



Department of
BIOTECHNOLOGY

Admissions
2021



About Us

The Department of Biotechnology was established in the year 2005, with the vision to raise Bio-technocrats and Entrepreneurs who develop processes and products for the betterment of the community and the environment. The Program B.Tech. Biotechnology was accredited by NBA in 2019 and both the B.Tech. & M.Tech. Programs are approved by AICTE and UGC.

The Department offers a multidisciplinary curriculum which includes Trending Technologies such as Genetic Engineering, Gene Transfer, Metabolic Engineering, Cancer Management, Downstream Processing, Thermodynamics, Tissue Engineering, Phyto-therapeutics, Plant & Animal Tissue Culture and Nanobiotechnology.

Each year the Department raises students with academic excellence, professional competence and good ethics to find solutions to human problems in areas relating to Water, Food, Health Care and Energy through scientific, social and technological research.

The Graduates are well equipped with the requirements of the Industry and Research organizations to pursue a career in Biotechnology.

Programs Offered

- **B.Tech.** Biotechnology (4 years / FT)
- **M.Tech.** Biotechnology (2 years / FT)
- **B.Sc.** Genetics and Microbiology (3 years / FT)
- **M.Sc.** Biotechnology (2 years / FT)
- **M.Sc.** Biomedical Genetics (2 years / FT)
- **Ph.D.** Biotechnology (FT / PT)

Thrust Areas of Research

The thrust areas of research include Bioprocess Modeling, Biomass and Bio-energy, Nutraceuticals, Phyto-therapeutics, Anticancer Research, Drug Discovery and Modeling, Bioremediation, Bio-film technology, and Environmental Engineering.

Laboratories / Facilities

The department is equipped with state-of-the-art laboratories and uses the latest technology to pursue cutting edge research in Microbiology, Immunology, Biochemistry, Molecular Biology, Genetic Engineering, Plant and Animal cell culture, Bioprocess technology and Downstream Processing. The Department also hosts a CPCSEA approved animal house facility which conducts preclinical research on experimental animals such as chicken, mice, rat, rabbit & hamster.

Funded Research Projects

The Department received research funds to the tune of Rs.3.4 crores from DBT (Department of Biotechnology), DST (Department of Science and Technology), DRDO (Defense Research and Development Organization), SERB (Science and Engineering Research Board), UGC (University Grants Commission), NTRF (National Tea Research Foundation) and ICSSR (Indian Council of Social Science Research) resulting in Publications and Patents.



Components of the Curriculum

The curriculum includes Program Cores, Professional Electives, Soft Cores, Project Oriented Learning, Industrial Visits and Industry Internships to attain the required academic credits. The students appear for MOOC certification programs offered by NPTEL, Swayam and Coursera which forms an Integral part of the curriculum.

Significant Courses aligned to the vision of the department:

- Molecular and Genetic Engineering
- Cell Biology and Immunotechnology
- Plant and Animal Tissue Culture
- Bioprocess Engineering
- Chemical Reaction Engineering
- Chemical and Bio-thermodynamics
- Pharmaceutical Technology
- Recombinant DNA Technology
- Entrepreneurship, IPR and Bioethics

The entire curriculum / syllabus of the Department can be viewed from the link given below <https://www.karunya.edu/academics>

Career Prospects and Higher Studies

Recruiters of our Graduates are from Pharmaceutical, Bio-processing, Food and allied industries and Core Giants such as Biocon, Zifo R&D solutions, Nestle, Dr. Reddy's Laboratories, Fruzyme, BRF (Bioscience Research Foundation), Steril-Gene, VWR labs, Quintiles, IQVIA, Microbiological Laboratory Pvt. Ltd, Novozymes, Bhat Biotech, Biozeen, Biozyme, Molecular Connections, Bharat Serums, Plant Lipids and MedSource Ozone Pvt. Ltd.

The students also opt for higher studies in reputed institutions in India and abroad such as Indian Institute of Technology, National Institute of Technology, Ben Gurion University, Israel; Swinburne University, Australia; University of Sheffield, UK; Katz School of Science, New York, USA and Zuckenberg Institute of Water Research, Israel.

MoU's / Collaborations / Internships

MoUs have been signed with leading industries to equip faculty and students with Industrial skill sets through training & internships.

- National Dong Hwa University, Taiwan.
- Mahasarakham University, Thailand for students / faculty exchange.
- M/s. Bhat Biotech, Bengaluru for student internships and projects.
- Microbiological Laboratories Pvt. Ltd.
- M/s. Parry Agro Industries Ltd., Coimbatore for training and placements.

Note worthy Recognition

- The Department holds the highest number of patents, a notable achievement indeed!
- The IAESTE-Student Exchange Program has enabled 12 students to pursue research / training programs in premier institutions in Germany, Brazil, Poland, Athens, Thailand and British Columbia.
- The Department has recently launched a CPCSEA approved Small Animal Breeding Facility for breeding and research.
- A team of students won a cash award of Rs.1,00,000/- in the National Competition for Innovation in Science, Engineering and Arts for "The Role of Second Green Revolution in India".

Institutions of Repute for Higher Studies

Our graduates availed opportunities to pursue their Post-graduation in the fields of Environmental Biotechnology, Systems Biology, Food Biotechnology, Pharmaceutical Biotechnology, Industrial Biotechnology, Medical Technology as specializations in M.Tech / MS Programs.



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Testimony

Mr. Darshan
(2016-2020)

I am Darshan Balachandran currently pursuing 1st year M.Tech. Biotechnology in KITS. My association with the department is a memorable one.

I was awarded the Gold Medal for excellence in academics and was selected to carry out my internship at the Department of Cell Biology at the University of Konstanz, Germany. This was an equally amazing and unforgettable experience with Molecular cloning technique in 2019. I have been offered to work as a researcher at the Department of Industrial Biotechnology in the University of Chalmers, Sweden from September 2021 to June 2022 on a 10 month project in Genetic Engineering.

I acknowledge the constant support and encouragement of the faculty of my department and attribute my success to their professional guidance and personal mentoring. I am indeed happy to have selected Karunya Institute of Technology and Sciences to pursue my studies and look forward to a brilliant career in Biotechnology.

Our Recruiters



APPLY NOW

Scan QR Code to Start the Admission Process

The Head of Department
Department of Biotechnology

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