



Centre for Career Development,
Indian Institute of Technology Guwahati

**Placement
Brochure 2023-2024**

Department of Biosciences and Bioengineering





About The Institute

Indian Institute of Technology, Guwahati

Established in 1994, as an 'Institute of National Importance', IIT Guwahati has grown into being a preferred destination for people passionate about learning and innovation. IIT Guwahati has been ranked among the Top 100 Young Universities in the world by the Times Higher Education, one of the two Universities from BRICS nations. IIT Guwahati has several factors contributing to how in a short span of time it has established itself as one of the best institutes of its kind in the country. The programmes and courses that are offered at IIT Guwahati are perpetually evolving to adapt to the ever changing global requirements and along with the diversity of the fields of study, this has helped the institute become one of the nation's nerve centres for research and development, and technical education. The faculty ensure that the students of the campus are ready to face the challenges of the professional world by providing them with a sound conceptual understanding of their respective disciplines. The institute also offers a plethora of opportunities to students for their holistic development, through the excellent facilities that it has for sports and general extracurricular activities.

About the Department of Biosciences and Bioengineering

Vision

To provide quality education and empower research in Biosciences and Bioengineering in North Eastern india

Mission

The Department of Biosciences & Bioengineering, IIT Guwahati is one of its kind in the north-eastern part of India, imparting quality education and promoting goal-orientated interdisciplinary research by interfacing modern biology with applied engineering sciences through its B.Tech, M.Tech and PhD programs.

As of now the department has 37 faculty members from diverse streams actively engaged in high quality teaching and research in areas of Biosciences and Bioengineering. The faculty members are internationally recognized. The dedication and hard work of the faculty members is clear from the increase in the number of projects and publications over the years.

Department of Biosciences and Bioengineering was established in 2002. Within about twenty years, it has established itself as a leading place for education and research with its contributions in the emerging areas of Biological Sciences and Bioengineering. Apart from fundamental research, the Department aims to meet the targeted demands to cater for the requirements of the Biotechnology based industries.

The Department currently offers a four-year B.Tech. (undergraduate) and two-year M.Tech. (postgraduate) teaching programmes in Biotechnology and also in Bioengineering. Besides, it offers a research programme at the Ph.D. level in the various disciplines of Biosciences and Bioengineering. The Department is unique in North-Eastern India, imparting quality education and providing an excellent teaching and research environment through its ongoing programmes coupled with an outreach programme recently launched across the entire NE region through NECBH. Extensive facilities and infrastructure have been developed to support its ongoing teaching and research activities. Further, to cater to the needs of academics and industry, and NE in particular, capacity building in terms of training manpower is one of the main mandates of the department.

Department has not only improved its quality of research by publishing high-quality papers in reputed journals but also has a strong science outreach programme. Department faculties are committed to the ethos of overall progress and development of the Institute and have brought accolades not only for themselves, for the Department but for the Institute in a bigger frame.



