

MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

NIRF 2019: Rank Band 151-200 in University Category



Information Brochure

2019-2020

(All UG & PG Courses are as per CBCS Pattern)

MGM SCHOOL OF BIOMEDICAL SCIENCES Aurangabad



ADDRESS

N-6, CIDCO, Aurangabad – 431 003



VISION

MGM Institute of Health Sciences aims to be a top ranking center of Excellence in Health Science Education, Health Care and Health Research.

MISSION

- Students graduating from the Institute will have the required skills to deliver the quality health care to all the sections of the society with compassion and benevolence, without prejudice or discrimination at an affordable cost.
- As a Research Centre, it shall focus on finding better, safer and affordable ways of diagnosing, treating and preventing diseases. In doing so, it will maintain the highest ethical standard.

‘To wipe every tear from every eye.’

- Mahatma Gandhi

About MGM Institute of Health Sciences, Navi Mumbai



The **Mahatma Gandhi Mission (MGM) Trust** is the parent body of MGM Institute Health Sciences which was established in 1982 by Hon. Shri.Kamalkishor N. Kadam, M. Tech (IIT Bombay) and Former Minister of Higher & Technical Education, Government of Maharashtra with a futuristic vision to provide quality education and health services by adopting innovative and dynamic pedagogical techniques, promote health, prevent and cure diseases, advancing biomedical and clinical research and educational programs for tomorrow's physicians and scientists. Since inception, the Trust has focused on providing Health Care Services, School Education and Higher Education with dedication and commitment. Members of the Trust are highly committed and well qualified professionals (Doctors and Engineers) who established, developed and nurtured this institution.

A chain of Schools, Medical, Nursing, Management, Engineering, Architecture, Computer Science & IT, Bioinformatics and Biotechnology, Fine Arts and Journalism stand testimony to the endeavors of the Trust. These Institutions under MGM Trust have achieved a mark of excellence in their respective areas over the years.

The MGM Trust had started two medical colleges, MGM Medical College & Hospital at Navi Mumbai in 1989 and MGM Medical College & Hospital at Aurangabad in 1990. During the year 2006, University Grants Commission (UGC) accorded **Deemed to be University** status to both these medical colleges and thus **MGM Institute of Health Sciences (MGMIHS)** came into existence u/s 3 of UGC Act, 1956 with these two constituent medical colleges at Navi Mumbai and Aurangabad, vide Notification No. F. 9-21/2005-U.3 (A) dated 30.08.2006 issued by the Government of India, Ministry of Human Resource Development, Department of Higher Education, New Delhi.

At present, MGMIHS has 09 constituent institutions (Medical, Biomedical, Physiotherapy, Nursing, Prosthetics & Orthotics) located at 02 campuses, namely Navi Mumbai and Aurangabad. All these institutions strive to achieve excellence in all areas and nurture total commitment to community services, by way of outreach programs. Teaching Hospitals at Navi Mumbai and Aurangabad with a total capacity of around 1740 beds caters to all kinds of speciality including super specialities. The hospitals are **NABH** certified and Laboratories are **NABL** certified. Our medical services are extended to needy patients and those below poverty line.

MGMIHS has been awarded **Grade 'A'** by the **National Assessment and Accreditation Council (NAAC)**. MGMIHS has ranked amongst top 200 universities of India (Under Rank Band: 151 - 200) in **NIRF – 2019 ranking**. It has also received **National 3rd ranking under Swachh Campus by MHRD, Govt. of India** for recognizing the green, self sustained and environment friendly campus at both locations.

Chancellor's Message

“The best way to find yourself is to lose yourself in the service of others.” - Mahatma Gandhi



MGM Institute of Health Sciences (Deemed to be University), Navi Mumbai offers undergraduate, post graduate and Ph. D. programs in Medical, Biomedical, Physiotherapy, Nursing and Rehabilitation disciplines since last 13 years. MGMIHS has played a pivotal role in creating medical and allied health professionals over the years to cater to ever increasing need of such professionals to serve society. With our feet firmly on the ground, we have kept pace with technology and globalization by inducting latest diagnostic and therapeutic equipment for patient management and for better exposure of students to newly emerging trends in medical sciences. I welcome you all to join in this journey with Best Wishes....

Shri Kamalkishor N. Kadam
Hon'ble Chancellor, MGMIHS

Vice Chancellor's Message



All the constituent Institutes of MGM Institute of Health Sciences at Navi Mumbai and Aurangabad will help you realize your dreams of becoming good health professional. Both campuses are located in beautiful, eco-friendly locations. Excellent infrastructure has been provided with state-of-art equipments, laboratories, class rooms, teaching aids, hostels and libraries. Highly quality teaching faculty with long years of experience will guide you to learn the art and science of medicine with love and care. In addition to general specialties, all super-speciality services are available in these hospitals. So you will have plenty of clinical workloads to learn specialised clinical skills.

Dr. Shashank D. Dalvi
Hon'ble Vice Chancellor, MGMIHS

Registrar's Message



MGMIHS has a culture of continuous growth which is evident from its active alumni network spread across the globe as well as its dedicated faculty with rich experience in their respective domains along with the various initiatives undertaken by students on campus. MGMIHS is determined to outshine the yardstick set, thus uplifting to higher trajectory in developing, designing and delivery of curriculum, training the budding health science professionals to acquire clinical acumen and skills and promoting and supporting research relevant to local, regional and national needs. By selecting this institute, you have made the right choice to get quality medical education.

Dr. Rajesh B. Goel
Registrar, MGMIHS

INDEX

1.	Vision & Mission.....	1
2.	Information about MGM Institute of Health Sciences, Navi Mumbai.....	2
3.	Chancellor’s Massage, Vice Chancellor’s Massage & Registrar’s Massage.....	3
4.	AboutMGMSBS.....	5-6
5.	Programme Offered.....	7
6.	B.Sc. Allied Courses.....	8-45
7.	M. Sc. Courses.....	46-67
8.	Code of Conduct.....	68
9.	Ragging: PreventionandPunishment... ..	69
10.	Facility &Infrastructure	70
11.	Annual Day	71-73
12.	Student Welfare	74
13.	Graduate Attributes	75
14.	Location Map& Contact Details.....	76

	Application cum Prospectus charges payable for the first academic program	Application cum Prospectus charges payable for each subsequent program/Preference
UG Programs	Rs. 1500/-	Rs. 500/-
PG Programs	Rs. 2500/-	Rs. 500/-

ABOUT MGMSBS, AURANGABAD

Welcome to MGM School of Biomedical Sciences, Aurangabad offering Basic Allied Science and Medical courses for students who aspire to pursue their career in the Allied Health Sciences, and teaching as well as medical research. 60% Allied health professionals constitute the healthcare systems in developed countries. Allied health professionals contribute to the delivery of various healthcare services which include evaluation, identification & prevention of disorders, rehabilitation and health systems management.

The demand for such technical professionals is appreciated and now there is a huge demand for such professionals for which strategies are being developed to scale up their numbers. MGMSBS initially started as a department under the Medical College when MGMIHS was been notified as a Deemed to be University i.e. “MGM Institute of Health Sciences” vide Notification No. F.9-21/2005-U.3 (A) dated 30.08.2006 issued by the Government of India, Ministry of Human Resource Development, Department of Higher Education, New Delhi to train allied health professionals.

Since its establishment in 2007, as a department it started with mere 100 students under Medical college and it has recorded exponential growth over the years. MGMSBS is now a full-fledged educational and research institution with student strength reaching approximately 211 and is now acclaimed as a centre of excellence in Allied Health Sciences. The reason for this growth and progress is mainly because of its demand-driven health related programs and the excellent infrastructure, clinical facilities and dedicated, qualified faculty. The school currently offers over 7 UG programs and 06 PG programs

School of Biomedical Sciences foster competencies beyond academic education, including evoking of leadership qualities, encouraging students for participating in conferences, thought-

provoking seminars, workshops, taking up research projects and extracurricular and outreach activities. Our consistent theme throughout is to encourage students to become engaged, be active learners and to promote medical research. While doing so the students acquire knowledge, skills needed to provide well qualified and trained professionals in allied health sciences profession. The majority of the alumni of the school are placed not only in reputed institute nationally but also overseas in universities, hospitals, healthcare teams and in private practice setups. We offer an intellectually stimulating environment coupled with rich cultural, social, sporting and harmonious life of the Institute campus.

