



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

(M.Sc. Medical Programs)

(Anatomy/Physiology/Biochemistry/Pharmacology/Microbiology)



Programs available at:

1. MGM Medical College, Navi Mumbai
2. MGM Medical College, Aurangabad



VISION

MGM Institute of Health Sciences aims to be a top ranking centre 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

M.Sc. (Medical) Programs

Duration: 3 Years

Courses	Intake Capacity	
	MGM Medical College, Navi Mumbai	MGM Medical College, Aurangabad
M.Sc. Medical Anatomy	05	05
M.Sc. Medical Physiology	05	05
M.Sc. Medical Biochemistry	10	10
M.Sc. Medical Pharmacology	05	05
M.Sc. Medical Microbiology	10	10

ADMISSION PROCESS FOR M.Sc. COURSES

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

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, M.B.B.S, BDS, BAMS, BHMS, B.Pharm., B.Tech (Biotechnology), or equivalent examination with a minimum aggregate score of 50%.

IMPORTANT NOTE:

- As M.Sc (Medical) programs are equivalent to MD programs in the respective specialties, duration is of 3 years for these programs. The nature of hospital work and other responsibilities are thus more or less same as of a MD registered student. It is therefore, clarified that all those students who wish to register for M.Sc. (Medical) programs will have to follow the same duty roaster along with MD students in respective specialties including night duties or shift duties as applicable.
- Students pursuing M.Sc. (Medical) with MGMIHS have the distinct advantage to continue their career after M.Sc. by registering for PhD at MGMIHS in respective specialty with merit scholarships subject to performance and research work carried out during M.Sc.

FEE STRUCTURE FOR M.Sc. (Medical) PROGRAMS

Sr. No	Program	Annual Tuition Fees (Rs.) Merit	Annual Tuition Fees (Rs.) MGT*	Annual Tuition Fees (USD \$) NRI
1	M.Sc. Medical Anatomy	60000.00	120000.00	3400
2	M.Sc. Medical Physiology	60000.00	120000.00	3400
3	M.Sc. Medical Biochemistry	60000.00	120000.00	3400
4	M.Sc. Medical Pharmacology	60000.00	120000.00	3400
5	M.Sc. Medical Microbiology	60000.00	120000.00	3400

***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

Important Dates:

Start of Online Application Form: 15th 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.mgmuhs.com regularly.

COMMENCEMENT OF THE PROGRAMME

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

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

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	<ol style="list-style-type: none"> 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.
- 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

M.Sc. Courses

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

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

M.Sc. Medical Anatomy

SCOPE OF THE COURSE:

M.Sc. Course in Medical Anatomy aims to provide guaranteed employment opportunity to pure science students with a number of following options to choose their career after successful completion of the course. Opportunity to pursue Ph.D. in the subject along with job in Medical College.

The student after completion of M.Sc. can teach in Medical Colleges, Dental Colleges & may also further opt their career in Scientific Research and Development Organization, as a scientist to oversee R & D programs, promote innovations in quality research and its application to human health monitoring and evaluation of scientific advances in healthcare.

Year wise Subject Distribution

First Year	Second Year	Third Year
Semester - 1	Semester - 3	Semester – 5
1. General Anatomy	1. General Anatomy	1. Head & Neck
2. General Histology	2. General Histology	2. Histo Techniques
3. General Embryology	3. General Embryology	3. Cross sectional anatomy
4. Muscular System	4. Upper Limb	4. Recent advances
5. Skeletal system	5. Lower Limb	
	6. Genetics	
	7. Research Methodology and Biostatistics	
Semester - 2	Semester – 4	Semester – 6
1. Gastrointestinal system	1. Thorax	1. Central Nervous System
2. Cardiovascular system	2. Abdomen	
3. Respiratory system		
4. Genitourinary System		
5. Nervous System		
6. Endocrines		

M.Sc. Medical Physiology

SCOPE OF THE COURSE:

M.Sc. Course in Medical Physiology aims to provide guaranteed employment opportunity to pure science students with a number of following options to choose their career after successful completion of the course. Opportunities to pursue Ph.D. in the subject along with job in Medical College.