Prof. Rakhi Chaturvedi

**From the Head
of the
Department**

Academic Curriculum

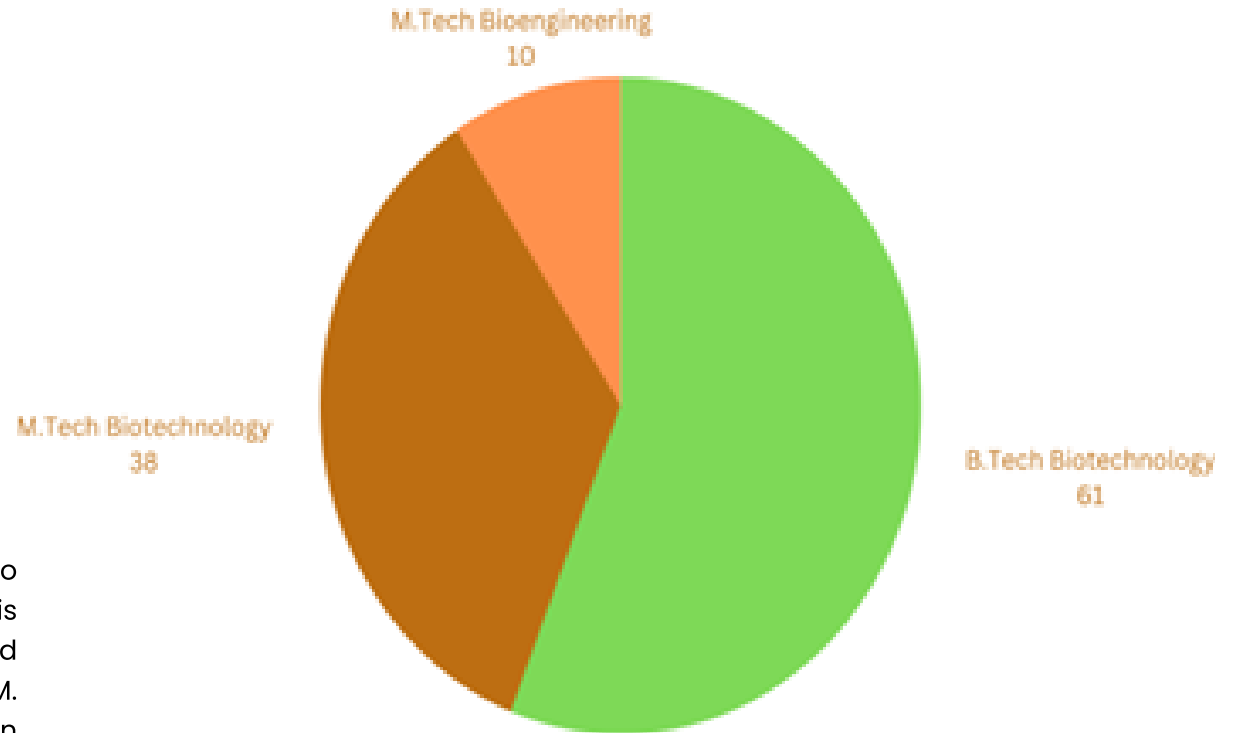
Undergraduate Programs – B.Tech

The Department of Bioscience and Bioengineering started a four year B. Tech. Biosciences and Bioengineering Program in 2002 to train the bright students as engineer along with essential knowledge on Biosciences and Bioengineering. In this program, the courses are designed systematically to offer an overall knowledge of physics including experimental techniques with modern equipments. All the passing out students of first batch of B. Tech. Biosciences and Bioengineering Program have got either industrial placement or got admission in to various prestigious universities in US/ Europe for higher studies.

Postgraduate Programs – M.Tech

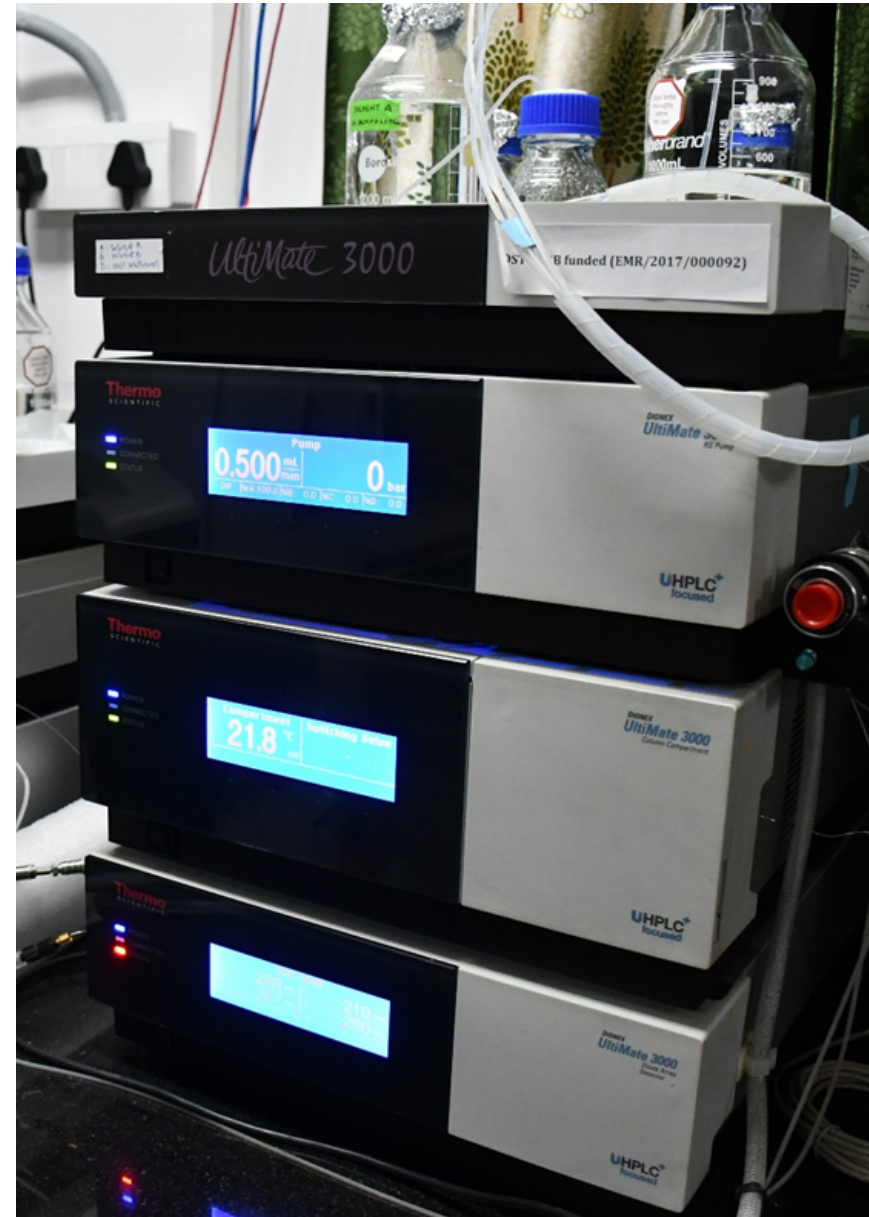
The Department of Biosciences and Bioengineering started a two year M.Tech (Biotechnology) Program in 2008. This program is designed with equal emphasis on both classroom lectures and laboratory training with modern equipments. A large fraction of M. Tech. passed out students find their places for higher studies in various prestigious institutes/universities all over the world. A new postgraduate program M.Tech in Bioengineering has been launched by the Department of Biosciences and Bioengineering.

