

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 NAVI MUMBAI



ADDRESS

2nd Floor, Medical College Building, Sector – 01,
Kamothe, Navi Mumbai – 410 209



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 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.	About MGMSBS.....	5-6
5.	Director’s Message.....	7-8
6.	Programme Offered.....	9
7.	Faculty.....	10
8.	B.Sc. Allied Courses	11-48
9.	M. Sc. Courses.....	49-91
10.	Research, Innovation & Extension	92
11.	Code of Conduct.....	93
12.	Details of Committee	94-95
13.	Ragging: Prevention and Punishment.....	96
14.	Facility & Infrastructure	97
15.	Annual Day	98-100
16.	Student Welfare	101
17.	Alumni	102
18.	Eminent Speaker	103
19.	Graduate Attributes	104
20.	Location Map	105
21.	Contact Details	106

	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, NAVI MUMBAI

Welcome to MGM School of Biomedical Sciences (MGMSBS,NM), offering Basic Allied Science and Medical courses for students who aspire to pursue their career in the Allied Health Sciences, 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 525 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 12 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.

Director's Message



Dr. Mansee Thakur

MGM School of Biomedical Sciences is one of the premium Institutes in Navi Mumbai offering graduation in allied sciences & post graduation courses. The college is determined to outshine the yardstick set, thus uplifting to higher trajectory in developing, designing and delivering of curriculum, training the budding allied health professions to acquire clinical acumen and skills while promoting research relevant to local, regional and national needs. The college nurtures competence and skills to prepare the best of allied health professionals across all fields to optimize health and health care needs of individuals and the community as a whole. The quality of medical care has improved tremendously in the last few decades due to the advances in technology, thus creating fresh challenges in the field of healthcare. It is now widely recognized that health service delivery is a team effort involving both clinicians and non-clinicians, and is not the sole duty of physicians and nurses. Professionals that can competently handle sophisticated machinery and advanced protocols are now in high demand. In fact, diagnosis is now so dependent on technology, that allied healthcare professionals (AHPs) are vital to successful treatment delivery. The Institute coordinates professional learning experiences and training for students in the field of Paramedical Sciences. The increasing demand of skilled paramedical professionals has opened up several career opportunities for young aspirants.

MGM School of Biomedical Sciences (MGMSBS) has seen considerable growth in the past few years, with the introduction of new programs of study, new disciplines, new initiatives and

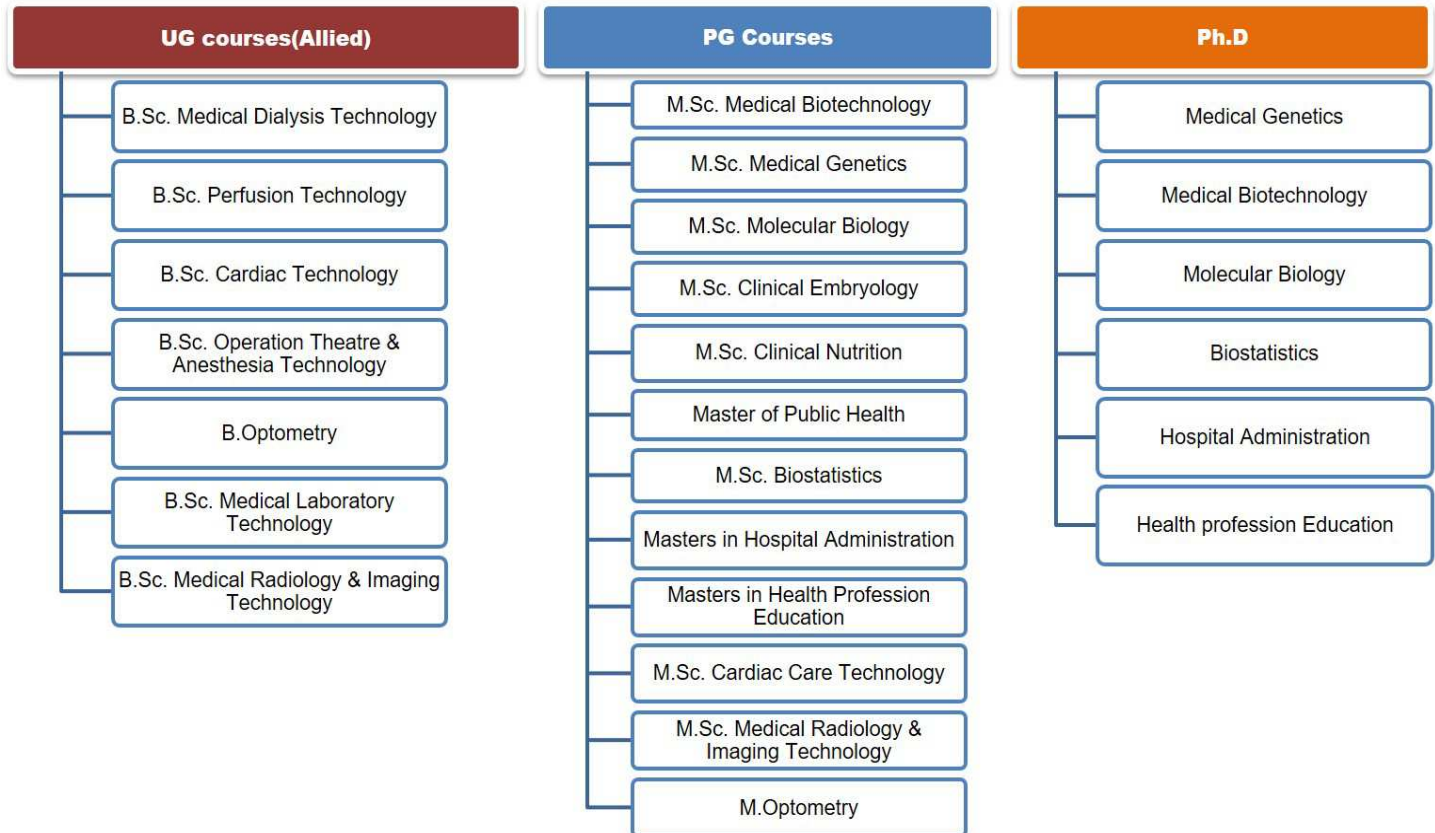
conviction to deliver excellence and nothing less. Within a short period of 10 years or so, MGMSBS under MGMIHS has established its academic repute across national border.

