and carcinogenesis.
	CO.6	Describe fundamental aspects of enzymology and the clinical implications of altered enzyme regulation.
	CO.7	Explain the biochemical basis and rationale of clinical laboratory tests, and demonstrate the ability to interpret these in a clinical context.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	2	3	2	2	2	2	3	3	2	2	3
CO2	3	3	2	3	3	2	2	3	3	2	3	2
CO3	2	2	3	3	2	2	2	3	3	3	3	2
CO4	3	3	2	2	3	2	3	3	3	3	3	3
CO5	2	3	2	3	3	3	2	3	3	3	3	3
CO6	3	2	3	3	2	2	2	3	3	3	3	3
CO7	3	3	3	3	2	3	2	3	3	3	3	3
CO	2.71	2.57	2.57	2.71	2.43	2.29	2.29	3.00	3.00	2.71	2.86	2.71

PHARMACOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PHARMACOLOGY	CO.1	Outline the essential and commonly used drugs and explain the pharmacological basis of their therapeutic effects.
	CO.2	Classify drugs according to their pharmacological and organ system-based functions.
	CO.3	Explain the mechanism of action, pharmacodynamics and pharmacokinetics of the drugs, including their kinetics, antidotes, and drugs used in cases of common poisoning.
	CO.4	Select and prescribe medications based on clinical conditions, considering pharmacological properties, efficacy, safety, suitability, and cost for common clinical conditions of national importance.
	CO.5	Select and prescribe drugs in special situations such as pregnancy, lactation, and for geriatric and pediatric populations, as well as for mass therapy under national health programs.
	CO.6	Explain the importance of pharmacovigilance, the concept of essential medicines, and the sources of drug information.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.7	Describe the ethics and methodologies involved in new drug development, including clinical practice, animal ethics, evidence-based medicine, and practice-oriented research.
	CO.8	Provide counselling and educate the patients on the appropriate use of prescribed drugs and drug delivery systems.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	2	3	3	3	3	2	2	3	3	2	3	3
CO2	2	2	3	3	3	3	2	3	3	2	3	3
CO3	2	3	2	2	3	3	2	3	3	2	3	3
CO4	2	3	2	3	2	3	2	3	3	2	3	3
CO5	2	3	2	3	2	3	2	3	3	2	3	3
CO6	2	3	2	2	2	3	3	3	3	3	3	3
CO7	2	3	3	2	2	3	3	2	3	3	3	3
CO8	2	3	3	3	3	3	3	2	3	3	3	2
CO	2.00	2.88	2.50	2.63	2.50	2.88	2.38	2.75	3.00	2.38	3.00	2.88

PATHOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PATHOLOGY	CO.1	Describe the mechanisms of homeostasis, cell injury, cell degeneration, cell death, and repair.
	CO.2	Explain the mechanisms and patterns of inflammatory responses to tissue injury and their role in the pathophysiology of diseases.
	CO.3	Describe the causes, evolution, and mechanisms of diseases, including alterations in the gross and cellular morphology of organs in disease states.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.4	Correlate the natural history, structural and functional changes of diseases with their clinical manifestations, diagnosis, and therapy.
	CO.5	Correlate normal and altered morphology (gross and microscopic) of different organ systems in common disease states.
	CO.6	Perform simple biochemical tests on blood, urine, and other biological fluid samples, and interpret the results.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	2	2	2	2	2	2	2	3	3	3	3
CO2	3	3	3	2	2	2	2	3	3	3	3	3
CO3	3	3	3	3	3	3	2	3	3	3	3	3
CO4	3	3	3	3	3	3	2	3	3	3	3	2
CO5	2	3	2	2	3	2	2	3	3	3	3	3
CO6	2	3	3	3	3	3	3	3	3	2	3	2
CO	2.67	2.83	2.67	2.50	2.67	2.50	2.17	2.83	3.00	2.83	3.00	2.67

MICROBIOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
MICROBIOLOGY	CO.1	List pathogenic microorganisms (bacteria, viruses, parasites, fungi) and describe their roles in health and disease.
	CO.2	Explain the immunological mechanisms involved in health and disease.
	CO.3	Describe the morphology, classification, and virulence mechanisms of bacteria, viruses, fungi and other pathogenic micro organisms.
	CO.4	Correlate the natural history, mechanisms, and clinical manifestations of infectious diseases with the properties of microbial agents.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.5	Demonstrate the basis for selecting laboratory diagnostic tests, interpreting their results, and choosing appropriate antimicrobial therapies, as well as methods for controlling and preventing infectious diseases.
	CO.6	Identify the infectious pathogens from clinical materials using suitable laboratory methods and interpret the findings.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	2	2	3	2	2	3	3	2	3	3
CO2	3	3	2	2	3	2	2	3	3	3	3	3
CO3	3	2	2	2	2	2	2	3	3	3	3	3
CO4	2	3	3	3	2	3	2	3	3	3	3	2
CO5	3	3	3	3	3	3	3	3	3	3	3	3
CO6	3	2	3	3	3	2	2	3	3	2	3	3
CO	2.83	2.67	2.50	2.50	2.67	2.33	2.17	3.00	3.00	2.67	3.00	2.83

FORENSIC MEDICINE AND TOXICOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
FORENSIC MEDICINE	CO.1	Relate the existing laws and legal procedures relevant to a Registered Medical Practitioner in cases of homicide, assault, sexual offenses, alcoholic intoxication, drug dependence, and other situations requiring medical opinion.
	CO.2	Explain the medico-legal responsibilities of physicians in primary, secondary, and tertiary care settings.



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.3	Describe a rational approach to crime investigation based on scientific and legal principles.
	CO.4	Diagnose and manage medical and legal issues in cases of poisoning or overdose.
	CO.5	Describe codes of conduct and medical ethics, demonstrating an understanding of the medico-legal framework of medical practice and medical negligence.
	CO.6	Perform appropriate medicolegal examinations, documentation, and report preparation in all medicolegal cases
	CO.7	Collect, preserve, and dispatch specimens and relevant evidence materials to the appropriate centers in medicolegal cases.
	CO.8	Perform medicolegal autopsies under supervision and issue all relevant medical and medicolegal certificates.

PO \ CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	2
CO2	2	3	3	3	3	2	2	2	3	3	2	3
CO3	3	3	3	3	3	3	3	3	3	3	3	2
CO4	3	3	3	3	2	3	3	2	3	2	3	3
CO5	3	3	2	3	3	3	3	3	3	3	2	2
CO6	3	2	3	3	3	3	3	3	3	2	3	3
CO7	2	3	3	1	3	3	3	3	3	3	3	2
CO8	3	3	2	3	3	1	3	3	2	3	2	3
CO	2.75	2.88	2.75	2.75	2.88	2.50	2.88	2.75	2.88	2.75	2.63	2.50

OPHTHALMOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
OPHTH ALMOL	CO.1	Delineate the prevalent eye diseases in the community and describe the ophthalmic manifestations of systemic diseases.
	CO.2	Recognize, diagnose, and treat common eye problems, and identify when to refer patients.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

CO.3	Identify visual impairment and blindness in the community and actively participate in implementing National Programs for the Prevention and Control of Blindness.
CO.4	Demonstrate skills in applying the procedures, indications, and contraindications of ocular bandaging techniques, methods for ocular surface staining, their applications, and procedures for dry eye evaluation.
CO.5	Illustrate the assessment of all components of visual acuity, including distant vision, near vision, colour vision, and field of vision in cataract patients, and explain the precautions and procedures for epilation and foreign body removal using cotton swabs under topical anesthesia.
CO.6	Demonstrate an understanding of the importance of eye donation from a community health perspective.
CO.7	Communicate effectively to counsel and educate patients about cataract surgery.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	2	3	3	2	2	2
CO2	2	3	3	3	3	2	2	2	3	3	2	3
CO3	3	3	3	3	3	3	3	3	3	3	3	2
CO4	3	2	2	2	2	3	2	2	2	2	3	3
CO5	3	3	3	3	3	2	3	3	3	3	2	2
CO6	3	2	3	3	3	3	3	3	3	2	3	3
CO7	2	3	3	1	3	3	3	3	3	3	3	2
CO	2.71	2.71	2.86	2.57	2.86	2.57	2.57	2.71	2.86	2.57	2.57	2.43