Last but by no means least, School of Biomedical Sciences envisions to continuously grow and reform. Reformatations are essential to any growing institution as it fulfils our bold aspirations of providing the best for the students, for us to serve long into the future and to get ourselves updated to changing and evolving trends in the health care systems.

PROGRAMME OFFERED

Sr. No.	UG Course	PG Course
1	B. Optometry	M.Sc. (Medical Genetics)
2	B.Sc. (Perfusion Technology)	M.Sc. (Clinical Research)
3	B.Sc. (Cardiac Care Technology)	M.Sc. (Clinical Embryology)
4	B.Sc. (Medical Laboratory Technology)	M.Sc. (Medical Radiology & Imaging Technology)
5	B.Sc. (Medical Dialysis Technology)	M.Sc. (Cardiac Care Technology)
6	B.Sc. (Operation Theatre & Anaesthesia Technology)	M. Optometry
7	B.Sc. (Medical Radiology & Imaging Technology)	

B.Sc. Allied Courses

Duration 4 Year(3Year + 1 Year Internship)

Courses	Intake Capacity
B.Sc. Medical Laboratory Technology	30
B.Sc. Medical Radiology & Imaging Technology	30
B.Sc. Medical Dialysis Technology	20
B.Sc. Operation Theater & Anesthesia Technology	20
B.Sc. Cardiac Care Technology	5
B.Sc. Perfusion Technology	5
B. Optometry	20

ADMISSION PROCESS FOR B.Sc. ALLIED COURSES

Online Application Form & Application Process is available
on www.mgmuhs.com

FEE STRUCTURE FOR B.Sc. ALLIED COURSES

Tuition Fee for B.Sc. Allied Courses

Sr. No	Course	Annual Tuition Fees (□) Merit	Annual Tuition Fees (□) MGT*	Annual Tuition Fees (USD \$) NRI
1	B.Sc. Operation Theatre & Anaesthesia Technology (OT&AT)	55000.00	110000.00	3100
2	B.Sc. Medical Radiology & Imaging Technology (MRIT)	55000.00	110000.00	3100
3	B.Sc. Medical Laboratory Technology (MLT)	55000.00	110000.00	3100
4	B.Sc. Medical Dialysis Technology (MDT)	55000.00	110000.00	3100
5	B.Sc. Cardiac Care Technology (CCT)	105000.00	210000.00	6000
6	B.Sc. Perfusion Technology (PT)	105000.00	210000.00	6000
7	B. Optometry (B.OPTOM)	105000.00	210000.00	6000

* Fee structure Subject to Change

In Addition To Tuition Fees, Additional Fees Are Mentioned Below

Particulars of Fees	1st Year	2nd Year	3rd Year
Other Fee (ID Cards, Library Card, Apron, Journal, Annual Day, Bonafide)	5000.00	-	-
Refundable Deposit	20000.00	-	-
Institute Enrollment & Eligibility Fees	6000.00	-	-
Exam Fee (Each Semester)	2500.00		

ADMISSION SCHEDULE

B.Sc. Allied Course

Important Dates:

Particular	1 st Round	2 nd Round	3 rd Round
Start of Online Application Form	13 th May 2019	16 th June	26 th June
Last Date for Online Submission of Application Form	15 th June 2019	25 th June	5 th July
Date of Counseling/ Interaction	20 th June 2019	30 th June	10 th July

Note:

- Admission will be confirmed on payment of annual tuition fee of first year & Authentication of original documents at the time of reporting for counseling.
- For further details & updates, Merit list, Date of counseling, students are requested to visit our website www.mgmsbsnm.edu.in or www.mgmuhs.com regularly.

COMMENCEMENT OF THE PROGRAMME

The programme commences on **1st August 2019**.

CANCELLATION OF ADMISSION

Admission Cancellation Charges for

B.Sc. Allied Courses

Sr. No.	Point of time when notice of Cancellation of admission is received	Cancellation Charges Applicable
1	Before 15 th July 2019	5% of Tuition Fee Or ₹ 5000/- (Whichever is Less)
2	Within 16 th July to 30 th July 2019	10% of Tuition Fees
3	Within 1 st August to 15 th August 2019	20% of Tuition Fees
4	Within 16 th August to 30 th August 2019	50% of Tuition Fees
5	After 30 th August	1. No refund of 1 st year fee 2. Full fees of the entire course of three years to be paid by the student.

Note:

- Fees once paid towards are neither refundable nor transferable under any circumstances.
- For the cancellation of admission, a candidate has to write an application of cancellation duly signed by him/her and counter signed by his/her parent/guardian at respective Institute.
- Please note that, if the applicant wants to shift to another program after confirming the admission in a particular program, he/she will have to cancel the admission from the admitted institute and cancellation charges as mentioned above will be applicable in such cases.
- The candidate has to enclose the original selection letter, fee receipt and with cancelled cheque along with the written application. (stated the relation of the cheque holder with the student)

DOCUMENTS TO BE SUBMITTED DURING ADMISSION

B.Sc. Allied Courses

The following documents in original, with two sets of photo copies , are required to be submitted at the time of Admission.

- SSC Mark sheet or Its Equivalent
- SSC Passing Certificate Or ItsEquivalent
- HSC Mark Sheet OR ItsEquivalent
- HSC Passing Certificate OR ItsEquivalent
- School or College leaving Certificate / TransferCertificate
- MigrationCertificate
- Age , Nationality and DomicileCertificate
- Medical FitnessCertificate
- Proof of Date ofBirth (PhotoCopy)
- Parents Income Proof (PhotoCopy)
- Gazette Copy (if there is a change in the name shown in the 12th marksheet)
- Caste Certificate (ifapplicable) (PhotoCopy)
- Parents IDProof (PhotoCopy)
- Adhaar Card (PhotoCopy)
- Gap Certificate (ifapplicable)
- Four Passport sizephotographs

B.Sc. Operation Theatre & Anesthesia Technology

Duration of the Course- 4 years (3Academics + 1year Internship)

ELIGIBILITY CRITERIA

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted Board with pass marks in Physics, Chemistry, and Biology.
- Minimum percentage of marks: 50% aggregate (P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduate course. Subject availability of seats.

SCOPE OF THE COURSE:

The Course helps to prepare the operating theatre technologist to work as a competent and reliable member of the health care team under the guidance and supervision of senior Doctors, Surgeons, Anesthetist and Nursing staff in their delivery of patient care. Training also focuses on the knowledge and skills of monitoring infection control policy and procedures in the operating theatre.

Programme Specific Outcome:

After taking this course the student will be able to:

- Demonstrate ability to prepare and maintain Operation Theater.
- Demonstrate ability to maintain equipment support in an acute care environment.
- Identify and move to maintain a sterile field
- Follow infection control policies and procedures
- Manage and maintain theater equipment
- Demonstrate ability to prepare the patient for operative procedures.
- Provide intra-operative equipment and technical support
- Demonstrate skills and knowledge to assist anesthetist in handling emergencies outside of OT room
- Manage hazardous waste and follow biomedical waste disposal protocols.
- Ensure availability of medical and diagnostic supplies
- Monitor and assure quality

COURSE OF INSTRUCTION
B.Sc. Operation Theater & Anesthesia Technology
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Introduction to National Health Care System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)
Practical			
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)
Ability Enhancement Elective Course		Skill Enhancement Elective Course	
1	English & Communication Skills	1	Medical Bioethics & IPR
2	Environmental Sciences	2	Human Rights & Professional Values

COURSE OF INSTRUCTION

B.Sc. Operation Theater & Anesthesia Technology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Introduction To Operation Theatre Technology (OT)	1	Basic Techniques of Anesthesia
2	Introduction To Anesthesia Technology (AT)	2	Medical diseases influencing choice of Anesthesia
3	Principles of Anesthesia	3	Medicine relevant to OT Technology
4	ATOT Directed Clinical Education-I	4	ATOT Directed Clinical Education-II
Practical			
1	Introduction To Operation Theatre Technology (OT)	1	Basic Techniques of Anesthesia
2	Introduction To Anesthesia Technology (AT)		
Generic Elective Course		Ability Enhancement Elective Course	
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION
B.Sc. Operation Theater & Anesthesia Technology
YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Basics of Surgical Procedures	1	Basic Intensive Care
2	CSSD procedures	2	Specialized Surgery and Anesthesia
3	Advance Anesthetic Techniques	3	Electronics and Technology in Surgery and Anesthesia
4	ATOT Directed Clinical Education-III	4	ATOT Directed Clinical Education-IV
Practical			
1	Basics of Surgical Procedures	NIL	
2	Advance Anesthetic Techniques		
Core Elective Course			
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		

Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

B.Sc. Cardiac Care Technology

Duration of the Course- 4 years (3Academics + 1year Internship)

ELIGIBILITY CRITERIA:

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted board with pass marks in Physics, Chemistry, and Biology.
- Minimum percentage of marks: 50% aggregate (P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduate course. Subject availability of seats.

