



MGMUNIVERSITY
AURANGABAD



INSTITUTE OF BIOSCIENCES & TECHNOLOGY

PROFESSIONAL DEGREE PROGRAM

B.SC (HONS.) MICROBIOLOGY

Professional Degree Awarded	B.Sc.(Hons.) / Bachelor of science
Duration of the Degree Program	Four Years Bachelors Research Program
Semester	Eight (8)
Intake	30
Tuition Fee	Rs.1,00,000/-

PROGRAM OVERVIEW

Microbiology is the branch of the science that deals with the study of microscopic organisms. Microscopic organisms are any living organism that is either a single cell, a cell cluster or has no cells at all. Microorganisms are responsible for the disease so the course usually studies about the immune system (Immunology).

It includes the study of topics like Macromolecular Structure & Analysis, Basic Microscopy & Instrumentation, Principles of Transmission Genetics, Principles of Immunology, Recombinant DNA technology, Computational biology, and Bio-informatics.

PROGRAM DESCRIPTION

Our B.Sc Microbiology (Hons) enables you to learn comparative characteristics of microbial organisms, general bacteriology and microbial techniques, pathogenicity, epidemiology, disease transmission, control of nosocomial infections, body defences, immunology, hypersensitivity, physical and chemical microbial control, collection and handling of laboratory specimens, common bacterial, fungal and viral diseases,

Our group enterprise projects, which involve close collaboration with entrepreneurs, provide a great opportunity for you to stand out from other graduates.

SPECIAL FEATURES

- The curriculum offers prime focus on fundamental and applied aspects of microbiology.

- Candidates are given a broader and deeper understanding of the concepts related to microbes, bacteria virus, genetics cell biology, and biology and computer sciences. The program further renders the knowledge through projects, presentations, and lab work
- Provides the basic and advanced academic, research, and industry-based curriculum consisting core, advanced, optional, and specific courses for the holistic development of students in life science
- Prepares the students for campus recruitment
- Undertakes a group enterprise project involving collaboration with entrepreneurs to develop a business plan for a real-life sciences product or service.

PROGRAM STRUCTURE

- Four-year program with 168 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 about various fields associated with biotechnology and life sciences

PROGRAM CONTENTS

Wide variety of electives from multiple disciplines with specialization tracks in -

Fundamentals Of Microbiology, Immunology, microbial organisms, general bacteriology and microbial techniques, pathogenicity, epidemiology, disease transmission, control of nosocomial infections, body defences, immunology, hypersensitivity, physical and chemical microbial control, collection and handling of laboratory specimens, common bacterial, fungal and viral diseases, and experimentation in clinical scenarios, Concepts In Microbiology and in last year Bachelors Research Program 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, students 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 Year 4, students carry out an 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. Email: admin@mgmibt.com

PLACEMENTS AND CAREER OPPORTUNITIES

Upon completion of the degree, you can choose to work for a range of employers, including pharmaceutical industries, microbial industries and Universities. Laboratories, Private Hospitals, Research Organizations, Environmental Agencies, Food Industry, Beverage Industry. Lab Technician, Business Development, Executive and other such.

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 the India and 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 Pharma , Advanced Clean room Micro clean (ACM) Lab, Matrix Life sciences, Probus, CFTRI, NIN, CIF



Contact us

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

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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**.