Presently there are very few institutions which impart proper training to the paramedical staff in a protocol based manner. MGMSBS is committed to providing quality training in the enormous field of paramedical sciences, through the devotion to the academic as well hands-on training of the program. Effective delivery of healthcare services depends largely on the nature of education, training and appropriate orientation towards community health of all categories of health personnel, and their capacity to function as an integrated team.

MGMSBS presents an education system that goes beyond chalk and talk; it believes in imparting its students the basic and advanced knowledge of a subject as well as the technical details. We, therefore, take every care for the student's bright future and help them to translate their dreams into reality.

I take this opportunity to welcome you to our School of Biomedical Sciences and look forward to being a part of your successful professional career.

PROGRAMME OFFERED



FACULTY

Sr. No.	Name	Designation	Qualification
1	Dr. Mansee Thakur	Director	Ph.D. (Biotechnology)
2	Dr. Raman P. Yadav	Professor	Ph.D. (Biotechnology)
3	Dr. Rita Dinesh Abbi	Professor	Ph.D. (Biostatistics)
4	Dr. Archana Mishra	Associate Professor	Ph.D. (MHA)
5	Dr. Mini Mol P	Assistant Professor	Ph.D. (Anatomy)
6	Dr. Himanshu Rajat Gupta	Assistant Professor	Ph.D. (Genetics)
7	Dr. Priyanka Pareek	Assistant Professor	Ph.D. (Clinical Nutrition)
8	Mrs. Vidula Prasad Patil	Lecturer	M. (Optometry)
9	Ms. Surya Panikar	Tutor	M.Sc. (Medical Genetics)
10	Mrs. Chandana Charudatta Kulkarni	Tutor	M.Sc. (Medical Biotechnology)
11	Mrs. Priyanka Rathod	Tutor	M.Sc. (Medical Biotechnology)
12	Mrs. Bhagit Amita Anant	Tutor	M.Sc. (Medical Biotechnology)
13	Mr. Yogesh Navalsing Patil	Tutor	M.Sc. (Medical Biotechnology)
14	Ms. Prema Vishwas Shewale	Tutor	M.Sc. (CCT)
15	Mr. Helvin Vincent Louis	Tutor	M.Sc. (Physics)
16	Ms. Smita Dinesh Babariya	Perfusionist	B.Sc. (PT)
17	Mr. Rohit Indrakumar Gupta	Tutor	B.Sc. (Optometry)

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 <input type="checkbox"/> 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 Its Equivalent
- HSC Mark Sheet OR Its Equivalent
- HSC Passing Certificate OR Its Equivalent
- School or College leaving Certificate / Transfer Certificate
- Migration Certificate
- Age , Nationality and Domicile Certificate
- Medical Fitness Certificate
- Proof of Date of Birth (Photo Copy)
- Parents Income Proof (Photo Copy)
- Gazette Copy (if there is a change in the name shown in the 12th mark sheet)
- Caste Certificate (if applicable) (Photo Copy)
- Parents ID Proof (Photo Copy)
- Aadhar Card (Photo Copy)
- Gap Certificate (if applicable)
- Four Passport size photographs

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 s 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 (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 or 50% of marks in mathematics separately
- 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:

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 which will answer the clinical questions. Medical Imaging Technologists work in collaboration with radiologists and other specialist Medical Practitioners to provide patients with a range of diagnostic examinations.

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 Biotechnology	20
M.Sc. Medical Genetics	20
M.Sc. Molecular Biology	20
M.Sc. Clinical Embryology	5
M.Sc. Clinical Nutrition	10
Master of Public Health	5
M.Sc. Biostatistics	10
Masters in Hospital Administration	15
Masters in Health Profession Education	10
M.Sc. Cardiac Care Technology	5
M.Sc. Medical Radiology & Imaging Technology	5
M.Optomety	5

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 Biotechnology	60000.00	120000.00	3400
2	M.Sc. Medical Genetics	60000.00	120000.00	3400
3	M.Sc. Molecular Biology	60000.00	120000.00	3400
4	M.Sc. Clinical Embryology	105000.00	210000.00	3400
5	M.Sc. Clinical Nutrition	60000.00	120000.00	3400
6	Master of Public Health	60000.00	120000.00	3400
7	M.Sc. Biostatistics	60000.00	120000.00	6000
8	Master In Health Profession Education	105000.00	210000.00	6000
9	Master In Hospital Administration	105000.00	210000.00	6000
10	M.Sc. Medical Radiology and Imaging Technology (MRIT)	105000.00	210000.00	6000
11	M.Optomety	105000.00	210000.00	6000
12	M.Sc. Cardiac Care Technology	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, 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 THE PROGRAMME

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 ₹ 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 Its Equivalent
- SSC Passing Certificate Or Its Equivalent
- HSC Mark Sheet OR Its Equivalent
- HSC Passing Certificate OR Its Equivalent
- B.Sc. Degree Mark sheet OR Its Equivalent (all years)
- Leaving Certificate/Transfer Certificate
- Passing Certificate of B.Sc. Or Degree or Its Equivalent
- Migration Certificate
- Age, Nationality and Domicile Certificate
- Medical Fitness Certificate
- Proof of Date of Birth (Photo Copy)
- Parents Income Proof (Photo Copy)
- Gazette Copy (if there is a change in the name shown in the last mark sheet)
- Caste Certificate (if applicable)
- Parents ID Proof
- Adhaar Card (Photo Copy)
- Gap Certificate (if applicable)
- Four copies of Passport size photos

M.Sc. Medical Biotechnology

Duration of the Course- 2 Year

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:

Innovative biotechnologist are in great demand in India and abroad. This program is designed to train students to deal in technological applications involving biological application systems, living organisms, or derivatives thereof, to make or modify products to processes for specific use to bridge the gap between industry requirements and the growing demand for skilled manpower in the Biotechnology sector.