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

OTORHINOLARYNGOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
OTORHINOLARYNGOLOGY	CO.1	Describe the anatomy of the external, middle, and inner ear, as well as the nose and throat (ENT).
	CO.2	Identify common otorhinolaryngological (ENT) emergencies and diseases.
	CO.3	Identify, diagnose, and manage common ENT problems in a patient care setting.
	CO.4	Recognize emergency ENT conditions requiring urgent or early surgical intervention and refer patients to appropriate centers at the optimal time.
	CO.5	Perform simple ENT procedures applicable in a patient care setting.
	CO.6	Identify hearing impairment and refer patients to appropriate hearing impairment rehabilitation programs.
	CO.7	Prescribe relevant investigative procedures for common ENT conditions and interpret the results.
	CO.8	Prescribe commonly used drugs for ENT conditions rationally, considering their adverse reactions.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	3	3	3	3	3	2
CO3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	2	2	2	3	3	2	3
CO5	3	3	2	3	3	3	3	3	3	3	2	2
CO6	3	3	3	3	3	3	3	3	3	2	3	3
CO7	3	3	3	2	3	3	3	3	3	3	3	2
CO8	3	3	2	3	3	2	3	3	2	3	2	3
CO	3.00	3.00	2.75	2.88	3.00	2.50	2.88	2.88	2.88	2.88	2.63	2.63



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

COMMUNITY MEDICINE

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
COMMUNITY MEDICINE	CO.1	Elucidate the notion of health and illness, strategies aimed at fostering well-being and forestalling ailments as outlined in National and State Health Initiatives.
	CO.2	Elaborate on the physical, social, psychological, economic, and environmental factors that influence health and illness.
	CO.3	Articulate the fundamental principles of demography, population dynamics, and the burden of diseases on both national and global scales, encompassing health economics
	CO.4	Examine epidemiological methodologies and their practical applications in discerning the occurrence and prevalence of both communicable and non-communicable
	CO.5	Outline and actively participate in National Health Programs, with particular attention to maternal and child health initiatives.
	CO.6	Identify, explore, document, strategize, and oversee public health concerns within communities, including issues like malnutrition and emergency situations.
	CO.7	Extract the frameworks of health information systems and the execution of health administration and educational initiatives within communities.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3	3
CO3	3	3	3	3	3	2	3	3	2	3	2	3
CO4	3	3	3	3	3	3	2	2	3	2	3	3
CO5	3	3	3	3	3	3	2	2	3	2	3	3
CO6	3	3	3	3	3	3	2	2	2	3	3	3
CO7	3	3	3	3	2	2	2	2	3	2	3	3
CO	3	3.00	3.00	3.00	2.86	2.71	2.14	2.43	2.71	2.57	2.71	3.00


