MGM UNIVERSITY
AURANGABAD

INSTITUTE OF BIOSCIENCES & TECHNOLOGY

PROFESSIONAL PG-DEGREE PROGRAM

M.SC. (FOOD TECHNOLOGY)

Professional Degree Awarded	**M.Sc. Masters of Science**
Duration of the Degree Program	**Two Years Research Program**
Semester	**Four (4)**
Intake	**20**
Tuition Fee	**Rs. 1,00,000/-**

PROGRAM OVERVIEW

Food science uses chemistry, microbiology, engineering, and biochemistry to help produce lasting, nutritious and easily accessible food. It involvesvarious aspects of science todevelop and design innovative processing technologies, improve food quality and nutrition value, enhance the safety, wholesomeness and availability of food.

Our MSc Food Technologycurriculum is designed in consultation with industry. It helps the students to,

- Prepare for a career in Food Industries, teaching or academic and industrial research.
- Gain practical experience in the laboratory.
- Research &Development (Academic & Industrial Sectors), Breweries, Dairy, Food industries.
- This is achieved through a combination of interdisciplinary curricula as well as intensive laboratory work. Through its unique pedagogical methods, the academic programme allows transferability of acquired skills in domains unrelated to biotech sectors. Students are expected to have both specialized knowledge and practical experience for addressing contemporary problems in both academic and industrial setting.

PROGRAM DESCRIPTION

- Designed to widen your skill set and boost employability, your case studies and project work will focus on current issues in the food industry.
- This is a research-focused master's course where in you take an interactive approach to learning, rather than taking traditional lectures. Seminars, workshops and lab meetings enable you to gain in-depth understanding of the field. A wide range of courses and workshops are available for your professional development as a research scientist.

THE PROGRAM MODULES ARE AS FOLLOWS

- **Microbes, Food Safety and Health-**
  Explore the fundamentals of microbiology, with a focus on aspects linked to the role of microorganisms infood and health.
- **Applied Food Quality and Safety-**
  This module provides a multidimensional understanding of the problem solving involved in the industrialdevelopment and production of food. You will apply scientific concepts to industry scenarios, checking for both qualityand safety issues in food products.
- **Sustainable Food Manufacturing and Process Design-**
  Gain a systematic understanding of food manufacturing processes, including the basic concepts of food processing, how individual unit operations are applied in food commodities, and how these are integrated during commercial manufacturing. You will also benefit from hands-on pilot plant experience.
- **Food Composition and Quality**
  This module explores the key aspects of food composition that influence food quality. You will develop anunderstanding of the practical application of food analysis methodologies to the characterisation of chemical composition of foods.
- You will learn how new start-up Food Technology companies are created, as well as about exploring the market potential of products and processes, creating business plans and raising wealth from venture capitalists.
- Our group enterprise projects, which involve close collaboration with entrepreneurs, provide a great opportunity for you to stand out from other graduates.

SPECIAL FEATURES

- Detailed research project on individual topics using laboratory, the pilot plant, the sensory suite, or facilities available in industry.
- Industry-relevant teaching and resources ranging from modern library and computing facilities to dedicated career advice and impressive students'activities.
- Designed to build a strong foundation with theoretical knowledge and specialized practical training.
- Exposure to next-generation technologies.
- Basic and advanced academic, research, and industry-based curriculum consisting core, advanced, optional, and specific courses for the holistic development of students in Food science
- Preparingstudents for campus recruitment

PROGRAM STRUCTURE

- Two-year program with68 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 Food Technology and life sciences
- As a final year student, you will have an opportunity to undertake a project in the labs of our world-class bioscience researchers. To support our research, we have extensive research facilities equipped with high-quality technology.

TEACHING AND LEARNING

- Interactive lectureswith encouragement to discussions and debates
- Lectures complemented by seminars, tutorials, workshops and practical sessions to help students develop analytical and critical appraisal skills.
- A strong emphasis on applying the theoretical frameworks to problem-solving
- Education is by theory, practical, tutorials, seminars and supervised research projects.
- Teaching by proficient academician, well known scientist and industrialist
- The syllabus is based on bloom's taxonomy. Students learn though practical oriental coursework.
- Well-equipped digital lecture hall Computer lab, Seminar hall, Workshop, problem-based learning etc

LEARNING FACILITIES

Our modern teaching labs equipped for a range ofFood Technology, a few of them are as follows:

Canning, Fermentation, Freezing, Modified atmosphere packaging, Pasteurisation, Smoking, Additives, Makes food edible, ultra-heat treatment, high pressure processing, or modified atmosphere packaging.

RESEARCH FACILITIES

- Our Researchers aims to solve some of the biggest problems facing people today, based on four themes: agriculture, food and health; environment; heritage and creativity; and prosperity and resilience.
- Students will be presented with tasks to develop and strengthen their knowledge, leadership, research and problem-solving skills in order to meet the global challenges associated within all aspects of the food industry, from farm to fork.
- Availability of equipment for advanced processing including high-pressure processing, supercritical fluid extraction, radiant energy processing, extrusion, and impingement drying/heating.
- The department also has a food preparation kitchen equipped with gas and electric stoves, humidity-controlled baking ovens, microwaves, and refrigerated and frozen storage.
- In addition, there are facilities for consumer and trained panel sensory tests, attribute testing, difference testing, and consumer preference.
- Laboratories include physical properties testing with instrumentation for light scattering, particle sizing, colour measurement, thermal properties measurement, zeta potential, water activity determination, water binding properties, and headspace analysis.
- In the Research Skills unit, you have the opportunity to carry out techniques that are widely used in current biological science research.
- Final year topics reflect the current hotspots of bioscience endeavour and the research interests of our staff, and are constantly being updated. You will undertake an independent in-depth research project that may involve supervised practical work in a laboratory, or you may choose to work on e-learning, educational, data analysis, enterprise topics.

COURSEWORK AND ASSESSMENT

The relative weightage to various examinations, course work, group project, lab report, oral examination, poster presentation, research project, case study, study tour, unit test, quiz, home assignment, seminar and record maintained during a semester shall be considered for assessment.

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

An M. Sc. Food Technologydegree offers a wide range of career options.

- Food technologists, for example, ensure the safety and quality of food in the production, manufacturing and distribution stages. They are highly valued for their problem-solving and technical skills.
- Many of our graduates have gone on to work in food in industry, government and education
- Food technologist can find job opportunities in sectors such as government and private hospitals, food industries, research and development organizations.
- They can also choose a career as science writer, writing articles for professional Food technologist or as a content writer and editor.
- After completing a degree in Food Technology one can find employment as Agricultural and Food Scientists.

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 Britannia Industries Ltd, Hindustan Unilever Ltd, LT Foods Ltd, McCain Foods India Pvt Ltd, Mondelez India Foods Pvt Ltd (Cadbury), MTR Foods Pvt Ltd (Orkla), Nestle India Ltd, Parley Agro Pvt Ltd.

Contact us

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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**.