



CENTRE FOR BIOTECHNOLOGY AND BIOINFORMATICS

INFORMATION BROCHURE

Academic Session 2019-2020

DIBRUGARH UNIVERSITY

DIBRUGARH-786004

ASSAM, INDIA

www.dibru.ac.in

ABOUT THE CENTRE

The **Centre for Biotechnology and Bioinformatics** offers Postgraduate programmes leading to MSc. and PhD in Biotechnology and Bioinformatics. The programmes are designed to generate competent human resources with comprehensive expertise in the broad fields of Biotechnology and Bioinformatics. The Centre aims to address individual, institutional and societal needs by dissemination of knowledge in the aforementioned areas and through engagement in active research.

The Centre has modern ICT-equipped classrooms, a well-stocked departmental library with extensive e-resources, a robust bioinformatics infrastructure facility and laboratories with requisite instrumentation for biotechnology, bioinformatics and computational biology research.



The core faculty members of the Centre are dynamic and are actively engaged in enriching the learning experience of the students through the regular academic regimen and by organizing intense interactive sessions. They are supported by Professors from the Allied Departments of the University who bring in the expertise of their own fields such as the Pharmaceutical Sciences, Life Sciences, Chemistry, Computer Sciences, Statistics and Mathematical Sciences, and Commerce and Management to extend unique perspectives to the students for addressing different areas of Biotechnology and Bioinformatics.

The syllabus for the MSc programme is in accordance with the guidelines of Department of Biotechnology, Government of India (DBT, GoI) and ensures elucidation of basic theoretical

concepts; hands-on practical experience in the wet lab and *in silico* environment. The students are required to do small dissertations in the third and fourth semesters.

Research Focus:

The Centre for Biotechnology and Bioinformatics offers specialization in the Masters' program in the following areas of research:

1. Cell and Tissue Culture
2. Enzyme Biotechnology
3. Environmental and Agricultural Microbiology
4. Biological Database Management System (DBMS)
5. Computer Aided Drug Designing (CADD)
6. Molecular Evolution
7. Biopharmaceuticals and Downstream processing
8. Phytopharmaceuticals and Pharmacological Screening Methods
9. Systems Biology

The Centre has well-endowed funds for teaching and research. The Centre also organizes Workshops and Seminars on a regular basis for support of college teachers and research scholars and accepts applications from students from other Universities for short-term summer projects, etc. Visiting Professors and Fellows from other reputed National and International Universities and Institutes are also invited regularly to the Centre.

The Centre has distinguished alumni both from India and abroad. After graduation, students find placement in various research institutes of national and international repute.



Programmes offered/conducted:

- MSc. in Biotechnology & Bioinformatics
- PhD in Biotechnology & Bioinformatics

MAJOR FACILITIES OF THE CENTRE

1. Central Instrumentation Facility
2. Cell and Molecular Biology Lab

3. Plant Tissue Culture Facility
4. Microbiology Lab
5. High Performance Cluster Computing facility
6. Separate Labs for students and research scholars
7. Classrooms with audio-visual teaching aids
8. Seminar halls with digital facility
9. Bioinformatics Infrastructure Facility
10. Well-stocked departmental library with subscription to more than 990 e-journals

MAJOR EQUIPMENT

1. High Performance Liquid Chromatography (HPLC)- Agilent, Germany
2. Thermocycler BIORAD C100, USA
3. Gel Documentation System BIORAD, USA
4. High-speed refrigerated centrifuge, Sigma, Germany
5. Rotary evaporator, IKA, Germany
6. UV-VIS Spectrophotometer, SHIMADZU, Japan
7. BSL-2, Labtech Daihan South Korea
8. Bioreactor, Eppendorf, BIOFLO, Germany
9. Nucleic Acids and Protein Magnetic Bead Separator, Fischer Scientific, Finland
10. CO₂ Incubator, Eppendorf, Germany
11. Deep Freezers (-20°C, -80°C) Eppendorf, Germany
12. Inverted Microscope, Zeiss, Germany
13. Bio Aerosol Sampler and Analyzer
14. Merck-Millipore Ultra-pure Water Purification System
15. Molecular Simulation softwares

The above-mentioned facilities have been created through the support of DBT-HRD project for strengthening, teaching, training and research, DBT-Bioinformatics Infrastructure Facility (BIF), DBT-Institutional Biotech Hub (IBTHub) and Rashtriya Uchchar Shiksha Abhiyan (RUSA), Government of India.

For further information on the Centre, please visit the webpage of the Centre for Biotechnology and Bioinformatics in the Dibrugarh University website by clicking on the following URL:

<https://www.dibru.ac.in/schools-of-studies/2014-12-25-08-59-12/centre-for-biotechnology-and-bioinformatics>