

## **MGM SCHOOL OF BIOMEDICAL SCIENCES**

A Constituent unit of MGM Institute of Health Sciences (Deemed University u/s of 3UGC Act,1956) Accredited by NAAC with "A++" Grade N -6 Cidco, Aurangabad

## **Courses Offered**

GANDHI MISSIO

Under Graduate Programs (4 Year) Post Graduate Programs (3 years) Post Graduate Programs (2 years) Doctor of Philosophy programs (4 year) MGM School of Biomedical Sciences Aurangabad campus is established with an aim of developing proficient healthcare professionals. MGM School of Biomedical Sciences is one of the premium Institutes in Marathwada region offering graduation post graduation in allied sciences.

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 increasing demand of skilled paramedical professionals has opened up several career opportunities for young aspirants.

## **KEY FACTS & FIGURES**

- One of the leading schools of Allied health Sciences in Maharashtra
- Well equipped laboratories with focus on new-age equipment
- Highly qualified faculties
- Practical training at the on-campus 900+ beds super speciality MGM Hospital.



Intake Capacity & Tuition Fee Structure of Undergraduate Programs :

Sr. No.	Courses	Intake Capacity	Tuition Fees Merit	Tuition Fees MGT*	Tuition Fees (USD \$) NRI
1	B.Sc. Operation Theatre & Anaesthesia Technology (OT&AT)	20	55,000/-	1,10,000/-	3,100/-
2	B.Sc. Medical Radiology and Imaging Technology (MRIT)	30	55,000/-	1,10,000/-	3,100/-
3	B.Sc. Medical Laboratory Technology (MLT)	30	55,000/-	1,10,000/-	3,100/-
4	B.Sc. Medical Dialysis Technology (MDT)	20	55,000/-	1,10,000/-	3,100/-
5	B.Sc. Cardiac Care Technology (CCT)	10	1,05,000/-	2,10,000/-	6,000/-
6	B.Sc. Perfusion Technology (PT)	05	1,05,000/-	2,10,000/-	6,000/-
7	B. Optometry (B. OPTOM)	20	1,05,000/-	2,10,000/-	6,000/-

Note : 1) Duration of BSc. Programe is of 4 Year (3 Year Academic +1 Year Internship)

2) All Programes According to CBCS (Choice Base credit system) with semester system.

In Addition to Tuition Fees, additional Fees are Mentioned Below

Particulars of Fees	1 <sup>st</sup> Year	2 <sup>nd</sup> year	3 <sup>rd</sup> Year	
Other Fee(ID Cards, Library Card, Apron, Journal, Annual Day, Bonafide)	500/-	-	-	
Refundable Deposit	5,000/-	-	-	
Institute Enrollment & Eligibility Fees	10% of tuition fees	-	-	
Exam Fee (Each Semester)	4,500/-			

#### 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.)

#### Lateral Entry for B.Sc. Allied Courses

- Lateral entry is applicable for all the U.G Degree courses of Allied Health Science Courses wherever corresponding diploma courses is available in the concerned speciality.
- They would be eligible to join in 2<sup>nd</sup> year of respective graduate course.
- There shall also be a merit-based, lateral admission of student having Diploma qualification to the second year of all the programmes and subject to availability of vacancy

#### List of documents

The following is the list of documents required for the document verification process during counseling

- 1) 10<sup>th</sup> Standard marks card (for date of birth proof)
- 2) 12<sup>th</sup> Standard marks card issued by the recognized board.
- 3) Aadhar card of the candidate.
- 4) Pan Card of the Parents.
- 5) 2 recent passport size photographs.
- 6) Fee as applicable. Demand draft for the course in which you are interested.
- 7) Domicile or passport xerox copy.