Total No of Students in Graduating Batch



Key Research Areas

- Plant Biotechnology
- Virology
- Biomechanics
- Biochemical Engineering
- Biosensors
- Cancer Biology
- Cell Biology
- Computational Biology
- Peptide Chemistry
- Fungal Biotechnology
- Neural Engineering
- Stem Cell Biology
- Structural Biology
- Tissue Engineering



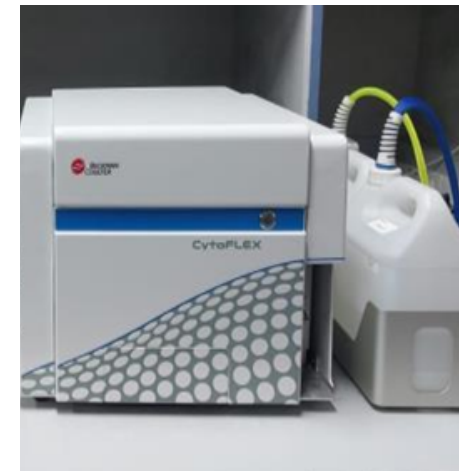
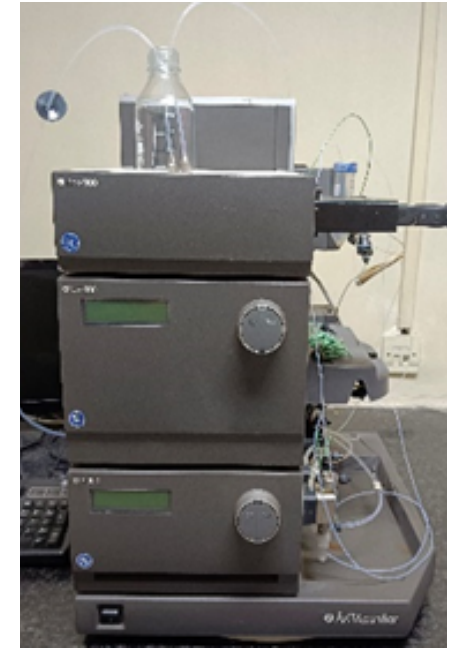
Research Laboratories

- Applied Biodiversity Laboratory (Prof. Latha Rangan)
- BERL (Bioengineering Research Laboratory)
- Bio Process Analytical Technology (BioPAT) Laboratory
- Bio-interface & Environmental Engineering Lab (Dr. Lalit Mohan Pandey)
- Biomaterial and Tissue Engineering laboratory (Dr. Biman B. Mandal)
- Biomechanics and Simulations lab (Dr. Souptick Chanda)
- Biophysical Chemistry Lab
- Bioprocess Development Lab
- Biosensor and Biofuel Cell Research Lab
- Cancer Biology Laboratory (Dr. Ajaikumar B. Kunnumakkara)
- Computational Lab
- Computational Structural Biology laboratory (Dr. Priyadarshi Satpati)
- Dr. Selvaraju Narayanasamy Lab
- Dr. Cota Navin Gupta
- Dr. Kusum Singh Laboratory
- Dr. Soumen Kumar Maiti Laboratory
- Enzyme and Microbial Technology Laboratory, EMTL (Prof. Sanjukta Patra)
- Experimental Teaching laboratory
- Laboratory for Stem Cell Engineering and Regenerative Medicine (Dr. Rajkumar P. Thummer)
- MAB (Mechanistic Approaches to Biology) Lab
- Malaria Research Group (Dr. Vishal Trivedi)