SCOPE OF THE COURSE:

The course aims at study of heart function, damage and repair. Heart failure, mostly resulting from heart attack, is the leading cause of hospital admissions in people over 60 years of age and has a large impact on quality of life, as well as productivity and healthcare costs.

The programme is designed to contribute to improvements in the area of Cardiac care. Graduates in this field have career prospects in the various Cardiac care hospitals as well as Institutions, located throughout the world.

PROGRAMME SPECIFIC OUTCOME:

- This programme is designed to cover all aspects of cardiovascular disease management and care.
- It involves learning of complex diagnostic and therapeutic procedures that involves use of various catheterization equipment, computer hardware, tools, machines and pharmacological agents.
- This program enables students to acquire skills for management of various cardiac disorders.

COURSE OF INSTRUCTION

B.Sc. Cardiac Care Technology

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry & Nutrition	3	General Microbiology
4	Introduction to National Health Care System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)
Practical			
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry & Nutrition	3	General Microbiology
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)
Ability Enhancement Elective Course		Skill Enhancement Elective Course	
1	English & Communication Skills	1	Medical Bioethics & IPR
2	Environmental Sciences	2	Human Rights & Professional Values

COURSE OF INSTRUCTION

B.Sc. Cardiac Care Technology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Applied Anatomy, Physiology, Pharmacology in Cardiac Care	1	Development of Cardiovascular system: Fetal & Neonatal
2	Basic Electrocardiography	2	Cardiovascular Diseases Pertinent to Cardiac Care Technology
3	Basic Echocardiography	3	Medical Instrumentation Relevant to Cardiac Care
4	CCT Directed Clinical Education-I	4	CCT Directed Clinical Education-II
Practical			
1	Basic Electrocardiography	1	Medical Instrumentation Relevant to Cardiac Care
2	Basic Echocardiography		
Generic Elective Course		Ability Enhancement Elective Course	
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION
B.Sc. Cardiac Care Technology
YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Advanced Electrocardiography	1	Cardiac Catheterization
2	Advanced Echocardiography	2	Pediatric Interventions
3	Invasive Cardiology	3	CCT Directed Clinical Education-IV
4	CCT Directed Clinical Education-III		
Practical			
1	Advanced Electrocardiography	1	Cardiac Catheterization
2	Advanced Echocardiography	2	Pediatric Interventions
Core Elective Course		NIL	
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		
Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

B.Sc. Medical Radiology & Imaging Technology

Duration of the Course- 4 years (3Academics + 1 Year Internship)

ELIGIBILITY CRITERIA:

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted Board with pass marks in Physics, Chemistry, and Biology or 50% of marks in mathematicsseparately
- Minimum percentage of marks: 50%aggregate(P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduatecourse. Subject availability of seats.

SCOPE OF THE COURSE:

Imaging Technologists are Health Professionals who facilitate patient diagnosis and management through the creation of Medical images using X-rays, ultrasound and magnetic resonance. They play a pivotal role in selecting and implementing the most appropriate examination protocols whichwill answer the clinical questions. Medical Imaging Technologists work in collaboration with radiologists and other specialist Medical Practitioners to provide patients with a range of diagnosticexaminations.

PROGRAMME SPECIFIC OUTCOME:

After taking this course...

- The student will learn principles of tomographic imaging with different modalities such as x-ray, PET and SPECT, NMR/MRI, ultra sound and optical with non-diffracting and diffracting energy sources.
- Learn principles of non-invasive medical imaging techniques and non-destructive techniques for industrial imaging.
- Understand projections and projection slice theorem
- Various types of data acquisition in tomography - parallel beam, fan-beam and cone-beam as well as circular and helical trajectories of the source and detectors. First to 4th generation of CT.
- Learn transform domain non-iterative 2D and 3D reconstruction techniques for non-diffracting radiation sources
- Learn the statistical nature of the radiation energy generation, propagation, and detection. The errors and artifacts due to the practical limitations of these processes.
- Exposed to a class of Algebraic Reconstruction Techniques (ART) and its variants.
- Some applications of Tomographic principles in signal processing and image processing.
- After completion of this curriculum, a Medical Radiology & Imaging Technologist gets opportunities to work at various health care institutes under designations as:
 - Radiographer
 - Radiological Technologist
 - X-ray Technologist
 - CT scan Technologist
 - MRI Technologist
 - Mammography Technologist
 - Applications Specialist
 - Quality control Technologist

COURSE OF INSTRUCTION
B.Sc. Medical Radiology & Imaging Technology
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Introduction to National Health Care System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)
Practical			
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)
Ability Enhancement Elective Course		Skill Enhancement Elective Course	
1	English & Communication Skills	1	Medical Bioethics & IPR
2	Environmental Sciences	2	Human Rights & Professional Values

COURSE OF INSTRUCTION
B.Sc. Medical Radiology & Imaging Technology
YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III			Semester IV
1	Physics for Medical Imaging - 1	1	Physics for Medical Imaging - 2
2	Radiographic Techniques - 1	2	Radiographic Techniques - 2
3	Dark Room Techniques	3	Digital Imaging
4	MRIT Directed Clinical Education - 1	4	MRIT Directed Clinical Education - 2
Practical			
1	Physics for Medical Imaging – 1	1	Physics for Medical Imaging - 2
2	Radiographic Techniques - 1	2	Radiographic Techniques - 2
Generic Elective Course			Ability Enhancement Elective Course
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION
B.Sc. Medical Radiology & Imaging Technology
YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Advanced Radiographic Techniques	1	Quality Assurance in Medical Imaging
2	Equipment for Medical Imaging	2	Modern Technologies in Imaging
3	Special Procedures in Medical Imaging	3	Radiation Physics and Radiation Protection
4	MRIT Directed Clinical Education - 3	4	MRIT Directed Clinical Education - 4
Practical			
1	Advanced Radiographic Techniques	1	Quality Assurance in Medical Imaging
2	Equipment for Medical Imaging	2	Modern Technologies in Imaging
Core Elective Course		NIL	
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		
Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

B.Sc. Medical Laboratory Technology

Duration of the Course- 4 years (3Academics + 1year Internship)

ELIGIBILITY CRITERIA:

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted board with pass marks in Physics, Chemistry, and Biology.
- Minimum percentage of marks: 50% aggregate (P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduate course. Subject availability of seats.

SCOPE OF THE COURSE:

- Course is concerned with the analysis of biological specimens to support diagnosis, treatment & prevention of disease.
- Programme introduces students to Pathology, Biochemistry, Microbiology, Histopathology, Immunology and Molecular Biology. Which remains mainstay in diagnosis?
- Students after successful completion of the course are designated as Clinical lab
- Technologists and work in collaboration with Pathologist & other specialized medical practitioners.
- Increasing modernization has definitely fuelled the demand for trained professionals to meet the era of automation, accreditation & skilled clinical management.

PROGRAMME SPECIFIC OUTCOME:

- The course will promulgate the students into Medical Lab technologist, academic researchers, microscopic machinist, which could fabricate the Medical Lab specialists.