Postgraduate qualification in Biotechnology can earn placements in research laboratories run by the government and the corporate sector. Private sector placements are in both technical and managerial positions. The biotech business is growing at an accelerated rate, with a number of companies launching innovative biotech applications. Entry of corporates in biotechnology makes career prospects in this field, bright.

In academics, one can go for higher qualifications like Ph.D. in various field of life sciences. There is a great demand of this course abroad as most of the foreign countries are looking for expert in this field.

After completion of the course, one can work in Research industries like Pharma companies, Hospitals, pathology labs, as Marketing manager, Bio-informist, Business development Manager etc.

PROGRAMME SPECIFIC OUTCOME:

- Biotechnology 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 biotechnology, including gene cloning, sequencing and mapping.
- Developments in biotechnology 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 biotechnology, and opened avenues for answering basic and applied questions in all of the life sciences.
- Biotechnology 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 biotechnology, while allowing flexibility for students to develop strength in their biochemical, biological or agricultural discipline.

COURSE OF INSTRUCTION
M.Sc. Medical Biotechnology
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 & Biomolecules (Multidisciplinary/Interdisciplinary)	4	Biostatistics , Research Methodology & Computer application (Multidisciplinary/Interdisciplinary)
Practical			
1	Cell Biology	1	Molecular Biology & Genomics
2	Immunology & Immunotechnology	2	Recombinant DNA Technology
3	Analytical Instrumentation	3	Bioinformatics
4	Basic Biochemistry & Biomolecules (Multidisciplinary/Interdisciplinary)	4	Biostatistics , Research Methodology & Computer application (Multidisciplinary/Interdisciplinary)

COURSE OF INSTRUCTION
M.Sc. Medical Biotechnology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Plant Biotechnology	1	Dissertation / Project*
2	Animal Biotechnology	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. Medical Microbiology II Human Genetics III Nanobiotechnology		
4	Dissertation/Project Proposal		
Practical			
1	Plant Biotechnology	1	Educational Tour / Field Work/Industrial Visit/ Hospital Visit
2	Animal Biotechnology		
3	Core Elective Course I. Medical Microbiology II Human Genetics III Nanobiotechnology		
4	Seminar		

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 Stem Cell		
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 Stem Cell		
4	Seminar		

M.Sc. Molecular Biology

Duration of the Course- 2 Year

ELIGIBILITY CRITERIA:

Candidates with 50% marks in B.Sc. Molecular Biology/ Biotechnology/ Microbiology/ / Biochemistry/Genetics /Botany/Zoology /B.Sc. Nursing/MBBS/BDS) or any equivalent degree in life sciences of any recognized university.

SCOPE OF THE COURSE:

The students of M.Sc. Molecular Biology course should be able to:

1. Read and analyze the primary research literature, critically assess scientific experiments and evaluate the impact of a scientific discovery.
2. Understand key implications of Proteomics and Genomics, Nanobiotechnology etc.
3. Be conversant with latest research developments in all the above areas.
4. Be primed and able to conduct quality research in latest molecular biology based research topics

PROGRAMME SPECIFIC OUTCOME:

- Understanding of molecular function in in biology.
- Fundamental understanding of genomics and proteomics and related applications.
- Importance of instrumentation in molecular biology.
- Advance understanding of genomics and proteomics
- Understanding and manipulation of metabolic network
- Importance of computation in molecular analysis and function.
- Detail understanding of recombinant DNA technology for production of recombinant products.
- Basic understanding of nano-biotechnology
- Basic understanding of techniques /process involved in molecular diagnostics.
- Fundamental understanding of importance of bioethics, bio-safety
- Basic understanding of various types of IPR including patent.
- Hands on experience of research in various aspects of molecular biology.

COURSE OF INSTRUCTION
M.Sc. Molecular Biology
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I			Semester II
1	Cell Biology	1	Gene and Protein Science
2	Molecular Immunology	2	Bioinformatics & Computational Biology
3	Molecular Enzymology	3	DNA Recombinant Technology
4	Metabolic Engineering	4	Research Methodology & Biostatistics (Core Course)
Practical			
1	Cell Biology	1	Gene and Protein Science
2	Molecular Immunology	2	Bioinformatics & Computational biology
3	Molecular Enzymology	3	DNA Recombinant Technology
4	Metabolic Engineering	4	Research Methodology & Biostatistics (Core Course)

COURSE OF INSTRUCTION

M.Sc. Molecular Biology

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Genomics	1	Dissertation / Project
2	Proteomics	2	General Elective Course I Analytical Instrumentation II Bioethics, Biosafety , IPR & Technology transfer III Quality Assurance & Quality Control
3	Core Elective Course I. Nanobiotechnology II. Molecular Diagnostics III Drug discovery		
4	Dissertation/Project Proposal		
Practical			
1	Genomics	1	Educational Tour / Field Work/Industrial Visit
2	Proteomics		
3	Core Elective Course I.Nanobiotechnology II. Molecular Diagnostics III Drug Discovery		
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 short way.
- 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 Mitigation Resources 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		

Masters In Hospital Administration

Duration of the Course - 2 Years

ELIGIBILITY CRITERIA:

Candidates admitted to the MHA should be a graduate from a recognized University with minimum 50% marks in qualifying examination. The candidates with experience will be given preference.