Research Laboratories

- Molecular Informatics and Design Group (Dr. Vibin Ramakrishnan)
- Molecular Microbiology Laboratory (Dr. Manish Kumar)
- Molecular Networks and Recombinant Therapeutics
- Neurospora Research Group (Dr. Ranjan Tamuli)
- Organelle Biology and Cellular Ageing Lab (Dr. Shirisha Nagotu)
- Plant Tissue Culture & Secondary Metabolite Production Lab (Prof. Rakhi Chaturvedi)
- Prof. Aiyagari Ramesh laboratory
- Prof. Arun Goyal Lab
- Prof. Gurvinder Kaur Saini laboratory
- Prof. Kannan Pakshirajan's laboratory
- Prof. R. Swaminathan Laboratory
- Prof. Siddhartha Sankar Ghosh lab
- Prof. V. V. Dasu lab
- Stem Cell and Cancer Biology Group (Dr. Bithiah Grace Jaganathan)
- Structural and Computational Biology Laboratory (Dr. Shankar Prasad Kanaujia)
- The Molecular Endocrinology lab (Dr. Anil Mukund Limaye)
- Translational Crop Research Laboratory (Prof. Lingaraj Sahoo)
- Viral Immunology lab (Dr. Sachin Kumar)



Sponsored Research Projects

- Multivariate/Multimodal Algorithms for NeuroImaging Big Data
- Microbial conversion of cellulosic agrowaste to bioethanol using microbial cultures, natural and recombinant cellulases and hemicellulases for bioethanol production.
- Fabrication of 3D nanomaterials for application as nanotherapeutics/anticancer agents
- Development of matrix using silk protein that can be used in bioartificial liver systems.
- Development of sustainable pilot scale production technology for hydrocarbon oil via hydrothermal liquefaction (HTL) of microalgae grown on flue gas and organic nutrients recycled from HTL unit
- Development of diagnostics and vaccine against OMP's of *Leptospira interrogans* and *Borrelia burgdorferi*.
- Studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics devices and other applications
- Vaccine development against avian paramyxoviruses using reverse genetics system.
- Design and Application of a Robust Process Analytical Technology (PAT) Platform for Real-time Monitoring and Control of Hyaluronic Acid Production
- Development of nanocarriers for gene/ drug delivery, luminescent nanoclusters for bioimaging and fabrication of theranostic devices.

Year at a Glance

- Prof. Rakhi Chaturvedi, "Featured in the book titled "She Is: 75 Women in STEAM" is released by the Office of the Principal Scientific Advisor, Government of India and British High Commission, New Delhi.", [2022]
- Prof. Sachin Kumar, "F.M.Burnett award from INDIAN SOCIETY FOR VETERINARY IMMUNOLOGY AND BIOTECHNOLOGY (ISVIB) Year 21-22.", [2022]
- Prof. Utpal Bora, "Appointed as a Member, Board of Research Studies, Mizoram University for 2 years", [2022]
- Prof. Biman B Mandal, "Featured in the book published by Vigyan Prasar titled 75 under 50: Scientists Shaping Today's India", [2022]
- Prof. Latha Rangan, "Dr. P. Sheel Memorial Lecture (Young Women Scientist) Award by the National Academy of Sciences, India ", [2021]

Internship

Our students have undergone internships and training in industries and universities around the world. We believe in equipping our students with real-world experiences that prepare them for the challenges of the professional landscape. Through our extensive network of industry partners and esteemed universities, we offer unparalleled internship opportunities that expose our students to diverse cultures, cutting-edge technologies, and innovative practices.



Previous Recruiters



Contact Us

Faculty Placement Coordinator



Prof. Sachin Kumar
sachinku@iitg.ac.in
Phone: +91-361-2582229

Overall Placement Coordinators



Zainab Sariya
s.zainab@iitg.ac.in
Phone: +919870035399



Chiranjeet Mishra
chiranjeet@iitg.ac.in
Phone: +919890346479

Department Placement Representatives



Aishwarya Vijayakumar
v.aishwarya@iitg.ac.in
Phone: +917353659366



Shreyansh Mishra
shreyansh.mishra@iitg.ac.in
Phone: +917887245316



Sohail ur Rehman
s.rehman@iitg.ac.in
Phone: +917006364788

Mail us at - placement@iitg.ac.in

Website: www.iitg.ac.in/ccd