Karunya
DEEMED UNIVERSITY
SOLVING HUMAN PROBLEMS
NAAC Accredited A++

Accreditation
A++ NAAC
NBA NATIONAL BOARD of ACCREDITATION
Accredited by 3 Years

Global Ranking
THE World University Rankings 2025
1201-1500 Band

Division of BIOTECHNOLOGY

CATEGORY 1 Institution UGC GoI.

ADMISSIONS 2026

About Us

The Division of Biotechnology was established in 2005 with a vision to nurture skilled bio-technocrats and entrepreneurs capable of developing sustainable processes and products for the welfare of society and the environment.

The B.Tech. Biotechnology program was accredited by the NBA in 2019, followed by the M.Tech. Biotechnology program in 2022. All programs — B.Tech., M.Tech., and M.Sc. Biotechnology — are approved by AICTE and UGC.

The Division offers a multidisciplinary curriculum encompassing emerging domains such as Genetic Engineering, Gene Transfer, Metabolic Engineering, Cancer Management, Downstream Processing, Bioprocess Engineering, Tissue Engineering, Phyto-therapeutics, Plant and Animal Tissue Culture, and Nanobiotechnology. Our mission is to generate academically proficient and ethically responsible professionals capable of addressing real-world challenges in food, water, healthcare, and energy through scientific research and technological innovation.

Graduates of the Division are well prepared to meet the dynamic needs of industry and research institutions worldwide.

Programs Offered

- **B.Tech.** Biotechnology - 4 Yrs / FT
- **B.Tech.** Biotechnology (Spl. in Artificial Intelligence)- 4 Yrs / FT
- **B.Tech.** Biotechnology (Spl. in Genome Engineering and Technology) - 4 Yrs / FT
- **M.Tech.** Biotechnology - 2 Yrs / FT
- **M.Sc.** Biotechnology - 2 Yrs / FT
- **Ph.D.** Biotechnology - FT / PT

Eligibility

- **B.Tech. Biotechnology / B.Tech. Biotechnology (AI) / B.Tech Biotechnology (Genome Engineering).**

  Candidates must have passed HSC (10+2) with Physics, Chemistry, and Biology / Zoology / Botany / Computer Science / Agricultural Engineering or with Physics, Mathematics, and any one of the following subjects: Biotechnology, Chemistry, Biology, Technical Vocational Subject, Computer Science, Information Technology, Agriculture, Engineering Graphics, or Business Studies.

- **Lateral Entry:** Candidates with a qualifying Diploma or B.Sc. degree in relevant disciplines such as Chemical Engineering, Instrumentation, Food Technology, Pharmaceutical Technology, Biotechnology, Life Sciences, Microbiology, Biochemistry, or equivalent are eligible.

Applicants must appear for KEE 2026, based on which scholarships are awarded.

Components of the Curriculum

In alignment with AICTE guidelines, the Outcome Based Industry Aligned curriculum includes Core Courses, Professional Electives, Soft Skills, Project based Learning, Industrial Visits, Industry Internships and Micro projects.

Students also complete MOOC certifications through NPTEL and SWAYAM as part of their academic requirements.

Significant Courses aligned to the vision of the Division

- Molecular Biology and Genetic Engineering
- Genome Editing for Therapy.
- Biosimilars Technology.
- Artificial Intelligence in Healthcare and Biosciences
- Gene Expression and Transgenics.
- Cell Biology and Immunotechnology

- Plant and Animal Tissue Culture
- Bioprocess and Downstream Engineering
- Tissue Engineering
- Nanotechnology
- Pharmaceutical Technology
- Recombinant DNA Technology
- Entrepreneurship, IPR, and Bioethics
- Food and Agricultural Biotechnology
- Algae Biotechnology
- Stem Cell Technology

Curriculum details are available at:
karunya.edu/biotechnology/academics Click Here

Laboratories / Facilities

The Division houses state-of-the-art laboratories and advanced research infrastructure in Microbiology, Immunology, Biochemistry, Molecular Biology, Genetic Engineering, Plant and Animal Cell Culture, Bioprocess Technology, and Downstream Processing.

We maintain a CCSEA-approved Animal House Facility (1537/PO/ReBi/S/11/CCSEA) for preclinical studies on experimental animals such as chicken, mice, rats, rabbits, and hamsters, with an integrated Small Animal Breeding Facility.

A Centre of Excellence in Stem Cell Research has been established to promote research in Adult Stem Cells, Biomaterials, and Tissue Engineering.

Thrust Areas of Research

- Bioprocess Modeling and Bioreactor Design
- Biomass and Bioenergy
- Nutraceuticals and Phytotherapeutics
- Anticancer Research
- Drug Discovery and Molecular Modeling
- Bioremediation and Biofilm Technology
- Environmental and Industrial Biotechnology

Funded Research Projects

The Division has secured 6 crores in research funding from national agencies, including DBT, DST, DRDO, SERB, UGC, NTRF, ICSSR, ICMR, CSIR, and BIRAC, resulting in numerous publications, patents, and product developments.