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

GENERAL MEDICINE

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
GENERAL MEDICINE	CO.1	Elaborate on the underlying pathophysiology, epidemiological characteristics, clinical manifestations, diagnostic protocols, and therapeutic approaches for various diseases.
	CO.2	Conduct a comprehensive history-taking session and physical examination of an adult patient, arriving at an accurate clinical diagnosis, and prescribing and interpreting relevant laboratory examinations.
	CO.3	Initiate cost-effective treatment plans guided by principles of rational drug use, understanding necessary medical interventions, and advocating preventive measures.
	CO.4	Undertake regular follow-ups of patients with medical conditions and make appropriate referrals when deemed necessary.
	CO.5	Demonstrate effective communication skills to educate and counsel patients and their families regarding their health conditions.
	CO.6	Effectively manage common medical emergencies and facilitate referrals as warranted.
	CO.7	Independently perform routine medical procedures with a focus on patient safety and well-being.
	CO.8	Stay updated with the latest advancements in the field of medicine.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	3	3	2	3	3	2
CO3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	2	3	2	2	3	2	2	3
CO5	3	3	2	3	3	3	2	3	3	3	2	2
CO6	3	3	3	3	3	2	3	3	3	2	3	3
CO7	2	3	3	2	3	3	3	3	3	3	3	2
CO8	3	3	3	3	3	2	3	3	2	3	2	3
CO	2.88	3.00	2.88	2.88	2.88	2.50	2.75	2.88	2.75	2.75	2.63	2.63



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

GENERAL SURGERY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
GENERAL SURGERY	CO.1	Explain the anatomical and physiological foundations, diagnostic principles, and treatment strategies for prevalent surgical needs in both adults and children.
	CO.2	Implement principles of cleanliness, sterilization, disinfection, judicious use of prophylaxis, antibiotic therapy, and universal precautions in surgical settings.
	CO.3	Choose, calculate, and administer intravenous fluids, electrolytes, blood, and blood products appropriately based on clinical indications.
	CO.4	Identify common malignancies in the Indian context, outlining preventive measures, early detection strategies, and treatment modalities.
	CO.5	Conduct routine diagnostic and surgical procedures at the primary healthcare level.
	CO.6	Differentiate between acute and chronic surgical conditions, recognizing, stabilizing, and providing basic and advanced life support to trauma patients.
	CO.7	Secure informed consent and provide pre-operative counseling to patients undergoing surgical procedures.
	CO.8	Demonstrate a dedication to enhancing the quality and safety of surgical practices while prioritizing patient welfare.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	2	2	2	3	3	2
CO3	3	3	3	3	2	3	3	3	3	3	3	3
CO4	3	3	3	3	3	2	2	2	3	2	2	3
CO5	3	3	3	3	3	2	2	3	3	3	2	2
CO6	3	3	3	3	2	2	3	3	3	2	3	3
CO7	3	3	3	3	3	3	3	3	3	3	3	2
CO8	3	3	3	3	3	2	3	3	2	3	2	3
CO	3.00	3.00	3.00	3.00	2.75	2.25	2.63	2.75	2.75	2.75	2.63	2.63



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

OBSTETRICS AND GYNAECOLOGY

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
OBSTETRICS AND GYNAECOLOGY	CO.1	Outline prevalent obstetric and gynecological issues alongside preventive measures for gynecological infections.
	CO.2	Gather a comprehensive gynecological history, conduct relevant physical and pelvic examinations including PAP smears, and diagnose and manage common reproductive tract infections within primary care settings.
	CO.3	Explain the normal physiological changes occurring during pregnancy and postpartum periods, as well as the typical mechanisms of labor.
	CO.4	Perform uncomplicated deliveries, adhering to safe delivery protocols in both primary and secondary care settings, and administer early neonatal resuscitation as needed.
	CO.5	Identify labor complications, provide primary care interventions, recognize high-risk pregnancies, and ensure timely referrals when necessary.
	CO.6	Discuss the indications, techniques, and potential complications associated with surgeries such as cesarean section, laparotomy, abdominal and vaginal hysterectomy, and medical termination of pregnancy.
	CO.7	Select and prescribe safe medications during pregnancy and lactation.
	CO.8	Provide counseling and antenatal care, as well as postnatal care including guidance on breastfeeding.
	CO.9	Apply medico-legal principles and ethical considerations pertinent to obstetrics and gynecological procedures such as tubectomy, medical termination of pregnancy, pre-conception, and prenatal diagnostic techniques, while upholding patient confidentiality.
	CO.10	Provide guidance and support to couples in choosing suitable contraception methods.
	CO.11	Interpret laboratory and radiological test results relevant to obstetric patient care.
	CO.12	Recognize the healthcare needs of women and adolescents and deliver the professional responsibilities in accordance with ongoing national health programs.