The student after completion of M.Sc. can teach in Medical Colleges, Dental Colleges & may also further opt their career in Scientific Research and Development Organization, as a scientist to oversee R & D programs, promote innovations in quality research and its application to human health monitoring and evaluation of scientific advances in healthcare.

Pharmaceutical industries booking for postgraduates in basic sciences for their research and developmental activities.

Year wise Subject Distribution

First Year	Second Year	Third Year
Semester - 1	Semester - 3	Semester – 5
1. General Physiology	1. General Physiology	1. Excretory system
2. Nerve Muscle Physiology	2. Blood	2. Endocrine system
3. Hematology	3. Nerve muscle Physiology	3. Reproductive system
4. Respiratory System	4. Biostatistics	4. Hospital posting – surgical & diagnostic
5. Cardiovascular system	5. Research methodology	5. Dissertation – Data analysis, Final report writing
	6. Scientific writing	
	7. MET	
Semester - 2	Semester – 4	Semester – 6
1. GIT	1. Respiratory System	1. Central nervous system
2. Excretory system	2. Cardiovascular system	2. Special senses
3. Endocrine system	3. GIT	3. Dissertation – Data analysis & Writing
4. Reproductive System	4. Exercise Physiology	4. Presentation by all PG Students Open defence
5. Central Nervous System	5. Fitness	
6. Special senses	6. Food & Nutrition	
	7. Hospital posting – Medical & diagnostic	

M.Sc. Medical Biochemistry

SCOPE OF THE COURSE:

M.Sc. Course in Medical Biochemistry aims to provide guaranteed employment opportunity to pure science students with a number of following options to choose their career after successful completion of the course.

Opportunity to pursue Ph.D. in the subject along with job in Medical College. The student after completion of M.Sc. can teach in Medical Colleges, Dental Colleges & career in Scientific Research and Development Organization, as a scientist to oversee R & D programs, promote innovations in quality research and its application to mankind, monitoring and evaluation of scientific advances in healthcare.

Pharmaceutical industries have been desperate for postgraduates in basic sciences for their research and development unit.

Year wise Subject Distribution

First Year	Second Year	Third Year
Semester - 1	Semester - 3	Semester – 5
M: 1- Cell Biology	M: 13- Centrifuge, Colorimeter, Spectrophotometer (IR, UV/VIS), Flurimeter, Flame photometer.	M: 25-Aging Free radicals/Antioxidants in health & diseases
M: 2- Chemistry of carbohydrates & Chemistry of lipids	M: 14- Chromatography	M: 26-Reproductive Biology, Developmental Biochemistry
M: 3- Chemistry of Protein, Chemistry of Nucleic acids.	M: 15- Electrophoresis	M: 27-Basic of Immunology
M: 4- Enzyme.	M: 16- Electron Microscopy, Flow cytometry, Radio isotopic techniques.	M: 28- Applied Immunology
M: 5- Vitamins, Biological Oxidation, Minerals.	M: 17- Research Methodology- Criteria for good research, Research design	M: 29-Laboratory Medicine- Part I
M: 6-Hb Chemistry, Hormone, Signal transduction.	M: 18-Research Methodology- Sampling techniques.	M: 30- Laboratory Medicine- Part II
Semester - 2	Semester – 4	Semester – 6
M: 7- Carbohydrates Metabolism	M: 19- Integration of carbohydrate, Protein & Lipid metabolism	M: 31- Molecular Biology
M: 8- Lipid Metabolism	M: 20- Inborn errors of Metabolism:	M: 32- Mutation & Repair of DNA & its associated diseases, Mitochondrial DNA & its diseases.
M: 9- Protein Metabolism	M: 21-Cell Cycle, Apoptosis, Cancer, Mitochondrial Diseases	M: 33-Regulation of Gene expression, Genetics Engineering
M: 10- Nucleic acid Metabolism, Hb Metabolism, Genetic Code, Protein Biosynthesis	M: 22- Endocrine disorders	M: 34-Techniques in DNA analysis
M: 11- Detoxification, Water & Electrolyte Balance, Acid & Base balance	M: 23- Pathophysiology of specialized tissues.	M: 35- Bioinformatics, Proteomics, Genomics
M: 12- Organ function Tests-LFT, RFT, TFT, PFT, GFT	M: 24- Principles of Nutrition	M: 36- Recent advances- Human Genome Project, Molecular Diagnostics, Gene Therapy, Stem Cell Research.