COURSE OF INSTRUCTION
B.Sc. Medical Laboratory Technology
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry & Nutrition	3	General Microbiology
4	Introduction to National Health Care System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)
Practical			
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry & Nutrition	3	General Microbiology
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)
Ability Enhancement Elective Course		Skill Enhancement Elective Course	
1	English & Communication Skills	1	Medical Bioethics & IPR
2	Environmental Sciences	2	Human Rights & Professional Values

COURSE OF INSTRUCTION
B.Sc. Medical Laboratory Technology
YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Fundamental of Biochemistry - I	1	Fundamental of Biochemistry - II
2	Fundamentals of Microbiology - I	2	Fundamentals of Microbiology - II
3	Hematology and Clinical Pathology - I	3	Hematology and Clinical Pathology - II
4	MLT Directed Clinical Education - I	4	MLT Directed Clinical Education - II
Practical			
1	Fundamental of Biochemistry - I	1	Fundamental of Biochemistry - II
2	Fundamentals of Microbiology - I	2	Fundamental of Microbiology-II
3	Hematology and Clinical Pathology - I	3	Hematology and Clinical Pathology - II
Generic Elective Course		Ability Enhancement Elective Course	
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION
B.Sc. Medical Laboratory Technology
YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Clinical Biochemistry - I	1	Clinical Biochemistry - II
2	Medical Microbiology-I	2	Medical Microbiology-II
3	Blood Bank and General Pathology - I	3	Blood Bank and General Pathology - II
4	MLT Directed Clinical Education - III	4	MLT Directed Clinical Education -IV
Practical			
1	Clinical Biochemistry - I	1	Clinical Biochemistry - II
2	Medical Microbiology- I	2	Medical Microbiology-II
3	Blood Bank and General Pathology - I	3	Blood Bank and General Pathology - II
Core Elective Course		NIL	
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		
Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

B. Optometry

Duration of the Course- 4 years (3 Academics + 1 year Internship)

ELIGIBILITY CRITERIA:

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted Board with pass marks in Physics, Chemistry, and Biology.
- Minimum percentage of marks: 50% aggregate (P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduate course. Subject availability of seats.

SCOPE OF THE COURSE:

- An optometrist dispenses spectacle, contact lenses, low vision aids and ocular prosthesis.
- The programme is designed to provide the student with a comprehensive knowledge about eye. This course will provide training on selecting and prescribing spectacles correction, dispensing of contact lenses and low-vision aids. The candidate will be provided with hands-on experience on various ophthalmic equipments. The student will also be exposed to ophthalmology operation theatre so as to learn assisting in eye surgeries, handling of microsurgical instruments and maintenance of operating microscopes and other equipments.
- The optometrist can set up his own shop for dispensing spectacles and contact lenses. He can also be working with the branded optometric stores. An optometrist is essential in an eye hospital and eye clinics.

PROGRAMME SPECIFIC OUTCOME:

The graduates will be knowledgeable in ophthalmic and systemic care to practice as an optometrist.

- The graduates will interpret results of common ophthalmic procedures, develop differential and definitive diagnoses, including the skillful use of vision care instruments and material.
- The graduates will be skillful in techniques and current technologies, skillful in problem solving, and will possess professional, ethical and compassionate behavior and standards.
- The graduates will provide quality eye and vision care through comprehensive and appropriate examination, measurement, assessment, diagnosis, treatment and management of eye and vision conditions.
- The graduates will be cognizant and responsive to the health care needs of the community and possess a commitment to continuously improve knowledge and abilities.
- The graduates will work and communicate effectively in an inter-disciplinary environment, either independently or in a team, and demonstrate significant leadership qualities.
- The graduates will possess the initiative and critical acumen required to continuously improve their knowledge through self-study, continuing education programme or higher studies.

COURSE OF INSTRUCTION

B. Optometry

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)				
Theory				
Semester I			Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II	
2	Human Physiology Part I	2	Human Physiology Part II	
3	General Biochemistry & Nutrition	3	General Microbiology	
4	Introduction to National Health Care System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology	
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)	
Practical				
1	Human Anatomy Part I	1	Human Anatomy Part II	
2	Human Physiology Part I	2	Human Physiology Part II	
3	General Biochemistry & Nutrition	3	General Microbiology	
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology	
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)	
Ability Enhancement Elective Course		Skill Enhancement Elective Course		
1	English & Communication Skills	1	Medical Bioethics & IPR	
2	Environmental Sciences	2	Human Rights & Professional Values	

COURSE OF INSTRUCTION

B. Optometry

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Physical Optics	1	Optometric Optics I & II
2	Geometrical Optics	2	Ocular Diseases II & Glaucoma
3	Visual Optics I/II	3	Dispensing Optics
4	Ocular Diseases I	4	Optometric Instrumentation
5	Clinical Examinations and Visual Systems	5	Basic & Ocular Pharmacology
		6	BOPTOM Directed Clinical Education-1
Practical			
1	Physical Optics	1	Optometric Optics I & II
2	Geometrical Optics	2	Dispensing Optics
3	Visual Optics I/II	3	Optometric Instrumentation
4	Clinical Examinations and Visual systems		
Generic Elective Course		Ability Enhancement Elective Course	
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION

B. Optometry

YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Contact Lenses I	1	Contact Lenses II
2	Binocular Vision I &II	2	Sports Vision
3	Low Vision Aids	3	Pediatric and Geriatric Optometry
4	Systemic Disease	4	Occupational Optometry
5	BOPTOM Directed Clinical Education-II	5	BOPTOM Directed Clinical Education-III
Practical			
1	Contact Lenses I	1	Contact Lenses II
2	Binocular Vision I & II	2	Pediatric and Geriatric Optometry
Core Elective Course		NIL	
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		
Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

B.Sc. Perfusion Technology

Duration of the Course- 4 years (3Academics + 1year Internship)

ELIGIBILITY CRITERIA:

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted Board with pass marks in Physics, Chemistry, and Biology.
- Minimum percentage of marks: 50% aggregate (P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduate course. Subject availability of seats.

SCOPE OF THE COURSE:

The Respiratory Care Technologist is a key member of the medical team, specializing in diagnostics, treatments, and procedures in the care of patients with respiratory problems. They evaluate, treat, and care for patients with breathing disorders.

The prime responsibility of the Perfusionist is to maintain adequate circulatory and respiratory support during open heart surgery, this support includes: set-up and operation of the extra-corporeal circuit, set-up and calibration of physiological monitoring, auto transfusion and maintaining proper perfusion records.

The Perfusionist is also responsible for the set-up and operation of advanced life support systems. Classroom instructions include medical gas therapy, clinical applications & therapeutics, clinical medicine, pulmonary functions and cardiopulmonary patho-physiology, and continuous mechanical ventilation.

PROGRAMME SPECIFIC OUTCOME:

At the completion of course, students will be able to:

- Demonstrate clinical skills in cardiopulmonary bypass and mechanical circulatory devices.
 - Demonstrate clinical skills in auto transfusion, blood conservation, and blood product management.
- Demonstrate clinical skills in laboratory analysis of blood gases, hematocrit, and coagulation.
- Integrate perfusion theory to clinical applications.
- Demonstrate acquired knowledge of various perfusion equipment and supplies used in the healthcare setting

COURSE OF INSTRUCTION
B.Sc. Perfusion Technology
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Introduction to National Healthcare System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)
Practical			
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)
Ability Enhancement Elective Course		Skill Enhancement Elective Course	
1	English & Communication Skills	1	Medical Bioethics & IPR
2	Environmental Sciences	2	Human Rights & Professional Values

COURSE OF INSTRUCTION

B.Sc. Perfusion Technology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Applied Pharmacology	1	Applied Physiology & Biochemistry
2	Applied Anatomy and Physiology of Cardiovascular system related to PT	2	Introduction of Perfusion Techniques
3	Basics of Perfusion Technology	3	PT Directed Clinical Education –IV
4	PT Directed Clinical Education-III		
Practical			
1	Applied Anatomy and Physiology of Cardiovascular system related to PT	1	Applied Physiology & Biochemistry
2	Basics of Perfusion Technology	2	Introduction of Perfusion Techniques
Generic Elective Course		Ability Enhancement Elective Course	
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION

B.Sc. Perfusion Technology

YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Perfusion Technology-Clinical	1	Perfusion Technology-Advanced
2	Perfusion Technology-Applied	2	Recent advance in Cardiopulmonary bypass & Perfusion
3	PT Directed Clinical Education -V	3	PT Directed Clinical Education-VI
Practical			
1	Perfusion Technology-Clinical	1	Perfusion Technology-Advanced
2	Perfusion Technology-Applied		
Core Elective Course		NIL	
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		
Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

B.Sc. Medical Dialysis Technology

Duration of the Course- 4 years (3Academics + 1year Internship)

ELIGIBILITY CRITERIA:

For 10+2:

- He/she has passed the Higher Secondary (10+2) with Science (PCB) or equivalent examination recognized by any Indian University or a duly constituted Board with pass marks in Physics, Chemistry, and Biology.
- Minimum percentage of marks: 50% aggregate (P.C.B.)