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	2	2	2	2	3	3	2
CO3	3	3	3	3	2	3	3	3	3	3	3	3
CO4	3	3	3	3	3	2	2	2	3	2	2	3
CO5	3	3	3	3	3	2	2	3	3	3	2	2
CO6	3	3	3	3	2	2	3	3	3	2	3	3
CO7	3	3	3	3	3	3	3	3	3	3	3	2
CO8	3	3	3	3	3	3	3	3	2	3	2	3
CO9	3	3	3	3	3	2	2	3	3	3	2	2
CO10	3	3	3	3	2	3	3	3	3	2	3	3
CO11	3	3	3	3	3	3	3	3	3	3	3	2
CO12	3	3	2	3	3	2	3	3	2	3	2	3
CO	3.00	3.00	2.92	3.00	2.75	2.42	2.67	2.83	2.75	2.75	2.58	2.58

PEDIATRICS

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
PEDIATRICS	CO.1	Discuss, evaluate, and advocate for the optimal growth, development, and nutritional requirements of children and adolescents while recognizing deviations from the norm.
	CO.2	Identify and deliver both emergency and routine ambulatory care for neonates, infants, children, and adolescents, referring cases as necessary to higher levels of care.
	CO.3	Diagnose and treat common pediatric and neonatal illnesses appropriately.
	CO.4	Perform necessary procedures for children of all age groups within primary care settings.
	CO.5	Recognize children with special needs and make appropriate referrals.

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.

	CO.6	Define, identify, and categorize high-risk neonates, including skills in neonatal resuscitation, assessing gestational age, and providing care for healthy newborns.
	CO.7	Demonstrate advocacy for children's health and disease prevention while actively engaging in national programs related to child health, aligning with the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) Strategy.
	CO.8	Outline the immunization schedule (IAP/NIP) and provide explanations about individual vaccines.

PO CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	3	2	3	3	3	3	3	3	3
CO2	3	3	3	3	3	2	2	2	3	2	2	3
CO3	3	3	3	3	3	2	2	3	3	3	2	2
CO4	3	3	3	3	2	2	3	3	3	2	3	3
CO5	3	3	2	3	3	3	3	3	2	3	2	3
CO6	3	3	3	3	3	1	2	3	3	3	2	2
CO7	3	3	3	3	2	3	3	3	3	2	3	3
CO8	3	3	3	3	3	3	3	3	3	3	3	2
CO	3.00	3.00	2.88	3.00	2.63	2.38	2.63	2.88	2.88	2.63	2.50	2.63

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

OVERALL COURSE ATTAINMENT (DIRECT):

CO CONTRIBUTION TO PROGRAMME OUTCOMES (POS):