## **BACHELOR OF OPTOMETRY**

Optometrists are trained to examine the eyes to detect defects in vision, signs of injury, ocular diseases or abnormality and problems with general health, such as high blood pressure or diabetes. They make a health assessment, offer clinical advice, prescribe spectacles or contact lenses and refer patients for further treatment, when necessary. Optometrists study at university for three years and must participate in a period of assessed clinical training before being deemed to have the knowledge and skills needed to be registered.

MGM Hospital will provide students with integrated inputs that will help develop their conceptual & analytical skills, and a strong technical knowledge base, in order to prepare them for a bright future in the eye care sector of the Healthcare Industry.

### **Career Options for Optometrist:**

- Assist ophthalmologists in hospital clinic.
- Practice in optical establishments.
- Run optical shop
- Offer clinical services to multinationals dealing, with the manufacturing and distribution of ophthalmic lenses, contact lenses and ophthalmic instruments.
- Optometrists can work as post-secondary teachers
- Start manufacturing unit for optical lenses.
- Career in sports vision, public health and government service or community health centers.
- Those interested in higher studies can join for M.Sc. and Ph.D. programmers and take up teaching Optometry as a carrier.



## Bachelor of Science (Cardiac Care Technology)

It involves learning of complex diagnostic and therapeutic procedures that involve use of various equipment, computer hardware, tools, machines and pharmacological agents. This programme enables students to acquire skills for management of various cardiac disorders. Students will be trained to apply specialized occupational theory, skills and concepts to work independently as qualified cardiovascular technologist and becomes an integral member of the cardiac catheterization and electrophysiology laboratory teams. The CVT's primary role is to perform, at the direction of a qualified physician, technical procedures for the diagnosis and treatment of cardiovascular injury and disease.

### Scope:

There will also be job opening due to current cardiovascular professionals retiring or leaving the field for other reasons. Because the profession is relatively small and competitive, job security should be high for these cardiac professionals.

# Graduate of this programme are placed in multispeciality hospitals to assist the Physicians as:

- Cardiovascular Technician
- Echocardiographer
- Cardiac Sonographer
- Cardiac Electrophysiology Specialist
- Vascular technologists
- Cardiac catheterization
- Intervention technologist



Those intrested in higher studies can join for M.Sc. Programme and take up teaching CVTs as a carrier



## Bachelor of Science (Medical Dialysis Technology)

Renal failure, or kidney diseases, results in the accumulation of excess of wastes and fluids in the blood that Dialysis Technicians help remove through dialysis machine. Dialysis Technicians must have a thorough knowledge of how the dialysis machine functions and interacts with the human body. They are also responsible for cleaning and sterilizing the dialysis machine.

The programme is designed to prepare students to administer haemodialysis treatments for patients with renal failure, under the supervision of a or physician. The programme imparts essential instruction to enrolled students in basic anatomy and physiology, dialysis preparation, dialysis prescription interpretation, extracorporeal circuit, dialyzer setup and maintenance, water treatment system and its maintenance, patient preparation, equipment monitoring, venepuncture and local anesthesia administration, taking vital signs, documentation and communication, safety and sanitation, emergency interventions, and professional standards and ethics.

#### Scope:

Dialysis technology graduates may find a job at hospitals (Government or private), clinics or healthcare setups offering dialysis treatment.

Usually they work in a team, under the supervision of qualified Doctors. Some of the common job profiles available in front of them include-

- Dialysis technician
- Dialysis supervisor
- Dialysis Therapist
- Dialysis Assistant
- Nephrologists Assistant
- Medical Technician
- Academician





## Bachelor of Science (Medical laboratory Technology)

Medical laboratory technicians assist physicians in the diagnosis and treatment of diseases by performing tests on tissue, blood and other body fluids. Medical lab technicians most commonly work in hospitals or doctors' lab. Medical laboratory technicians play an important role in the prevention and diagnosis of diseases, such as cancer, diabetes and AIDS. Medical lab technicians work under the supervision of a physician, lab manager or medical technologist and perform laboratory tests on specimens.