For Lateral Entry:

- Lateral entry is applicable for all the UG Degree courses of Allied Health Science Courses wherever corresponding Diploma courses is available in the concerned specialty.
- The corresponding Diploma Courses should be pursued from a recognized university only.
- They would be eligible to join in 2nd year of respective graduate course. Subject availability of seats.

SCOPE OF THE COURSE:

- Dialysis Technologists operate machines that remove waste and excess fluids from the blood of patients whose kidneys can no longer carry out those functions.
- The programme is designed to provide the Student with a comprehensive introduction to the field of dialysis and the skills required for entry level employment as a dialysis technologist. Classroom instruction includes principles of dialysis, anatomy and physiology of the kidney, fluid and electrolyte balance, hematological aspects, infectious diseases, dialysis systems and equipment, vascular access to circulation, dietary regulation, blood chemistries, complications of renal failure, psychosocial aspects, and an overview of peritoneal dialysis and renal transplantation.

PROGRAMME SPECIFIC OUTCOME:

This programme is designed to cover all aspects of cardiovascular disease management and care.

- It involves learning of complex diagnostic and therapeutic procedures that involve use of various catheterization equipment, computer hardware, tools, machines and pharmacological agents.
- This program enables students to acquire skills for management of various cardiac disorders.

COURSE OF INSTRUCTION

B.Sc. Medical Dialysis Technology

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Introduction to National Healthcare System (Multidisciplinary/ Interdisciplinary)	4	Basic Pathology & Hematology
		5	Introduction to Quality and Patient safety (Multidisciplinary/Interdisciplinary)
Practical			
1	Human Anatomy Part I	1	Human Anatomy Part II
2	Human Physiology Part I	2	Human Physiology Part II
3	General Biochemistry& Nutrition	3	General Microbiology
4	Community Orientation & Clinical Visit (Including related practical to the parent course)	4	Basic Pathology & Hematology
		5	Community Orientation & Clinical Visit (Including related practical's to the parent course)
Ability Enhancement Elective Course		Skill Enhancement Elective Course	
1	English & Communication Skills	1	Medical Bioethics & IPR
2	Environmental Sciences	2	Human Rights & Professional Values

COURSE OF INSTRUCTION

B.Sc. Medical Dialysis Technology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Introduction to Dialysis	1	Concept of Renal Disease & Disorders
2	Fundamental of Dialysis	2	Nutrition in Dialysis
3	Pharmacology in Dialysis	3	MDT Directed Clinical Education-II
4	MDT Directed Clinical Education-I		
Practical			
1	Introduction to Dialysis	1	Concept of Renal Disease & Disorders
2	Fundamental of Dialysis	2	Seminar
Generic Elective Course		Ability Enhancement Elective Course	
1	Pursuit of Inner Self Excellence (POIS)	1	Computer and Applications
2	Organisational Behaviour	2	Biostatistics and Research Methodology

COURSE OF INSTRUCTION

B.Sc. Medical Dialysis Technology

YEAR WISE SUBJECT DISTRIBUTION

Third Year (Semester V & VI)			
Theory			
Semester V		Semester VI	
1	Applied Dialysis Technology Part – I	1	Applied Dialysis Technology Part – II
2	Advanced Dialysis Technology Part – I	2	Advanced Dialysis Technology Part – II
3	MDT Directed Clinical Education-III	3	MDT Directed Clinical Education-IV
Practical			
1	Applied Dialysis Technology Part – I	1	Applied Dialysis Technology Part – II
2	Advanced Dialysis Technology Part – I	2	Advanced Dialysis Technology Part – II
Core Elective Course		NIL	
1	Basics of Clinical Skills Learning		
2	Hospital Operation Management		
Fourth Year (Semester VII & VIII)			
Semester VII		Semester VIII	
1	Internship	1	Internship

LABORATORY FACILITY FOR B.Sc. ALLIED COURSES



M.Sc. COURSES

Duration: 2 Years

Courses	Intake Capacity
M.Sc. Medical Genetics	10
M.Sc. Clinical Embryology	5
M.Sc. Cardiac Care Technology	2
M.Sc. Medical Radiology & Imaging Technology	2
M.Optomety	2
M.Sc. Clinical Research	10

ADMISSION PROCESS FOR M.Sc. COURSES

Online Application Form & Application Process is available on www.mgmuhs.com

FEE STRUCTURE FOR M.Sc. COURSES

Sr. No	Course	Annual Tuition Fees (Rs.) Merit	Annual Tuition Fees (Rs.) MGT*	Annual Tuition Fees (USD \$) NRI
1	M.Sc. Medical Genetics	60000.00	120000.00	3400
2	M.Sc. Clinical Embryology	105000.00	210000.00	3400
3	M.Sc. Medical Radiology and Imaging Technology (MRIT)	105000.00	210000.00	6000
4	M. Optometry	105000.00	210000.00	6000
5	M.Sc. Cardiac Care Technology	105000.00	210000.00	6000
6	M.Sc. Clinical Research	60000.00	120000.00	3400

* Fee structure Subject to Change

***In addition to tuition fees, additional fees are mentioned below**

Particulars of Fees	1st Year	2nd Year	3rd Year
Other Fee (ID Cards, Library Card Apron, Journal, Fest, Bonafide)	5000.00	-	-
University Enrollment & Eligibility Fees	12000.00	-	-
Exam Fee (Each Semester)	5000.00		

ADMISSION SCHEDULE

M.Sc. Course

Important Dates:

Start of Online Application Form: 13th may, 2019

Note:

- Admission will be confirmed on payment of tuition fee& authentication of original document at the time of reporting for counseling
- For further details & updates, merit list, date of counseling, students are requested to visit our website www.mgmsbsnm.edu.in or www.mgmuhs.com regularly.

COMMENCEMENT OF THEPROGRAMME

Tentative date of programme commencement is **1st September 2019.**

CANCELLATION OF ADMISSION

Admission Cancellation Charges for

M.Sc. Courses

Sr. No.	Point of time when notice of Cancellation of admission is received	Cancellation Charges Applicable
1	Before 15 th August 2019	5% of Tuition Fees Or <input type="checkbox"/> 5000/- (Whichever is Less)
2	Within 16 th August to 30 th August 2019	10% of Tuition Fees
3	Within 1 st September to 15 th September 2019	20% of Tuition Fees
4	Within 16 th September to 30 th September 2019	50% of Tuition Fees
5	After 30 th September	1. No refund of 1st year fee 2. Full fees of the entire course of three years or two years as the case may be will be liable to be paid by the student.

Note:

- Fees once paid towards are neither refundable nor transferable under any circumstances.
- For the cancellation of admission, a candidate has to write an application of cancellation duly signed by him/her and counter signed by his/her parent/guardian at respective Institute.
- The candidate has to enclose the original selection letter, fee receipt and with cancelled cheque along with the written application. (state the relation of the cheque holder with the student)

DOCUMENTS TO BE SUBMITTED DURING ADMISSION

M.Sc. Courses

The following documents in original, with two set of photo copies thereof, are required to be submitted at the time of Admission.