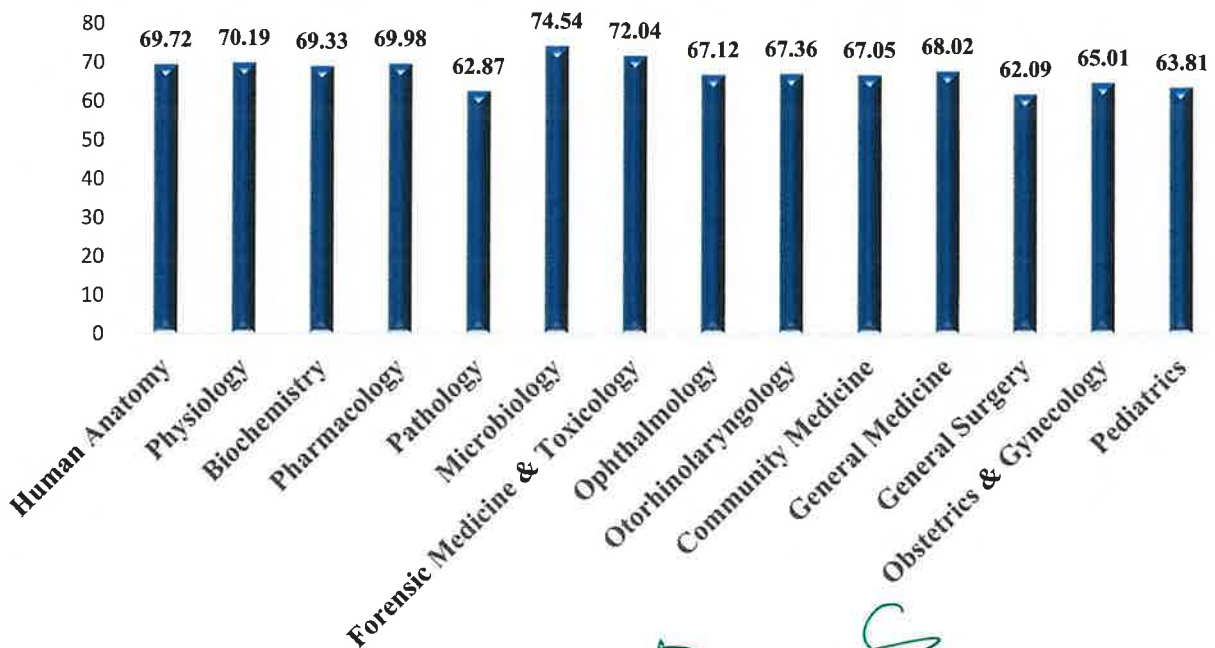
OVERALL CO ATTAINMENT

Course name	Total Number of Students Appeared (X)	Number of students Scoring above threshold (Y)	Percentage (Y/X*100)	Threshold based CO attainment level (A1)	Percentage based CO attainment (Average % marks per course)
Human Anatomy	144	144	100	3	69.72
Physiology	144	144	100	3	70.19
Biochemistry	144	144	100	3	69.33
Pharmacology	144	144	100	3	69.98
Pathology	144	144	100	3	62.87
Microbiology	144	144	100	3	74.54
Forensic Medicine & Toxicology	144	144	100	3	72.04
Ophthalmology	144	144	100	3	67.12
Otorhinolaryngology	144	144	100	3	67.36
Community Medicine	144	144	100	3	67.05
General Medicine	144	144	100	3	68.02
General Surgery	144	143	99.3	3	62.09
Obstetrics & Gynecology	144	144	100	3	65.01
Pediatrics	144	141	97.5	3	63.81



Sri Muthukumar Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

Marks Percentage based CO attainment




DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute

Chikkarayapuram, Near Mangadu, Chennai – 600069.


PO ATTAINMENT:

The overall PO attainment level of the batch of students was calculated using the formula:

