

Career Opportunities

This course will open up avenues in the areas of Life Sciences & Research, Food & Beverage, Agro Biotech, Healthcare (Pharmaceutical / Biopharmaceutical / Nutraceuticals) & Consultancy domain of Biotechnology.

Curriculum

Semester I

- Biomathematics and Biostatistics
- Molecular Cell Biology & Immunology
- Gene Technology
- Biological Chemistry

Learning Labs

- Molecular Cell Biology, Immunology & Gene technology
- Biological Chemistry

Semester II

- Sterility & Aseptic Processing in Biotech Industry
- Industrial Microbiology & Fermentation Process
- Mammalian Cell Culture Technology
- Food Biotechnology

Learning Labs

- Upstream Processing
- Sterile Engineering & Filtration

Semester III

- Bio separation Technology
- Bioprocesses & Bioreactor Design
- Principles of Biologics Production

Elective (any one)

- Environmental Biotechnology
- Industrial Enzymes
- Algae Biotechnology
- Plant Cell Biotechnology

Learning Labs

- Down Stream Processing
- Elective

Semester IV

- Principles of Vaccine Development
- Biologics Formulation & Stability Analysis

Elective (any one)

- Nano Biotechnology
- Quality Control and Assurance of Biotech Products
- Industrial Management
- Food and Drug Regulations
- Entrepreneurship in Biotechnology
- Plant Design & Automation
- Computational Methods in Industrial Biotechnology

Learning Labs

- Project - Presentation & Defence
- Comprehensive Viva-Voce

Study Campus

Center for Post Graduate Studies

Jayanagar 3rd Block

Bangalore - 560 011

P +91 80 4322 6500

M +91 99729 11288 / 95388 41275

Industry Partner

Bangalore Biotech Labs Pvt. Ltd.

49/2, Gubbi Cross, Hennur - Bagalur Main Road

Kothanur Post, Bangalore - 560 077

P +91 6530 9009 / 6530 9006

Center for Post Graduate Studies JAIN UNIVERSITY

Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956



Master of Science

INDUSTRIAL BIOTECHNOLOGY

Explore the frontiers of Science!

About Jain University

Jain University is declared as deemed-to-be University u/s 3 of the UGC Act, 1956. It is ranked no.1 among top private university in South India & ranked no.2 among top private universities in India by India Today Best Universities Survey, June 2013. A member of the Association of Universities of Asia and the Pacific (AUAP) is now certified ISO 9001:2008 for quality management.

The University currently offers over 185 innovative programmes at the Undergraduate, Postgraduate and Research levels. At Jain University undergraduate & postgraduate aspirants have an opportunity to fulfil education requirements, choose among a wide variety of elective courses and interdisciplinary certificate programmes and be a part of research activities undertaken by the university in diverse fields.

About Center for Post Graduate Studies (CPGS)

Center for Post Graduate Studies (CPGS) is an exclusive postgraduate and research centre of Jain University.

The centre presently has oriented its research in the areas of Life Sciences that includes Bioinformatics, Cancer Biology, Biofuels, Industrial, Agricultural and Environmental Microbiology, Mycology, Enzymology, Bioplastics, Biomedical Physics, Plant Metabolomics, Phytochemistry, Toxinology, Oxidative Stress Biology, Stem Cells etc. Application of various bioinformatics tools for rational drug development from herbal sources against tuberculosis and swine flu has been the main research focus of the dry lab research. The wet lab research of the centre includes standardization of conditions for production of industrial enzymes, biodegradable plastics and secondary metabolites from fungi.

The centre has established collaborative research with various national and international institutions and industries of repute. In the past 5 years, it has attracted research grants of over a crore from national funding agencies.

About Bioprocess Training School, BIOZEEN

BIOZEEN – Bangalore Biotech Labs Private Ltd. is a market leader in creating value added innovative solutions to the biotech industry. The company is equipped with a state-of-the-art research and development facility with core focus on developing and standardizing the design and control systems for microbial fermentation and mammalian cell culture bioreactors employed in Pharma, Biopharma, Vaccine and Food Industry. The Bioprocess Training School at BIOZEEN provides a platform for academics and industry executives to gain hands on practical knowledge and skills.

Study Campus - Center for Post Graduate Studies

- Holistic approach to education with emphasis on development of all-round skills
- Highly qualified faculty trained in prestigious institutions in India and abroad
- Strong in fundamentals of Biotechnology and other allied subjects
- Student-friendly environment
- High emphasis on research based training through innovative funded projects and international collaborations

Industry Partner - BIOZEEN

- ISO 9001:2008 certified
- Operates a state-of-the-art cGMP compliant pilot plant dedicated exclusively for training, led by a team of industry professionals
- Dynamic curriculum interfaced with industrial experience, with the strong emphasis on bridging the gap between academia and industry
- Provides an opportunity through its unique model of training which enables the participants to acquire the skills required to excel in Biopharma industry
- On-campus recruitment from leading Pharma, Biopharma and Vaccine companies
- Winner of Indian Achievers Award and Rajiv Gandhi National Quality Award

Do you want to move away from the regular classroom courses in Biotechnology? Are you interested in a learning programme that orients you to develop practical skills and actively engages you to gain ‘real-world’ experience in industrial setting? Do you want to pursue an exciting and rewarding career in your field of education? If your answer is ‘yes’ then, come and experience the interactive global learning environment at the Center for Post Graduate Studies, Jain University.

Industrial Biotechnology

For the first time in India, Center for Post Graduate Studies, Jain University in association with BIOZEEN, a leading Bioprocess Engineering partner bring to you a unique MSc programme in INDUSTRIAL BIOTECHNOLOGY that integrates academic knowledge with hands on industrial exposure, ensuring a holistic programme towards development of industry ready talent.

Programme Code	Course Code	Duration	Total Credits
044	4415	2 years, 4 semesters	100

Eligibility

The minimum qualification required to apply is a BSc degree from a university recognised by UGC with chemistry and any 2 of the following subjects from life sciences - Botany, Zoology, Biochemistry, Biotechnology, Microbiology, Genetics, Environmental Sciences, Applied Botany, Applied Zoology, Applied Genetics, Molecular Biology

Deliverables

This curriculum is a combination of Practical & Theory covering operational skills & domain knowledge which would enhance job prospects in the industry