- SSC Mark sheet or ItsEquivalent
- SSC Passing Certificate Or ItsEquivalent
- HSC Mark Sheet OR ItsEquivalent
- HSC Passing Certificate OR ItsEquivalent
- B.Sc. Degree Mark sheet OR Its Equivalent (all years)
- Leaving Certificate/TransferCertificate
- Passing Certificate of B.Sc. Or Degree or ItsEquivalent
- MigrationCertificate
- Age, Nationality and DomicileCertificate
- Medical FitnessCertificate
- Proof of Date ofBirth (Photo Copy)
- Parents Income Proof (Photo Copy)
- Gazette Copy (if there is a change in the name shown in the last marksheet)
- Caste Certificate (ifapplicable)
- Parents IDProof
- Adhaar Card (Photo Copy)
- Gap Certificate (if applicable)
- Four copies of Passport sizephotos

M.Sc. Medical Genetics

Duration of the Course - 2 Years

ELIGIBILITY CRITERIA:

As a minimum criterion of eligibility, aspiring candidates are needed to have attained a B.Sc. in any discipline of Life Sciences, Biosciences, Bachelor's degree in any of Physics, Biological Sciences, M.B.B.S, BDS, BAMS, BHMS, B.Pharm,B.Tech (Biotechnology), Bachelor's Degree in Agricultural, Veterinary and Fishery Sciences, or equivalent examination with a minimum aggregate score of 50%.

SCOPE OF THE COURSE:

M.Sc. Medical Genetics provides outstanding educational opportunities for students who wish to pursue a career in research, education, and service in this field.

Students in the programme obtain rigorous training in modern biology with a special emphasis on genetics.

They also receive training in cutting edge technology for diagnosis of genetic diseases.

The unique environment of a medical college provides students with an opportunity to obtain education and practical experience in both basic and applied research in human genetics.

In order to encourage our students to fulfill their potential and to excel in their work, we provide state of art laboratories, hands on experience and opportunity to expose them to faculty of international repute.

This institute is one of the very few institutes to offer this course.

PROGRAMME SPECIFIC OUTCOME:

- GENETICS is the basic science that has as its goal an explanation of life processes at the sub cellular and molecular level.
- Recent years have seen explosive advances in the study of DNA, including gene cloning, sequencing and mapping.
- The candidates of Genetics generally study the genetic variation, genes, and heredity in living organisms
- Developments in genetics have opened new areas of study and provided powerful techniques that are revolutionizing the pharmaceutical, health, and agricultural industries
- They have spawned new industries in genetics, and opened avenues for answering basic and applied questions in all of the life sciences.
- Genetics students complete a comprehensive curriculum in the fundamentals of science and are prepared to address problems in the biochemical, biological and agricultural sciences.
- The requirements of the molecular biology major assure competence in the broad scientific theory and application of genetics, while allowing flexibility for students to develop strength in their biochemical, biological or agricultural discipline.

COURSE OF INSTRUCTION

M.Sc. Medical Genetics

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I			Semester II
1	Cell Biology	1	Molecular Biology & Genomics
2	Immunology & Immunotechnology	2	Recombinant DNA Technology
3	Analytical Instrumentation	3	Bioinformatics
4	Basic Biochemistry & Inborn Errors of Metabolism) (Multidisciplinary/Interdisciplinary)	4	Research Methodology & Biostatistics (Core Course)
Practical			
1	Cell Biology	1	Molecular Biology & Genomics
2	Immunology & Immunotechnology	2	Recombinant DNA Technology
3	Analytical Instrumentation	3	Bioinformatics
4	Basic Biochemistry & Inborn Errors of Metabolism) (Multidisciplinary/Interdisciplinary)	4	Research Methodology & Biostatistics (Core Course))

COURSE OF INSTRUCTION

M.Sc. Medical Genetics

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Clinical Genetics & Genetic Counseling	1	Dissertation / Project*
2	Developmental Genetics & Environmental Genetics	2	General Elective Course I Pursuit of Inner Self Excellence (POISE) II Bioethics, Biosafety, IPR & Technology Transfer III Disaster Management and Mitigation Resources IV Human Rights
3	Core Elective Course I.Cancer Genetics and Pharmacogenomics II Principles of Genetics & Population Genetics III StemCell		
4	Dissertation/Project Proposal		
Practical			
1	Clinical Genetics	1	Educational Tour / Field Work/Industrial Visit/ Hospital Visit
2	Developmental Genetics		
3	Core Elective Course I.Cancer Genetics and Pharmacogenomics II Principles of Genetics & Population Genetics III StemCell		
4	Seminar		

M.Sc. Clinical Embryology

Duration of the Course - 2 Years

ELIGIBILITY CRITERIA:

As a minimum criterion of eligibility, aspiring candidates are needed to have attained a B.Sc. in any discipline of Life Sciences, Biosciences, Bachelor's degree in any of Physics, Biological Sciences, M.B.B.S, BDS, BAMS, BHMS, B.Pharm., B.Tech (Biotechnology), Bachelor's Degree in Agricultural, Veterinary and Fishery Sciences, or equivalent examination with a minimum aggregate score of 50%.

SCOPE OF THE COURSE:

The students of M.sc. Molecular Biology course (2 years) should be able to

1. Develop/ produce trained manpower with strong knowledge base in clinical embryology.
2. To impart knowledge of embryology.
3. To teach the basics of an ART centre where they can work as clinical embryologists.
4. To impart knowledge on cryopreservation & practice of embryo freezing so that they can work in cryopreservation centers.
5. To give them the basic knowledge of genetics so that they can work in genetics lab.
6. To train students in micromanipulation of sperm and oocytes for carrying out ICSI and single- cell biopsies of embryos for preimplantation genetic diagnosis.

PROGRAMME SPECIFIC OUTCOME:

Clinical embryology graduate students will be able to:

- Understand complete knowledge about the structures, development of human embryo at different stages including gametogenesis, fertilization and implantation. Also, the students will have the ability to correlate between the embryological structure and its clinical significance. This course trains the student to solve and understand any related clinical problems by simple and shortway.
- Demonstrate the ability to assimilate and integrate information from lectures, practical, tutorial and independent activities on the gametogenesis, fertilization, implantation, embryonic period, fetal period and development of the pharyngeal arches and their derivatives.
- Experience through small group teaching and group discussion to analyze any related clinical problem or congenital anomaly and to communicate with other students and teaching staff.

COURSE OF INSTRUCTION
M.Sc. Clinical Embryology
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I			Semester II
1	Relevant Gross Anatomy	1	Infertility & Ovulation Induction Methods
2	Histology	2	Quality assessment, statistics, handling data, ethics, legislation
3	Genetics and Reproductive Hormone	3	IVF procedure
4	General & Systemic Embryology	4	Research Methodology & Biostatistics (Core Course)
Practical			
1	Relevant Gross Anatomy	1	Infertility & Ovulation induction methods
2	Histology	2	Quality assessment, statistics, handling data, ethics, legislation
3	Genetics and Reproductive Hormone	3	IVF procedure
4	General & Systemic Embryology	4	Research Methodology & Biostatistics (Core Course)

COURSE OF INSTRUCTION

M.Sc. Clinical Embryology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Introduction to IVF lab	1	Dissertation / Project
2	Techniques used in IVF Lab	2	General Elective Course I Pursuit of Inner Self Excellence(POISE) II IPR & Bioethics (Multidisciplinary / Interdisciplinary) III Disaster Management and MitigationResources IV Human Rights
3	Core Elective Course I. ICSI II Biochemistry including steroid metabolism III Lab equipment		
4	Dissertation/Project Proposal		
Practical			
1	Introduction to IVF lab	1	Educational Tour / Field Work/Industrial Visit/Hospital Visit
2	Techniques used in IVF Lab		
3	Core Elective Course I. ICSI II Biochemistry including steroid metabolism III Lab equipment		
4	Seminar		

M.Sc. Cardiac Care Technology

Duration of the Course- 2 years

ELIGIBILITY CRITERIA:

B.Sc. Cardiac Care/Cardiovascular Technology OR 2 years of Diploma in Cardiovascular Technology (post regular general B.Sc.) with minimum of 3 year experience.

PROGRAMME SPECIFIC OUTCOME:

- This course offers the opportunity to study all aspects of clinical cardiology including expert assessment and management of a range of cardiac conditions, cardiac interventions, interpretation and practical skills.
- Includes hyper acute stroke and thrombolysis management, interpretation of cardiac CT and MRI, TIA management, maximizing stroke care and rehabilitation.
- The programme can be regarded as vital training for the early stages of cardiology or stroke specialist training with clear learning objectives.