= weighted average value of each PO × overall CO attainment average (A1) /3

PO-CO ARTICUALTION MATRIX

Course name	CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Human Anatomy	3	3	2.86	3	3	2.86	2.14	2.29	2.29	3	2.86	2.86	3
Physiology	3	3	3	3	3	2.86	2.29	2.14	2.43	2.71	2.57	2.71	3
Biochemistry	3	2.71	2.57	2.57	2.71	2.43	2.29	2.29	3	3	2.71	2.86	2.71
Pharmacology	3	2	2.88	2.5	2.63	2.5	2.88	2.38	2.75	3	2.38	3	2.88
Pathology	3	2.67	2.83	2.67	2.5	2.67	2.5	2.17	2.83	3	2.83	3	2.67
Microbiology	3	2.83	2.67	2.5	2.5	2.67	2.33	2.17	3	3	2.67	3	2.83
Forensic Medicine & Toxicology	3	2.75	2.88	2.75	2.75	2.88	2.50	2.88	2.75	2.88	2.75	2.63	2.50
Ophthalmology	3	2.71	2.71	2.86	2.57	2.86	2.57	2.57	2.71	2.86	2.57	2.57	2.43
Otorhinolaryngology	3	3.00	3.00	2.75	2.88	3.00	2.50	2.88	2.88	2.88	2.88	2.63	2.63
Community Medicine	3	3	3	3	3	2.86	2.71	2.14	2.43	2.71	2.57	2.71	3
General Medicine	3	2.88	3.00	2.88	2.88	2.88	2.50	2.75	2.88	2.75	2.75	2.63	2.63
General Surgery	3	3.00	3.00	3.00	3.00	2.75	2.25	2.63	2.75	2.75	2.75	2.63	2.63
Obstetrics & Gynecology	3	3.00	3.00	2.92	3.00	2.75	2.42	2.67	2.83	2.75	2.75	2.58	2.58
Pediatrics	3	3.00	3.00	2.88	3.00	2.63	2.38	2.63	2.88	2.88	2.63	2.50	2.63
Average of each PO		2.82	2.89	2.80	2.82	2.76	2.45	2.47	2.74	2.87	2.69	2.74	2.72


DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
 Chikkarayapuram, Near Mangadu,
 Chennai-600 069.



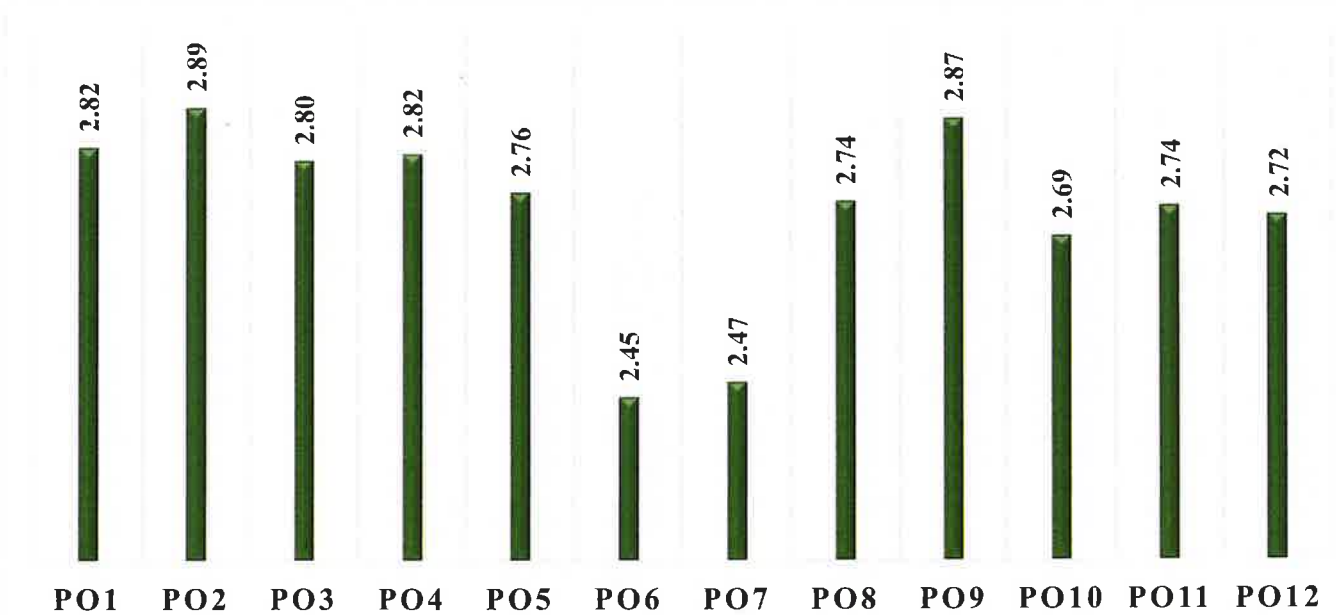
Sri Muthukumar Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