Read 'M:' as Module.

M.Sc. Medical Pharmacology

SCOPE OF THE COURSE:

M.Sc. Course in Medical Pharmacology aims to provide guaranteed employment opportunity to pure science students with a number of following options to choose their career after successful completion of the course.

Opportunity to pursue Ph.D. in the subject along with job in Medical College.

The student after completion of M.Sc. can teach in Medical Colleges, Dental Colleges & career in pharmaceutical industries, Scientific Research and Development organization, as a scientist to oversee R & D programs, promote innovations in quality research and its application to mankind, monitoring and evaluation of scientific advances in healthcare.

Pharmaceutical industries have been desperate for postgraduates in basic sciences for their research and development unit

Year wise Subject Distribution

First Year	Second Year	Third Year
Semester - 1	Semester - 3	Semester – 5
Module 1- History of Pharmacology & sources of Drugs	Module 12- Biostatistics & Computer Application	Module 22- Drug discovery & Phases of Clinical Trials
Module 2- Pharmaco Kinetics	Module 13-Research Methodology	Module 23- Dissertation
Module 3- Pharmaco Dynamics	Module 14- Clinical Pharmaco-Kinetics	Module 24- Ethical aspects of Clinical Trial
Module 4- Adverse Drug Reactions	Module 15- Advanced-General Pharmacology ANS & CVS	
Module 5- Drugs acting on Nervous System.	Module 16- Experimental & Laboratory	
	Module 17- Drug Design Discovery	
Semester - 2	Semester – 4	Semester – 6
Module 6- Drugs affecting Central Nervous System	Module 18- Drug Addition & Poisoning	Module 25- Drug Screening and evaluations
Module 7- Drugs affecting Cardiovascular System	Module 19- Advanced – endocrinology & Chemotherapy	Module 26- Ocular & Dermato-Pharmacology Ethical Review of Scientific Project.
Module 8- Hormones & Antagonist	Module 20- Advanced-Central Nervous System	Dissertation – Data analysis & Writing, Presentation by all PG Students Open defence, Thesis defense
Module 9- Drugs affecting Haemopoietic System	Module 21- SAR, Ethics, Drug Toxicity	
Module 10- Chemotherapeutic Agents		
Module 11- Experimental Pharmacology (Lab animals, Bioassay, Equipments.		

M.Sc. Medical Microbiology.

SCOPE OF THE COURSE:

M.Sc. Course in Medical Microbiology aims to provide guaranteed employment opportunity to pure science students with a number of following options to choose their career after successful completion of the course.

Opportunity to pursue Ph.D. in the subject along with job in Medical College.

The student after completion of M.Sc. can teach in Medical Colleges, Dental colleges & have a career in Research and Development organization, as a scientist to oversee R & D programs, Promote innovations in quality research and its application to mankind, monitoring and evaluation of scientific advances in healthcare.

Pharmaceutical industries have been desperate for postgraduates in basic sciences for their research and development units.