PROGRAMME SPECIFIC OUTCOME:

- Hospital Administration is a branch which is gaining increasing importance. As successful management is required in the ever-expanding field of corporate, Similarly, able and capable managers/administrators are required in the hospitals too, who serve as a strong 'Back Bone' of the health care industry.
- Hospitals in India whether it belongs to a private or public sector, should have at least 2-3 qualified and trained Hospital Administrators.
- There are about 2.5 lac hospitals and for their smooth administration, about 15000 trained hospital administrators are required every year.
- The demand for trained hospital administrators is increasing not only in government sectors like "National Rural Health Mission" but also in private sectors like- Medical Diagnostic Hardware and Software Companies, Health Insurance Companies, Pharma-Companies, Health Diagnostic Centre, Medico - Legal Consulting Companies and also in companies involved in the production of Hospital Equipments, Hospital Information System (H.I.S).
- The programme is designed to impart multi-dimensional knowledge of the aforesaid domain to the students.
- Masters in Hospital Administration can be taken up by any student who has completed any medical related graduation degree or has completed B.Sc (Nursing). It's a two year course which deals with the subjects like, Mathematics, Accounts, Principles of Management, Business Communication etc. Along with these, various other subjects related to hospitals like- Hospital Planning & Design, Medico -Legal, Operation Management, Health Statistics, Health-Economics etc. are also being taught in it.
- This course is a fantastic option for the graduates like- M.B.B.S, B.D.S, B.A.MS, B.H.M.S, Bio-Technology), B.P.T.,B.Sc.(Nursing), Pharmacy ,etc.

COURSE OF INSTRUCTION
Masters in Hospital Administration
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I			Semester II
1	Epidemiology and Demography	1	Hospital Planning and Management
2	Health Economics	2	Organizational Behaviour
3	Business Communication	3	Managerial Communication
4	Health Care System and Policies & Health Surveys	4	Accounting & Costing
5	Principles of Management	5	Management Information System
6	Orientation of Hospital Industry	6	Human Resource Management
		7	Project Management
		8	Research Methodology & Biostatistics (Core Course)
Practical			
1	Industry Posting (P)	1	Hospital Project (P)
		2	Research Methodology & Biostatistics (Core Course) (P)

COURSE OF INSTRUCTION
Masters in Hospital Administration
YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Core Elective Course I. Quality Management & Accreditation in Hospital II Health Insurance III Hospital Super-specialty IV Services Management	1	General Elective Course I Pursuit of Inner Self Excellence (POISE) II Bioethics, Biosafety, IPR & Technology Transfer (Multidisciplinary/ Interdisciplinary) III Disaster Management and Mitigation Resources IV Human Rights
2	Legal Framework in Hospital	2	Dissertation Project
3	Marketing Management for Hospital		
4	Material Management		
5	Financial Management		
6	Strategic Management		
7	Medical Technology Management		
8	Dissertation/Project Proposal		
Practical			
1	Internship (P)	1	Educational Tour/Field Work/Industrial Visit/Hospital Visit (P)

M.Sc. Biostatistics

Duration of the Course - 2 Years

ELIGIBILITY CRITERIA:

Candidates with 50% marks in Bachelor's degree from recognized universities in Mathematics or Statistics or BE/B.tech. BCA B.Sc. Computer science subjects or with at least two full papers of Mathematics or Statistics.

SCOPE OF THE COURSE:

- Our Bio-statistics M.Sc. programme will benefit the students to learn through real examples by applying the statistical research techniques to variety of health data generated from our own hospital
- Students will enable to understand and interpret the data generated in biology public health and other health sciences using modern Statistical Methods.
- Students will develop a thorough grasp of statistical methodology, before going on to apply statistical skills to solve real-life problems in various field.
- Student will be equipped with the skills needed to begin a career as a professional biostatistician

COURSE OF INSTRUCTION

M.Sc. Biostatistics

YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I			Semester II
1	Basic Mathematics and Introduction to Statistical Methods	1	Research Methodology-I
2	Epidemiology	2	Sampling Techniques in Health
3	Health Economics	3	Estimation and Testing of Hypothesis
4	Demography	4	Applied Multivariate Analysis
5	Health Care System and Policies & Health Surveys		
Practical			
1	Basic Mathematics and Introduction to Statistical Methods	1	Research Methodology-I
2	Epidemiology	2	Sampling Techniques in Health
3	Health Economics	3	Estimation and Testing of Hypothesis
4	Demography	4	Applied Multivariate Analysis
		5	Seminar

COURSE OF INSTRUCTION

M.Sc. Biostatistics

YEAR WISE SUBJECT DISTRIBUTION

Second Year (Semester III & IV)			
Theory			
Semester III		Semester IV	
1	Core Elective Course I. Non parametric Test II Advance Statistical Computing III Time Series Analysis IV Operations Research	1	General Elective Course I Pursuit of Inner Self Excellence (POISE) II Bioethics, Biosafety, IPR & Technology Transfer (Multidisciplinary/ Interdisciplinary) III Disaster Management and Mitigation Resources IV Human Rights
2	Survival Analysis	2	Dissertation / Project
3	Design of Experiment and Clinical Trials		
4	Biostatistics and Research Methodology-II		
5	Dissertation / Project		
Practical			
1	Core Elective Course I. Non parametric Test II Advance Statistical Computing III Time Series Analysis IV Operations Research	1	Educational Tour/Field Work/Industrial Visit/Hospital Visit
2	Survival Analysis		
3	Design of Experiment and Clinical Trial		
4	Biostatistics and Research Methodology-II		
5	Seminar		

M.Sc. Clinical Nutrition

Duration of the Course- 2 Year

ELIGIBILITY CRITERIA:

Eligibility students with the following undergraduate degree are eligible, B.Sc. Biochemistry or any Life Sciences, MBBS, BHMS, BAMS, B.Sc. Nursing.