#### Scope:

The career prospects in this field depend on the academic and technical skills of the technologist/technician. Initially he/she joins any laboratory as a certified medical laboratory technician.

Medical Laboratory Technicians find Employment :

- Government Hospitals
- Technician / supervisor in Pathology Labs
- Research Labs
- Urologist Clinic
- Pharmaceuticals
- Private Hospitals/ Medical Centers
- Medical Colleges/Universities etc.
- Many other organizations which support biomedical science industry
- Application specialist (Companies: pathlab, Biotech Crop, InnoBio, Gribbles, BP, Clinic Path) and other relevant organization commercial laboratories
- Academician



## Bachelor of Science (Medical Radiology and Imaging Technology)

Radiology is the branch or speciality of Medicine that deals with the study and application of Imaging Technology like x-ray and Radiation to Diagnosing and treating diseases. Radiology Technologists are Health Care Professional who perform diagnostic Imaging Procedures and are responsible for accurately positioning patients and ensuring that a quality diagnostic image is produced. Radiology Technicians produce clear and accurate images of the body that enable physicians to diagnose and treat medical conditions that would otherwise be difficult to document. Radiology Technicians operate sophisticated equipment that includes X-ray, Mammography, and Computerized Axial Tomography (CAT) and Position Emission Tomography (PET) scan devices.

#### Scope :

India's healthcare sector is on a growth trajectory, the career opportunities for such allied health care workers with expertise in diagnostic science have never been better. Services of diagnostic professionals can be essential for medical treatments and their demand is on the rise.

- Radiographer
- Radiologic Technologist (CT/MRI/Mammography)
- Applications Specialist
- X-Ray Technician
- Health Care Marketing
- Interventional Technologist
- Medical Advisor
- Radiologic Technologist
- Medical Image Analysis Scientist



## **Bachelor of Science (Operation Theatre & Anesthesia Technology)**

An anaesthesia technician is an allied healthcare Professional. Their main task is to assist Doctors/Surgeons during surgery, by administering appropriate dose of anaesthesia and operating anaesthesia equipment whenever required.

They can be seen assisting Doctors/Surgeons in intensive Care Units (ICU), Emergency wards and departments and operation Theatres.

They are trained in preparing Anesthesia trolleys checking the machines for suction, Anesthesia machine, pipeline gas system, working of OT tables, various gases used in OT, inhalational agents usage. They assist with the administration and monitoring of anaesthesia and have extensive knowledge of anaesthesia techniques, instruments, supplies, and technology.

#### Scope:

- Anesthesia technologist/ Surgical/ operation theatre technologists in operating rooms in hospitals, surgical centers, ambulatory centers, emergency and trauma units.
- Appointed in the Workplaces of physicians or dentists who perform outpatient surgery.
- Pursue a career as a research assistant.
- Advance in the career by pursuing higher education in speciality areas like conscious sedation for dentistry, dialysis anesthesiology, physician assistant (anesthesia), pain management, invasive anesthetic techniques and medical technology.



## **Bachelor of Science (Perfusion Technology)**

**Perfusion Technology** is the study of physiology and the pathology of the lungs and the allied respiratory organs of the human body. The course also throws considerable light on the associated equipment that is used to support or assume the function of the lungs and the heart during surgical procedures.

Students of BSc Perfusion Technology or Perfusion Technologists prepare and operate heart-lung machines and other sophisticated equipment as directed by healthcare physicians. Perfusionists measure blood pressure and other parameters to identify appropriate mechanical, pharmacological and thermal manipulation to maintain tissue viability. Additionally, the Perfusionist must be capable of handling stressful situations, paying great attention to detail, communicating effectively, and willing to stay abreast of new developments in the profession.

- Perfusion technologist,
- Pediatric Perfusionist,
- Cardiac Perfusionist,
- Medical coder, lecturer / teacher,
- Risk manager,
- Cardiac technician, etc.



# **EXTRA CURRICULAR ACTIVITIES**