Year wise Subject Distribution

First Year	Second Year	Third Year
Semester - 1	Semester - 3	Semester – 5
1. Basics of general Microbiology.	1. Details of general Microbiology ,Immunology and serology	1. Details of Mycology, Virology and Parasitology
2. Basics of Immunology and serology	2. Biostatics and Research Methodology.	2. Working Knowledge and procedure for above
3. Basics of Inflammation	3. Working Knowledge and procedure for above	
Semester - 2	Semester – 4	Semester – 6
1. Basics of Mycology Parasitology	1. Details of Systemic bacteriology.	Submission of Dissertation
2. Basics of Virology	2. Working Knowledge and procedure for above	Elective Industrial Posting
3. Basics of Parasitology		



MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI

Graduate Attributes

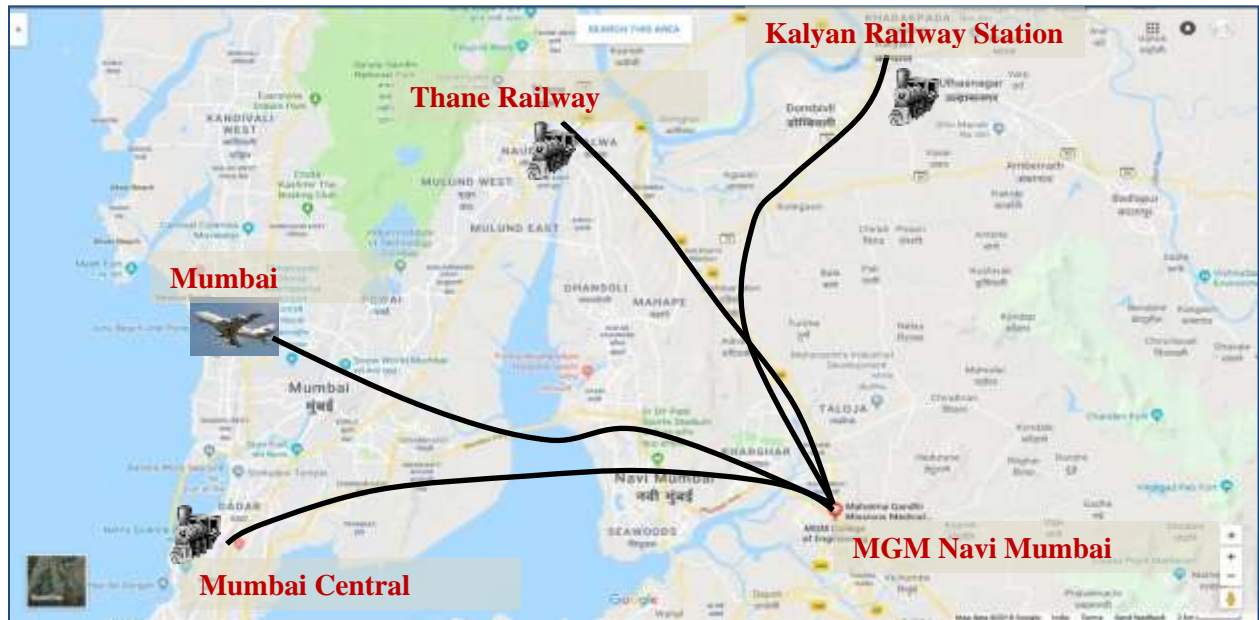
Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university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

1. **MGM Education Campus, Navi Mumbai** is located at start of Mumbai – Pune Express Highway, Sector – 01, Kamothe, Navi Mumbai – 410 209



How to Reach

Nearest Airport is – Mumbai Airport (40 Km)

Nearest Railway Station:	Nearest Local Train Station:
i. Mumbai Central Railway Station (45 Km)	i. Khandeshwar, Kamothe, Navi Mumbai (2 Km)
ii. Thane Railway Station (32 Km)	ii. Mansarovar, Kamothe, Navi Mumbai (4 Km)
iii. Kalyan Railway Station (31 Km)	iii. Kharghar, Navi Mumbai (7 Km)
iv. Panvel Railway Station (5 Km)	

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



How to Reach:

Nearest Airport: Aurangabad (5 Km)

Nearest Railway Station: Aurangabad (7 Km)