MGM UNIVERSITY
AURANGABAD

INSTITUTE OF BIOSCIENCES & TECHNOLOGY

PROFESSIONAL DEGREE PROGRAM

B.TECH. BIOMEDICAL ENGINEERING

Professional Degree Awarded	**B.Tech.Bachelor of Technology**
Duration of the Degree Program	**Four Years Bachelors Research Program**
Semester	**Eight (8)**
Intake	**30**
Tuition Fee	**Rs.1,10,000/-**

PROGRAM OVERVIEW

Biomedical engineering degree program focuses on including engineering practices in the medical world. It is a cross disciplinary program including engineering, biology & medicine. This branch of Science and engineering is an enthralling multidisciplinary area of study that involves the application of engineering techniques to help practitioners like physicians and doctors in their healthcare practices. Develop a solid understanding of science, technology and business management. The program aims to build the knowledge and skills required to solve the problems in biology & medicine. It teaches to design instruments and develop new procedures to carry out research needed to solve biomedical problems.

PROGRAM DESCRIPTION

This program will enable you to learn about the science behind biomedical engineering while also looking at how to succeed in a career in the medical or Pharma industry. Biomedical Engineers are professionals who are responsible to develop medical tools and equipment that can be used by healthcare professionals and doctors.They also find the solution to resolve health related problems using the technologies. A biomedical engineer uses the skills of biological engineering, chemistry and medicine to design and develop biomedical products. They are needed not only in the health care sectors but also in other sectors like agriculture, food industries and engineering firms.

This course is designed to produce graduates who have a solid understanding of science, technology and, along with the entrepreneurial skills required to exploit technological advances within a competitive environment.

SPECIAL FEATURES

Our B.Tech Biomedical Engineering incorporates the designing and technicality of engineering for a better health maintaining analytics, tracking and treatment.We are focusing on how to succeed in a career in the medical researcher, Scientist and content developer.This course implements the mixture of expertise in medical science and engineering. Hence, it tends to bridge the gap between the two fields.It primarily utilizes physical science concepts to comprehend biological entities. The course involves application of technology and problem-solving ability in the healthcare and medical industry for its advancements.

B. Tech in BME is a blend of engineering field with the medical field that certainly has a vast scope in the coming future.In your third year you have increased freedom to follow your own interest by choosing from wide range of optional modules and completing a research project or dissertation involving a significant element of biomedical engineering.We combine world-class facilities with the very best practitioners, helping you set the agenda for future technologies in the biomedical sector in which we specialize.The focus is to develop innovative methods using approaches in biology, implants, processes so as to help in the diagnosis & prevention of numerous diseases

PROGRAM STRUCTURE

- The four-year program has 175 choice-based credits to equate the professional degree
- Specialized experimental training with special attention to each individual through the 'Exploration Workshop'
- Special Open Elective course for students per semester
- Specialized labs with highly automated instruments
- Interactive learning with e-classrooms
- A complete package with an idea aboutvarious fields associated with biotechnology and life sciences
- Choice based credit system.

PROGRAM CONTENTS

It has wide variety of electives from multiple disciplines and the specialization tracks are -

Biophysical Signals &Systems, Circuit Theory & Networks, Engineering Physiology & Anatomy, Bioinformatics, Nano-Biotechnology, Biophysical Signals and Systems Lab, Environmental Science, Biophysics and Biochemistry Etc.

TEACHING AND LEARNING

- You will spend time in the laboratory, lectures, tutorials and seminars, as well as undertake site visits, a group project and a research project to aid the understanding of real-world application.
- Teaching and learning will be delivered using a variety of methods. A typical week in your first year of study will comprise approximately 30 hours of activity, of which approximately 15 hours will be timetabled study, such as interactive/active learning lectures, videos, tutorial sessions, laboratory classes and 15 hours will be independent or self-directed study.
- As you progress through the course, an increasing emphasis will be placed on independent study, and this reflects you applying your knowledge and skills in individual projects.
- The course contains strong practical elements. This commences in year 1 with `Introduction to laboratory science' (semester 1) and `Introduction to experimental biology' (semester 2) which will enable you to develop basic experimental and data analysis skills.
- In year 2, the Experimental Design modules (semester 1) will enable you to develop experimental skills, which are closely aligned to your degree programme. In Semester 2, you will take an intensive, degree specific Research Skills Module (RSM) module where you will have the opportunity to learn key experimental skills and design and analyse simple experiments relevant to your degree.

- In year 3, you will carry out an independent research project. This can involve laboratory or field-based research or you can opt to conduct a non-laboratory-based project, such as education, business and science media projects. All of these projects contain a research element and will require you to both generate and statistically analyse data.
- In the 4th Year, you will carry out and independent real time project with industry.

DISABILITY SUPPORT

Practical support and advice for current students and applicants is available from the Disability Advisory and Support Service. Email: admin@mgmibt.com

PLACEMENTS AND CAREER OPPORTUNITIES

Our graduates may choose to work in industry, academia or work for a Biomedical company. Healthcare, Career options include work as a geneticist in the field of medical research, or one of many other possibilities, such as in the pharmaceutical sector.You are not limited to the biomedical industries, however, and may go into a variety of careers. Find out more about how we help our students prepare for the workplace and the careersand the careers our graduates go into within and outside the lab.

INDUSTRY COLLABORATION

At the MGMUIBT, we know the value of working together. We break down barriers and get involved; we collaborate across disciplines, cultures to solve state, national and global problems; and we transform people's lives by making positive change across India and the world.

Partner with us today, and discover what a difference we could make to your - our - future. We engage with big companies to small scale companies like Mahyco, wockhardt, Metahelix, Jindal seeds, Ulman Lab, Matrix Life sciences, Probus, CFTRI, NIN, CIFE

Contact us

Admission:https://mgmu.ac.in/admissions/

Email: admin@mgmibt.com and director@mgmibt.com; Website: www.mgmibt.com

University website:https://mgmu.ac.in/; Mobile: 9921154640

MGM University, established by the widely revered Mahatma Gandhi Mission Trust, is a self-financed State University. It has the 2(f) status of the University Grants Commission of India (UGC) and is approved by the Government of Maharashtra.

MGM Institute of Biosciences & Technology is a constituent college of **MGM University** from 2019. The institute has excellent infrastructure, and students can access all the facilities, in the areas of sports and culture, in the environs of the green, safe, and eco-friendly, **MGM Campus**.