COURSE OF INSTRUCTION

M.Sc. Cardiac Care Technology

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Introduction to Clinical Cardiology	1	Introduction to Non-Invasive Techniques in Cardiology
2	Fundamentals of Cardiac Diagnostic Procedures and Investigations	2	Invasive Cardiology
3	Introduction to Pacing and Electrophysiology study techniques	3	CCT Directed Clinical Education-II
4	CCT Directed Clinical Education-I	4	Research Methodology & Biostatistics (Core Course)
Practical			
1	Introduction to Clinical Cardiology	1	Introduction to Non-invasive techniques in Cardiology
2	Fundamentals of Cardiac diagnostic procedures and Investigations	2	Invasive cardiology
		3	Research Methodology & Biostatistics (Core Course)
		Core Elective Course	
		1	Basics of Clinical Skills Learning
		2	Hospital Operation Management

Second Year (Semester III & IV)

Theory

Semester III		Semester IV	
1	Echocardiography- Advanced	1	Pursuit of Inner Self Excellence (POISE)
2	Quality Assurance, Standardization & Accreditation (Cardiac Care)	2	Bioethics, Biosafety, IPR & Technology transfer
3	CCT Directed Clinical Education-III	3	Disaster Management and Mitigation Resources
4	Dissertation/Project*	4	Human Rights
		5	Dissertation / Project

Practical

1	Echocardiography- Advanced	1	Educational Tour / Field Work/IV/Hospital Visit
---	----------------------------	---	-------------------------------------------------

Seminars

1	Seminars
---	----------

M.Sc. Medical Radiology and Imaging Technology

Duration of the Course- 2 years

ELIGIBILITY CRITERIA:

B.Sc. in Medical Radiology & Imaging Technology/B.Sc. Medical Technology Radio diagnosis and Imaging / B.Sc. Radiological Technology/B.Sc. in Radiography B.Sc. Medical Technology (X-ray) with a minimum 50% marks in B.Sc.

PROGRAMME SPECIFIC OUTCOME:

After taking this course...

- The student will learn principles of tomographic imaging with different modalities such as x-ray, PET and SPECT, NMR/MRI, ultra sound and optical with non-diffracting and diffracting energy sources.
- Learn principles of non-invasive medical imaging techniques and non destructive techniques for industrial imaging.
- After completion of this curriculum, a Medical Radiology & Imaging Technologist gets opportunities to work at various health care institutes under designations as: Radiographer, Radiological Technologist, X-ray Technologist, CT scan Technologist, MRI Technologist, Mammography Technologist, Cathlab Technologist, Ultrasonography Technologist, Applications Specialist, Radiological Safety Officer, Interventional Technologist, Quality control Technologist, PACS manager, Sales and marketing of radiology industry, Diagnostic Manager, Teaching & research faculty in Medical colleges

COURSE OF INSTRUCTION
M.Sc. Medical Radiology and Imaging Technology

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Conventional Radiology and Imaging Equipment	1	Radiographic and Imaging Techniques
2	Modern Radiological and Imaging Equipment	2	Interventional Radiological Techniques
3	Radiation Safety and Protection	3	Radiological Physics for Imaging
4	MRIT Directed Clinical Education - I	4	MRIT Directed Clinical Education - II
		5	Research Methodology & Biostatistics (Core Course)
Practical			
1	Conventional Radiology and Imaging Equipment	1	Radiographic and Imaging Techniques
2	Modern Radiological and Imaging Equipment	2	Radiological Physics for Imaging
		3	Research Methodology & Biostatistics (Core Course)
		Core Elective Course	
		1	Basics of Clinical Skills Learning
		2	Hospital Operation Management

**Second Year
(Semester III & IV)**

Theory

Semester III		Semester IV	
1	Radiological and Imaging Procedures	1	Pursuit of Inner Self Excellence (POISE)
2	Quality Assurance in Diagnostic Imaging	2	Bioethics, Biosafety, IPR & Technology transfer
3	MRIT Directed Clinical Education - III	3	Disaster Management and Mitigation Resources
4	Dissertation/Project	4	Human Rights
		5	Dissertation / Project

Practical

1	Quality Assurance in Diagnostic Imaging	1	Educational Tour / Field Work/IV/Hospital Visit
---	-----------------------------------------	---	-------------------------------------------------

Seminars

1	Seminars		
---	----------	--	--

M. Optometry

Duration of the Course- 2 years

ELIGIBILITY CRITERIA:

Bachelor of Optometry or equivalent from a recognized university with minimum 5.5 CGPA

PROGRAMME SPECIFIC OUTCOME:

At the end of the course the students will be knowledgeable in the following aspects of ocular diseases:

1. Etiology, Epidemiology, Symptoms, Signs, Course sequelae of ocular disease, Diagnostic approach and Management of the ocular diseases.
2. The students will be skilled in knowing the purpose, set-up and devices required for the test, indications and contraindications of the test, step-by-step procedures, documentation of the findings, and interpretation of the findings of the various clinical optometry procedures.

COURSE OF INSTRUCTION

M. Optometry

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Epidemiology Public health & Community Eye Health	1	Ocular Diseases and Diagnostics II
2	Ocular Diseases	2	Advanced Contact Lenses I
3	Anterior Segment Diagnostic	3	Binocular Vision and Pediatric Optometry
4	Optometry Directed Clinical Education-I	4	Low vision and Geriatric Optometry
		5	Optometry Directed Clinical Education-II
		6	Research Methodology & Biostatistics (Core Course)
Practical			
1	Epidemiology Public health & Community Eye Health	1	Ocular Diseases and Diagnostics II
2	Anterior Segment Diagnostic	2	Advanced Contact Lenses I
		3	Binocular Vision and Pediatric Optometry
		4	Low vision and Geriatric Optometry
		5	Research Methodology & Biostatistics (Core Course)
Core Elective Course			
		1	Basics of Clinical Skills Learning
		2	Hospital Operation Management

**Second Year
(Semester III & IV)**

Theory

Semester III		Semester IV	
1	Advanced Dispensing Optics	1	Pursuit of Inner Self Excellence (POISE)
2	Advanced Contact Lenses II	2	Bioethics, Biosafety, IPR & Technology transfer
3	Visual Perception, Neuroscience and Psychophysics	3	Disaster Management and Mitigation Resources
4	Applied Vision Therapy	4	Human Rights
5	Optometry Directed Clinical Education-III	5	Dissertation / Project
6	Dissertation/Project		

Practical

1	Advanced Dispensing Optics	1	Educational Tour / Field Work/IV/Hospital Visit
2	Advanced Contact Lenses II		
3	Applied Vision Therapy		

Seminars

1	Seminars		
---	----------	--	--



M.OPTOM



MSc Cardiac Care Technology



MSc Medical Radiology & Imaging Technology

CODE OF CONDUCT

1. Students should report to college before 9.00 am.
2. A grace time of 5 minutes will be allowed to a student entering late in class after which they will be marked late. Three late marks will be considered, as 1 day of absenteeism.
3. Any student who is going to remain absent due to a foreseeable reason should inform the respective class in-charge coordinator staff in writing.
4. If the student is absent due to a medical reason, it should be informed to the respective class in-charge. On the day of joining back, student **must** produce a medical certificate for their absence; and a letter from parent / guardian informing about the same. Certificate will NOT be accepted at a later date.
5. Every student should have mandatory 75% attendance in lectures as well as practical. Students with less than 75% attendance will not be eligible to appear for University exam.
6. When lectures are followed by practical/posting, students will have to reach the area within 10 minutes, after which they will be marked late for that particular practical or posting.
7. Students should wear uniform, aprons with identity badges in the campus for all practical, classroom sessions & examinations.
8. Use of mobile phones is prohibited during lectures, practical, postings, symposiums/presentation & examination. Failure to comply with this rule will result in confiscation of the phone.
9. Accessories like long earrings, flashy bracelets, watches etc. will NOT be allowed.
10. Students should wear uniform in college premises.
11. Girl students should tie their hair neatly & Boys to have a descent haircut.
12. Use of indecent language & behavior is strictly prohibited.
13. Silence should be observed in college premises especially when lectures / practical for other batches are taking place.
14. All audio vision property in the classroom in college property & should not be tampered with, by the students failing which students will be fined or asked to compensate for the loss.

