ACHARYA INSTITUTE OF TECHNOLOGY

Affiliated to VTU

NBA NATIONAL BOARD OF ACCREDITATION | NAAC A ACCREDITED

Established in 2000, **Acharya Institute of Technology (AIT)** stands as a NAAC & NBA-accredited centre of excellence, recognised by NIRF for its academic standards and innovation. Located on a vibrant 120-acre campus in Bengaluru, AIT blends industry-aligned education, advanced infrastructure, and strong corporate partnerships to shape future-ready engineers and technology leaders.



- **Industry-aligned programs** delivered by expert faculty, enriched with in-demand certifications like Ai, EV, Cyber Security, and emerging technologies.
- **Smart learning ecosystem** with LinkedIn Learning access, high-performance laptops, advanced labs, and a digital library.
- **Strong industry collaborations** enabling internships, live projects, and real-world exposure with leading corporations.
- **Global outlook** through international partnerships and a culturally diverse student community.
- **Proven placement excellence** supported by 550+ recruiting companies visiting the campus annually.

B.E. BIOTECHNOLOGY ENGINEERING

About

Biotechnology engineering combines technology and biological sciences to create or alter products to benefit human health and society at large. In addition to healthcare, biotechnology is also employed in agriculture, food production, environmental management, and industrial processes.

- **Interdisciplinary biotech foundation** covering biological sciences, genetics, microbiology, molecular biology, bioinformatics, and engineering principles.
- **Hands-on laboratory experience** that builds practical skills in genetic engineering, bioprocessing, and bioinformatics.
- **Global exposure & internships** with international opportunities to engage with leading universities and research programs.
- **Strong industry partnerships** with firms like Merck Life Science Pvt. Ltd. and Neo-Stick Tapes Pvt. Ltd. for collaborative projects and training.
- **Research-oriented culture** with an NBA-accredited department, active research programmes, patents, and award-winning student projects.



Career Scope

- **Diverse sector opportunities** in pharmaceuticals, healthcare, agriculture, food processing, environmental management, and biotech product development.
- **Research and advanced studies pathways** that lead to roles in R&D, innovation labs, and postgraduate or doctoral programmes in India and abroad.
- **Biotech problem-solvers for global challenges,** including drug discovery, sustainable agriculture, and diagnostic technologies, addressing real-world societal needs.

Eligibility

10+2 with PCM/PMC/PME + English, min 45%.
Age 17+.

Duration
4 years

COURSE CONTENT

Semester 1

- Mathematics I for Biotechnology Engg. Stream
- Applied Physics for BT Stream
- Principles of Programming Using C
- Engineering Science Course - I
- Emerging Technology Course - I
- Programming Languages Course - I
- Communicative English
- Professional Writing Skills in English
- Samskrutika Kannada / Balake Kannada
- Indian Constitution
- Innovation and Design Thinking
- Scientific Foundations of Health

Semester 2

- Mathematics - II for Biotechnology Engg. Stream
- Applied Chemistry for BT Stream
- Computer - Aided Engineering Drawing
- Engineering Science Course - II
- Programming Language Course - II
- Emerging Technology Course - II
- Professional Writing Skills in English
- Communicative English
- Indian Constitution
- Samskrutika Kannada / Balake Kannada
- Scientific Foundations for Health
- Innovation and Design Thinking

Semester 3

- Cell Biology and Genetics
- Unit Operations + Lab
- Biochemistry +Lab
- Microbiology
- Microbiology Lab
- Engineering Science Course
  - Python Programming
  - Human Anatomy and Physiology
  - R programming for Biologists
  - Plant Physiology and Phyto-hormones
- Social Connect and Responsibility
- Ability Enhancement Course /Skill Enhancement Course - III
  - Bio-Lab Management and Risk Assessment
  - Data presentation, Error Analysis and Inferences
  - Analysis Of Dairy Products Lab
  - Biodiversity and Conservation Law
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 4

- Molecular Biology & Genetic Engineering
- Biostatistics and Tools + Lab
- Immunotechnology + Lab
- Molecular Biology & Genetic Engineering Lab
- Engineering Science Course
  - Biochemical Thermodynamics
  - Marine Bioresources and applications
  - Bioprocess Principles and Stoichiometry
  - Structural Biology and Biophysical Techniques
- Ability Enhancement Course / Skill Enhancement Course- IV
  - Hydroponics, Aquaponics and Aeroponics
  - Water Analysis Lab
  - Extraction methods and herbal products lab
  - Biopesticides and Biofertilizers
- Biology For Engineers (Dr VM, SCE)
- Universal human values course
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga



Semester 5

Bioeconomy and Entrepreneurship
- Enzyme Technology + Lab
- Genomics, Proteomics and Bioinformatics
- Bioinformatics Lab
- Professional Elective Course
  - Food Processing and Nutraceuticals (include nutrigenomics)
  - Medicinal Chemistry and Chemoinformatics
  - Forensic Biology
  - Bioprocess Equipment Design and CAED
- Mini Project
- Research Methodology and IPR
- Environmental Studies
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 7

- Upstream Process Technology + Lab
- Downstream Process Technology + Lab
- Bioethics, Biosafety and Regulatory affairs
- Professional Elective Course
  - Clinical Research
  - Biological Data Management
  - Environmental Biotechnology
  - Agricultural Biotechnology
- Open Elective Course
  - Biomaterials and Medical Implants
  - Traditional Medicine And Health Management
  - Public Health and Community Medicine
  - Bioremediation Techniques
- Major Project Phase - II

Semester 6

- Bioprocess Control & Automation + Lab
- Biokinetics
- Professional Elective Course
  - Biopharmaceuticals
  - Synthetic Biology and Tissue Engineering
  - Biomedical Imaging and Health Informatics
  - Systems Biology and Rational Drug design
- Open Elective Course
  - Robotics in Healthcare and Agri-Tech
  - Food, Nutrition and Health
  - Nanobiotechnology
  - Ecology and Ecosystem
- Project Phase I
- Biokinetics Lab
- Ability Enhancement Course / Skill Development Course V
  - Bio-Innovation and Start-ups
  - Modelling and Simulations in Biology Lab
  - Bioinstrumentation and Servicing Lab
  - Good Manufacturing and Laboratory Practices
- National Service Scheme (NSS)
- Physical Education (PE) (Sports and Athletics)
- Yoga

Semester 8

- Professional Elective (Online Courses)
- Open Elective (Online Courses)
- Internship (Industry/Research) (14 - 20 weeks)

FEE STRUCTURE

Refer offer letter for the actuals.

Inclusions: Tuition Fee, University Registration, Eligibility Fee, Miscellaneous Fee, Laboratory Fee, Library Fee and Sports Fee.

Exclusions: Uniform & Stationery.
Examination Fee as prescribed by the University / Board.

The Program Includes OBT, AMCAT/CoCubes, Soft Skills Training, Domain-Specific Training and LinkedIn Learning. Students are also provided with a Complimentary Laptop and Global Immersion Program.



Acharya Legacy

Founded in 1990, Acharya aims to revolutionize education. With over 12,000 students and 100+ academic programs annually, it stands among the global education elite. Located in India's technical hub, Bangalore, Acharya prioritizes innovation and knowledge. The institution fosters experiential and collaborative learning, shaping well-rounded individuals, evident in its diverse student population from 75+ countries.

11 Institutions

15 Research Centers

100+ Programmes

75+ Nationalities

12000+ Students

1000+ Eminent Faculty

120 Acres State-of-the-Art Campus



B Premnath Reddy
Founder Chairman
Acharya Group

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Hostels



Habba



PROGRAMS OFFERED

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