Student should have obtained minimum 50% marks in the undergraduate degree or B grade from any recognized University.

SCOPE OF THE COURSE:

To impart knowledge and develop capacities of the students through higher education in the area of Clinical Nutrition and Dietetics and application in Medical Nutrition Management.

To develop students to become health care professionals for services in various fields of clinical nutrition and medical nutrition management and related areas such as hospitals academics, research, industry, clinical nutrition department, training, extension and community service.

To develop capacities and abilities and enable them to pursue higher education and research in Clinical Nutrition and Dietetics.

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

First Year (Semester I & II)			
Theory			
Semester I			Semester II
1	Principles of Nutrition	1	Medical Nutrition Therapy I
2	Biochemistry & Applied Biochemistry	2	Advance Nutrition
3	Basic Human Physiology	3	Food Microbiology and Safety
4	Pathophysiology	4	Nutrition Directed Clinical Education-II
5	Nutrition Directed Clinical Education-I	5	Research Methodology & Biostatistics (Core Course)
Practical			
1	Biochemistry & Applied Biochemistry	1	Medical Nutrition Therapy I
2	Basic Human Physiology	2	Research Methodology & Biostatistics (Core Course)
3	Pathophysiology		

Master of Public Health (MPH)

Duration of the Course- 2 Year

ELIGIBILITY CRITERIA:

The graduates from science background will be admitted for the course. Candidates from the field of sociology, Psychology, Nursing, Social work, Pharmacy, Medical and Paramedical will be admitted.

SCOPE OF THE COURSE:

- To develop human resource with expertise in the field of public health and epidemiology, who can ensure comprehensive health development of the community and better quality of life;
- To create good advocates for launching public health movements;
- To promote the understanding of the need to integrate social and cultural factors and determinants into the practice of public health;
- To develop qualities that encourage the development of innovative and alternative approaches to meet the varying local needs of communities;
- To train students in health services/systems research in order to encourage this as an integral part of health administration/management.

COURSE OF INSTRUCTION
Master of Public Health
YEAR WISE SUBJECT DISTRIBUTION

First Year (Semester I & II)			
Theory			
Semester I		Semester II	
1	Concept of Public Health & Basic Epidemiology	1	Health Management: Principles and Practices
2	Introduction to Demography & Basic Biostatistics	2	Reproductive, Maternal Health, Child Health and Adolescent Health
3	Introduction to Health System, Policy and Programs	3	Communicable and Non-Communicable Diseases & Nutrition
4	Introduction to Health Economics	4	Practice of Public Health (Advanced) – Rural Outreach
5	Practice of Public Health (Basic)	5	Research Methodology & Biostatistics (Core Course)
Practical			
		1	Research Methodology & Biostatistics (Core Course)

Second Year (Semester III & IV)

Theory

Semester III		Semester IV	
1	Environment and Occupational Health and Public Health Laws	1	General Elective Course I Pursuit of Inner Self Excellence (POISE) II Bioethics, Biosafety, IPR & Technology Transfer (Multidisciplinary/ Interdisciplinary) III Disaster Management and Mitigation Resources IV Human Rights
2	Introduction to Financial Management and Budgeting		
2	Medical Sociology and Effective Communication in Health Care		
3	Practice of Public Health (Advanced) – Urban Outreach		
4	Internship/Dissertation / Project*		
Practical			
1	Advanced Epidemiology & Biostatistics	1	Dissertation / Project
2	Health Systems, Policy, Planning and Programme Management		

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
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Seminars

1	Seminars
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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
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Seminars