(Direct attainment)												
Set target	3	3	3	3	3	3	3	3	3	3	3	3

Overall PO attainment of 2018-2019 BATCH:

PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
2.82	2.89	2.80	2.82	2.76	2.45	2.47	2.74	2.87	2.69	2.74	2.72

MBBS 2018-2019 BATCH - OVERALL PO ATTAINMENT

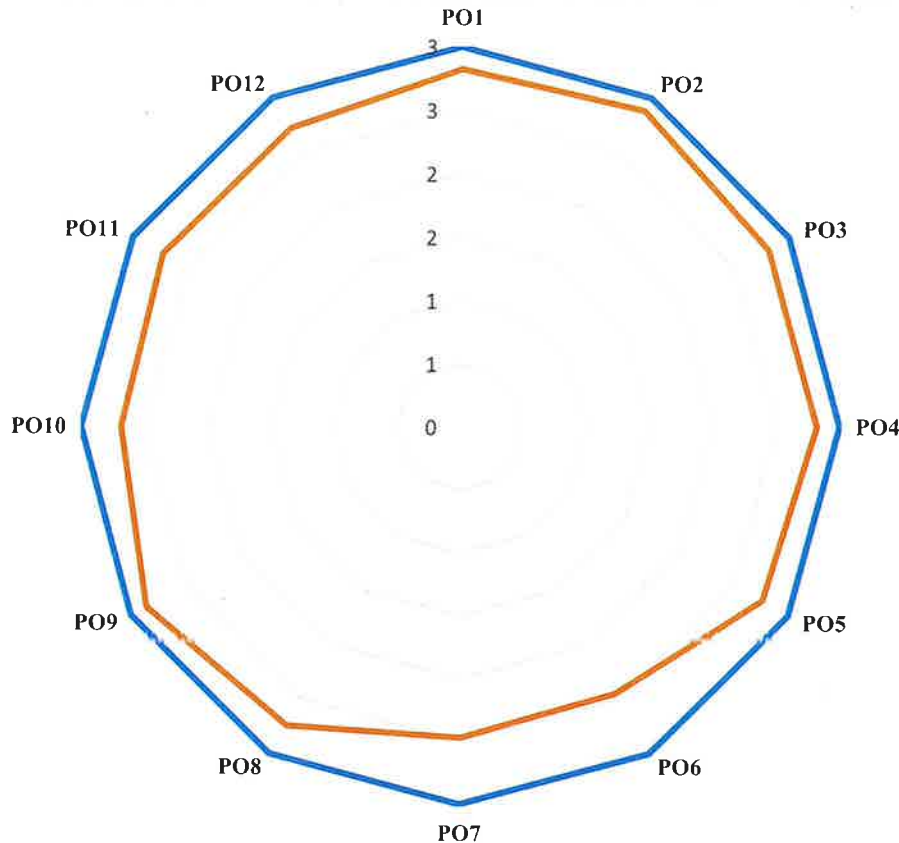



DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.



Sri Muthukumaran Medical College Hospital and Research Institute
Chikkarayapuram, Near Mangadu, Chennai – 600069.

MBBS 2018-2019 BATCH - OVERALL PO ATTAINMENT



CORRECTIVE ACTIONS TO IMPROVE PO ATTAINMENT:

PO6: Demonstrate the ability to pursue basic, clinical, and translational research in recent medical advances relevant to patient care, along with a commitment to lifelong learning.

- To enhance the number of research methodology workshops for students, encourage undergraduate students to indulge in minor research projects by providing institutional grants as seed money.

PO7: Communicate effectively, empathetically, and respectfully with patients in a language they understand, enhancing patient satisfaction, trust, and health outcomes.

- To organize more of communication skill development programs and emphasize the same in AETCOM modules

DEAN
SRI MUTHUKUMARAN MEDICAL COLLEGE
HOSPITAL & RESEARCH INSTITUTE
Chikkarayapuram, Near Mangadu,
Chennai-600 069.