All students are expected to follow code of discipline. Students failing to maintain the above discipline will be given one warning. If the same behavior continues then appropriate action will be taken against the student.

RAGGING: PREVENTION AND PUNISHMENT

(As per committee constituted by the Hon'ble Supreme Court, India in SLP No. 24295 of 2006)

Ragging has been recognized as a criminal offence, hence would be very seriously taken at constituent units of MGM Institute of Health Sciences. The students alleged by the juniors for ragging, shall have to abide by the punishment as per the recommendation of Anti Ragging Committee/ Guidelines of Anti Ragging Act Prescribed by the Committee constituted by the Hon'ble Supreme Court in SLP No. 24295 of 2006 . Broadly ragging has been defined and categorized in the following way for which various terms of punishment prescribed as per the directions of Hon'ble Supreme Court in SLP No. 24295 of 2006 ranging from one year imprisonment and fine to up to 7 years rigorous imprisonment and fine.

Following shall be treated as Act of Ragging:

1. Verbal –where Senior causes mental harassment, discomfort for the junior by forcing him/ her to answer unacceptable/personal questions, forcing to dance or to indulge in other embarrassing actions. It also includes within its ambit cyberragging.

Punishment: 1 year imprisonment or fine or both

2. Severe verbal Ragging-where the mental harassment, discomfort is to such an act as forces the junior to withdraw from the college.

Punishment: 7 years imprisonment with fine.

3. Physical-Any act by the senior towards the junior which inflicts bodily injury on the junior. Like beating the junior, hitting him/her with object etc.

Punishment: 7 years imprisonment with fine.

4. Sexual Ragging- Where the senior asks the junior to do an act which damages sexual dignity of the junior.

Punishment: 7 years rigorous imprisonment and fine.

As enactment of anti ragging act is pending in IPC, an Institutional Authority has been set up in MGMIHS with full authority to deal with ragging cases. Following are some of the guidelines for information to junior students to remember in case they are subjected to any act of ragging.

1. The complainant can report orally or in writing to the Dean, Head of the Department or any teacher or non-teaching staff of the institution or to the members of Anti Ragging Committee.

2. Any act of ragging that has been witnessed by teacher, non teaching staff or the administrative staff, shall be treated as evidence and will be considered enough to initiate appropriate action against the culprits.

3. Following action shall be taken for the trial of alleged culprits

- a. On receipt of complain, the culprits shall be suspended from college or hostel forthwith report will be submitted.
- b. Institutional Enquiry will follow and submit report within 24 hours with recommendation for punishment.
- c. Written complaints to the police and FIR will be lodged
- d. Expulsion from the college.
- e. Endorsement of remarks in College leaving Certificate/ Migration Certificate.

4. All Students are requested to join the institutional authorities for prevention and monitoring of ragging cases.

5. All cases of ragging are dealt on a fast track basis within specific time –frame

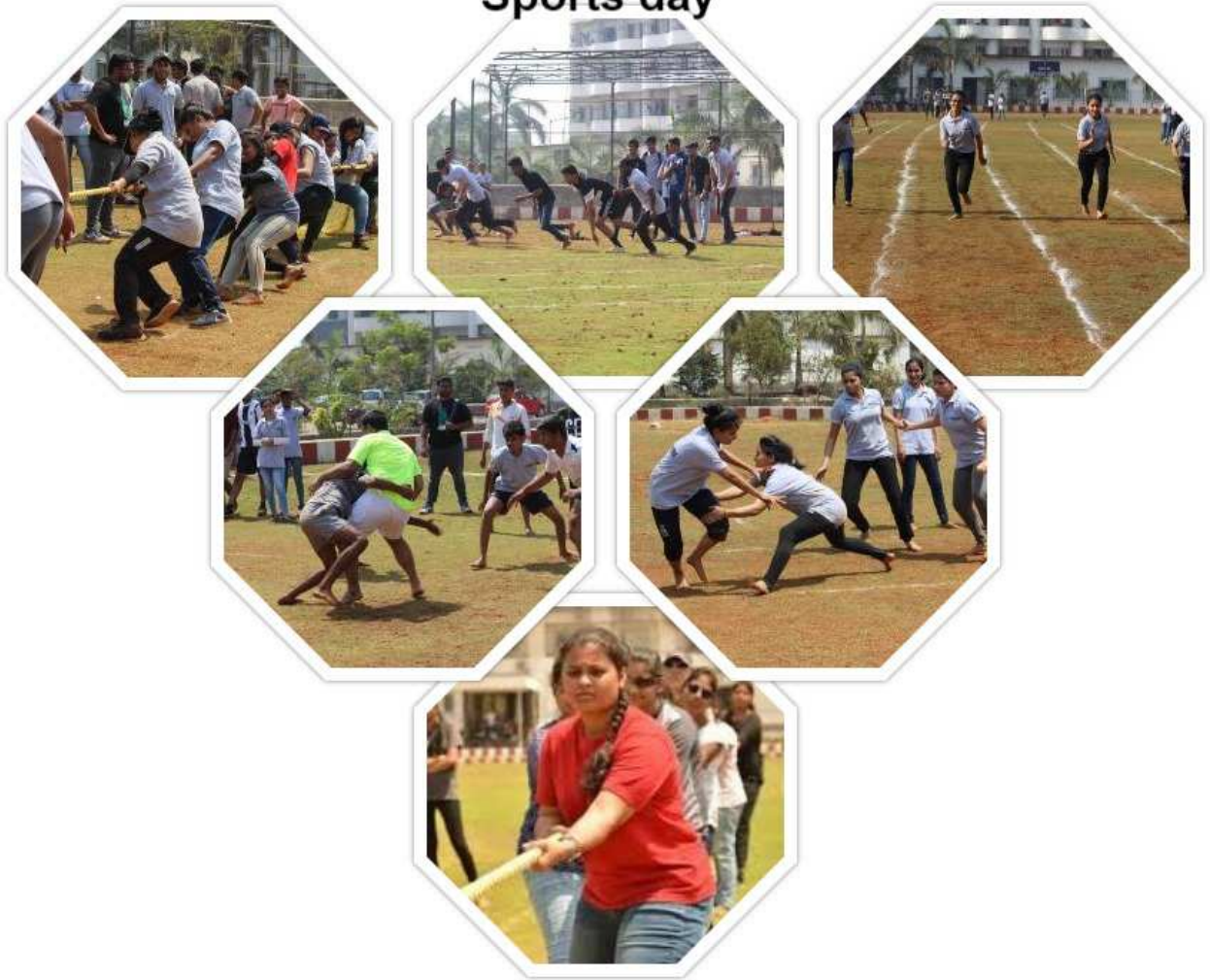
6. There will be periodic review of the mechanism laid down by the University and Medical Colleges in order to plug the loopholes and find other solutions, if necessary.



***Facilities
&
Infrastructure***

ANNUAL DAYS EXUBERANCE

Sports day







Traditional day



Student Welfare





MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI

Graduate Attributes

Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university courses. They are qualities that also prepare graduates as agents of social good in an unknown future.

(Bowden *et al*, 2000)

A student graduating from MGM Institute of Health Sciences, NaviMumbai, should attain the following attributes:

- 1 • Dynamic professionalism
- 2 • Exemplary leadership
- 3 • Effective communication skills
- 4 • Scholarly attitude
- 5 • Element of critical thinking
- 6 • Enthusiasm for research
- 7 • Social commitment
- 8 • Global competencies

HOW TO REACH MAP

MGM Aurangabad Campus is located at N-6, CIDCO, Aurangabad – 430 003.



How to Reach:

Nearest Airport: Aurangabad (5 Km)

Nearest Railway Station: Aurangabad (7 Km)

Contact Details

MGM SCHOOL OF BIOMEDICAL SCIENCES

N-6, CIDCO, Aurangabad – 431 003

Phone No. - 0240-6601100

Email ID - mgmmca@themgmgroup.com