1	Seminars
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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		

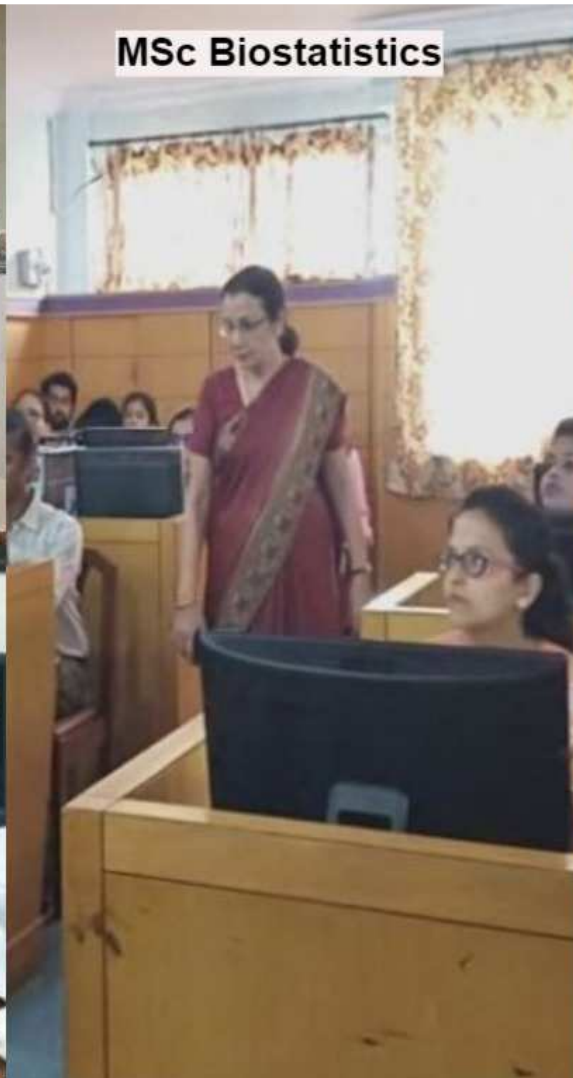
Practical

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

Seminars

1	Seminars		
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LABORATORY FACILITY FOR M.Sc. COURSES





M.OPTOM



MSc Cardiac Care Technology



MSc Medical Radiology & Imaging Technology

RESEARCH, INNOVATION & EXTENSION

Research and development– Highlighting sophisticated and modern facilities



Zebrafish lab



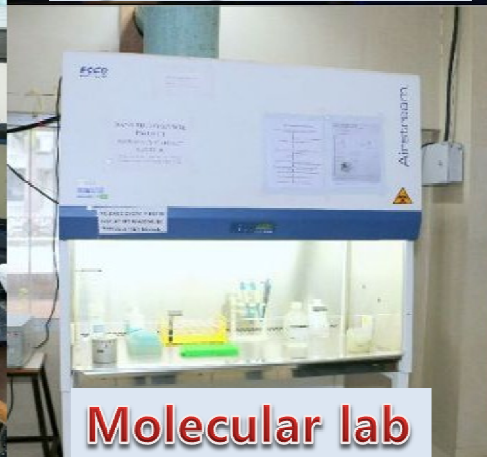
Hydroponics lab



OMICS Lab



Genetics lab



Molecular lab



Pathology Lab

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.

DETAILS OF COMMITTEES

MGM School of Biomedical Sciences, Navi Mumbai			
Sr. No.	Members	Department	Designation
Anti Ragging Flying Squad Members			
1	Dr. R.S. Inamdar	Professor & HOD, Physiology	Chairman
2	Dr. Mini Mol	Assistant Professor, Anatomy	Secretary
3	Dr. Anjali Sabnis	Professor & Head, Anatomy	Member
4	Dr. Prabhakar Patro	Associate Professor, Pathology	Member
5	Dr. Vishwas Sathe	Associate Professor, Anesthesia	Member
6	Dr. Shilpi Shahu	Associate Professor, Pathology	Member
7	Ms. Shrushti	Student representative, MSc	Member
Anti Ragging Committee			
1	Dr. Mansee Thakur	I/C Director	Chairman
2	Dr. Sanhita Walawalkar	Associate Professor, Physiology	Secretary
3	Dr. A.D.Urekar	Professor and Head, Microbiology	Member
4	Dr. Prabhakar Patro	Associate Professor, Pathology	Member
5	Dr. Aruna Mukherjee	Emeritus Professor, Anatomy	Member
6	Dr. Mini Mol	Assistant Professor, Anatomy	Member
7	Ms. Amita Bhagit	Student representative (Ph.D)	Member
8	Ms. Rumaney Aalia Aslam	Student representative (M.Sc.)	Member
9	Mr. Erande Pruthweeraj Maruti	Student representative (M.Sc)	Member
10	Mr. Ghag Shubham Ram	Student representative (B.Sc)	Member
11	Mrs. Poonam Patil	Non teaching	Member
Grievance Redressal Cell			
1	Dr. N.C. Mohanty	Professor of Pediatrics & Joint Controller	Chairman
2	Dr. Haritha Kumari	Associate Professor, Anatomy	Secretary
3	Dr. Sharwari Samant	Professor, Microbiology	Member
4	Dr. Rishikesh Wadke	Assistant Professor, PSM	Member
5	Dr. Manisha Tamedkar	Associate Professor, Pathology	Member
6	Dr. Karuna Sunil Ramraje	Assistant Professor, Law College	Member
7	Mr. Erande Pruthweeraj	Student representative (M.Sc)	Member
8	Ms. Apoorva Shrivastav	Student representative (M.Sc)	Member
Prevention Of Sexual Harassment And Violence Against Women			
1	Dr. Parineeta Samant	Associate Professor, Biochemistry	Chairman
2	Dr. Rita Khadkikar	Associate Professor, Physiology	Secretary
3	Dr. Rushikesh Wadke	Assistant Professor, PSM	Member
4	Dr. Ipseeta Ray	Professor, Pharmacology	Member

5	Dr. Karuna Sunil Ramraje	Assistant Professor, Law College	Member
6	Dr. Himanshu Gupta	Assistant Professor	Member
7	Ms. Rumaney Aalia Aslam	Student representative (M.Sc.)	Member
8	Mr. Shubham Ghag	Student representative (B.Sc)	Member
9	Mrs. Supriya Pawar	Administrative Clerk & Computer Operator	Member
10	Mr. Yogesh Patil	Research Assistant	Member
Student Welfare Committee			
1	Dr. R.S. Inamdar	Professor & HOD, Physiology	Chairman
2	Dr. Mini Mol	Assistant Professor, Anatomy	Secretary
3	Dr. Sumi Reny	Tutor, Anatomy	Member
4	Dr. Ipseeta Ray	Professor, Pharmacology	Member (Academic Section)
5	Dr. Kavita More	Assistant Professor, Biochemistry	Member (cultural section)
6	Dr. Santosh Gawali	Assistant Professor, Biochemistry	Member (student grievance)
7	Ms. Amita A Bhagit	Student representative (PhD)	Member
8	Ms. Rumaney Aalia Aslam	Student representative (M.Sc.)	Member
9	Mr. Ghag Shubham Ram	Student representative (B.Sc.)	Member

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 cyber ragging.

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 objects 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 ad monitoring of ragging cases.