Career Prospects & Higher Studies

Our graduates are recruited by leading organizations such as Biocon, Johnson & Johnson, Indian Immunologicals, RGCB, ICAR, Dr. Reddy's Laboratories, IQVIA, Novozymes, Biozeen, Zifo R&D Solutions, Pasteur Institute of India, and Nestlé.

They also pursue advanced studies at prestigious institutions including IITs, NITs, Ben Gurion University (Israel), Swinburne University (Australia), University of Sheffield (UK), Katz School of Science (USA), KTH Royal Institute of Technology, Stockholm, Sweden, and Zuckerberg Institute of Water Research (Israel).

MoU's / Collaborations / Internships

Strategic collaborations offer students and faculty valuable training and exchange opportunities:

- National Dong Hwa University, Taiwan – Student/Faculty Exchange.
- University of Chemistry and Technology Prague - Student Internship.
- Worcester Polytechnic Institute, Worcester, Massachusetts, United States – Student/Faculty Exchange.
- West Pomeranian University of Technology, Szczecin, Poland- Student Internship.
- University of Colombo, Sri Lanka – Student/Faculty Exchange.
- Biocon, Bengaluru – Internships and Projects.
- Rajiv Gandhi Centre for Biotechnology, Trivandrum – Research and Training.
- Microbiological Laboratories Pvt. Ltd. – Research, Training, and Placements.
- Biozeen, Bengaluru - Internships and Training.

Testimonial

Ms. Ainy Joy
B.Tech. (2021-2025)

My journey at Karunya Institute of Technology and Sciences has been enriching and transformative, offering the perfect blend of academic rigor, research exposure, and personal growth. The B.Tech. Biotechnology program (2021–2025) equipped me with a strong foundation in microbiology, molecular biology, and bioprocess engineering. Hands-on projects and internships, particularly in genetic engineering and fermentation technology, made my learning experience truly memorable. The dedicated guidance from experienced professors and the university's state-of-the-art laboratory facilities enhanced my technical and research skills. Karunya's excellent faculty mentorship, industry collaborations, and career counseling services played a crucial role in my academic and professional development. Opportunities to participate in national and international conferences further strengthened my research profile. Currently, I am with Johnson & Johnson MedTech (Ethicon Division) in Wound Closure and Biosurgery, contributing to innovations that improve patient outcomes. The university's emphasis on practical learning and real-world applications helped me excel in this role. One of the most valuable skills I gained at Karunya is critical thinking and problem-solving, essential for addressing complex challenges in biotechnology. I wholeheartedly recommend Karunya University to aspiring students seeking a holistic education, strong research culture, and supportive environment for personal and professional growth.

Ms. Iana Jestin
B.Tech. (2020-2024)

My journey at Karunya Institute of Technology and Sciences has been one of learning, growth, and transformation. Though the path had its challenges, it shaped me into an independent individual with strong academic and personal foundations. The B.Tech. Biotechnology program (2020–2024) offered a perfect balance of theoretical knowledge and practical application, preparing me for the professional world. Hands-on projects, laboratory work, and interactive sessions made my learning experience both engaging and memorable. Beyond academics, the supportive environment at Karunya helped me develop essential behavioural and interpersonal skills such as teamwork, adaptability, and effective communication - qualities that have been instrumental in my career. Currently, I am working as an Associate CQV Engineer at NNE, where the technical knowledge I gained during my course plays a vital role in understanding and contributing to key aspects of bioprocess operations. Among the many lessons learned at Karunya, patience and resilience stand out as the most valuable traits that continue to guide me in both personal and professional spheres. I would wholeheartedly recommend Karunya University to future students who seek not only quality education in biotechnology but also holistic development in a nurturing and value-driven environment.

Noteworthy Recognition

- The Division holds the highest number of patents 31 patents filed, 7 granted.
- Through IAESTE Student Exchange, 20 students have undertaken research and training in Germany, Brazil, Poland, Greece, Thailand, and Canada.
- Small Animal Breeding Facility and Centre of Excellence in Stem Cell Research adds distinction to our research infrastructure
- Students have achieved national recognition by winning Ideathon and Hackathon challenges for innovative research projects

Our Students at Institutions of Repute for Higher Studies

Major Recruiters

The Head of Division
Division of Biotechnology

Karunya Institute of Technology and Sciences,
Karunya Nagar, Coimbatore - 641 114, Tamil Nadu, India
E-mail: admissions@karunya.edu • Web: www.karunya.edu
Tel: 0422-2614499, 94878 46 639
Toll Free: 1800 88 99 888, 1800 42 54 300

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