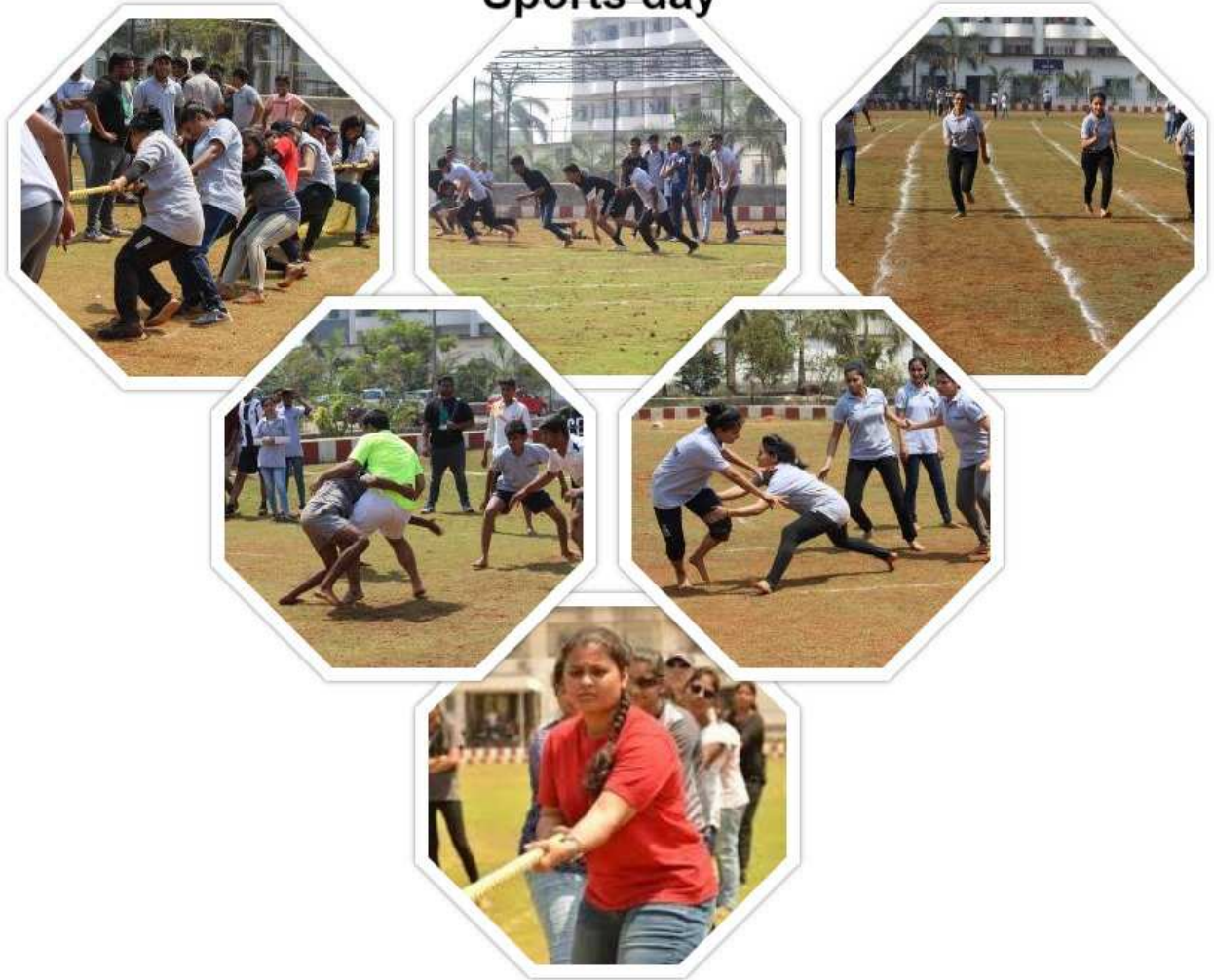
5. All cases of ragging are dealt on a fast track basis within specific time –frame

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.



ANNUAL DAYS EXUBERANCE

Sports day





Traditional day





STUDENT WELFARE



ALUMNI

Outstanding students



Dr. Bhushan Thakur
ACTREC, PDF In NIH, USA



Radha Subraman,
Univ. of Buffalo, USA



Dr. Gurjeet Singh,
N.C. Medical College
Haryana



Dr. Navami Dayal
Pillai college, Mumbai
University



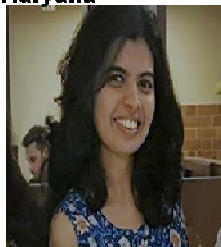
Meenakshi Bhattacharjee
Tasgaonkar Institute



Anum Datta
Tutor , AIIMS



Santosh Rawat
Serum Institute of
India Pvt. Ltd.



Gargi Thakur
NIRRH, (ICMR)



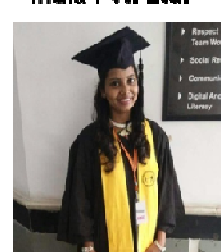
Ashlesha,
Embryologist, Nova
IVF, Mumbai



Prathamesh
Fellow and Area Convenor,
TERI



Kaustubh Kolwankar
(MBA) , Bal Ratanbal
Gharda Hospital, Lavel



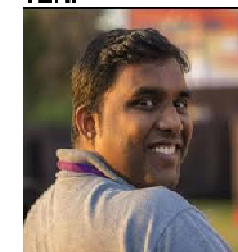
Prema Shewale
Tutor MGMSBS.



Reena Patel, Sr.
Perfusionist
Sasoon hospital
Pune



Dr. Revati Pattni
Fiona Elsey Cancer Resear
ch Institute,
Australia



Dr. Gish Pai
HI Media

Eminent speakers



Mr. Sanjay Bhatia
Chairman – Mumbai Port Trust



Dr. Lalita Dhareshwar
Ex-BARC Scientist



Dr. Snehal Deshpande
Director SNEH



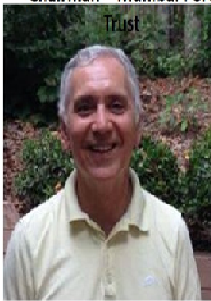
Mr. Tushar Pradhan
CFO-HSBC



Dr. Harish Mehta
Interventional Cardiologist



Dr. Mohandas Hegde
Director, Crest



Mr. John Barlow
Sr. Director Ambulatory Operations,
Department of Medicine,
Boston Medical Center



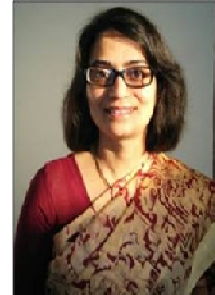
Mrs. Betsy Barlow
BA, Holistic Studies from
Vermont College



Mrs. Sushila Sharangdhar
Nutritionist



Mr. Bharat Dhareshwar
CMO W.Railway



Mrs. Pragya Kalia
Mkt Head - Hindustan times



Ravi Shankaran Dhesingh | Ph.D. |
University of Madras
Chennai

(Invited Guest Speakers in last two years)



MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI

Graduate Attributes

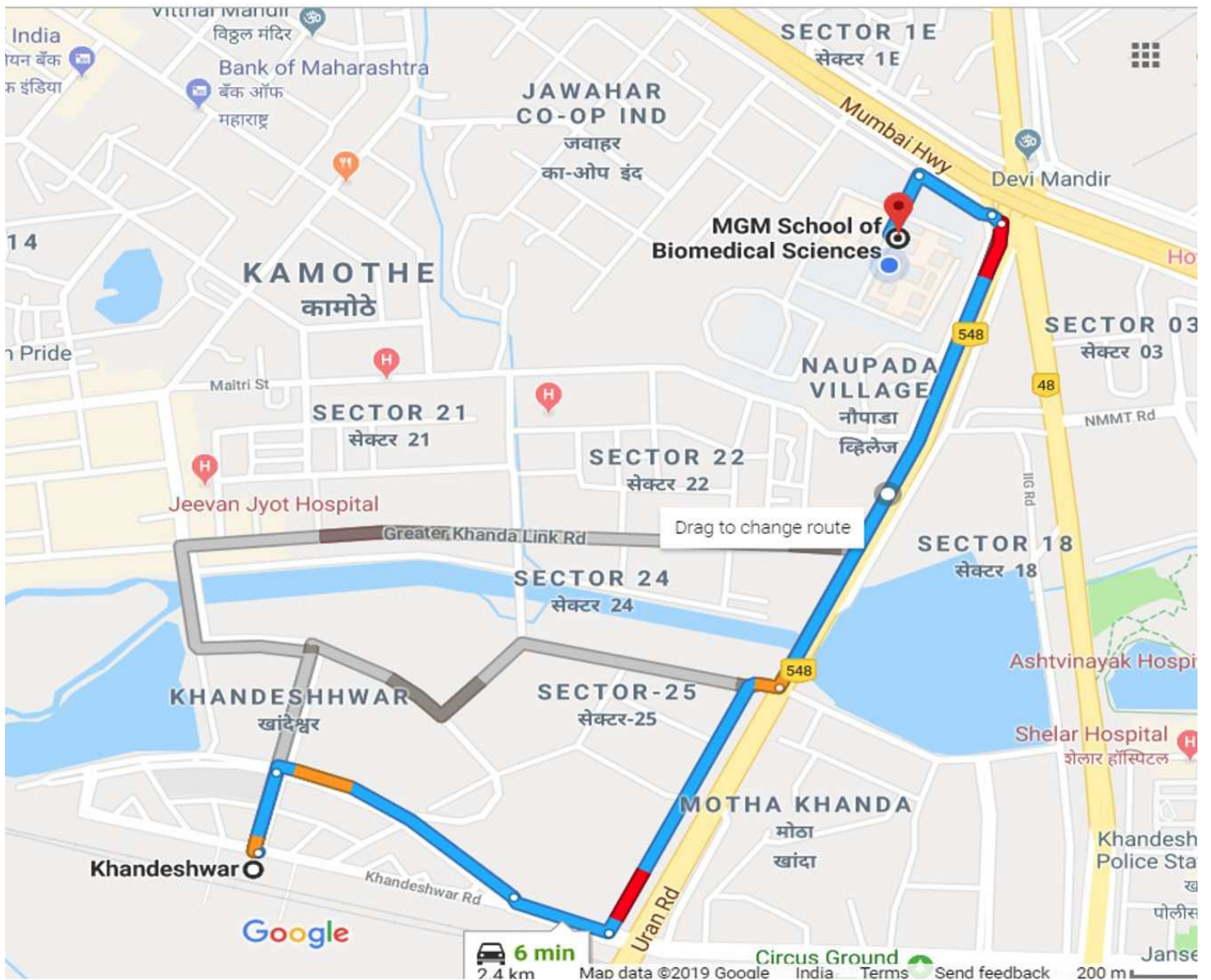
Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university 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, Navi Mumbai, 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

Location to Reach MGM School of Biomedical Sciences from Nearest Local Station (Khandeshwar)



Contact Details:

MGM School of Biomedical Sciences,

2nd Floor, MGM Medical College Building,

Sector – 01, Kamothe, Navi Mumbai – 410 209

Phone 022- 27437632, 022-27437631/27432890

E-mail – sbsnm@mgmuhs.com

Website – www.mgmsbsnm.edu.in