DEPARTMENT OF BIOTECHNOLOGY AND BIOINFORMATICS

Advanced Certificate Programme in Biological Software Technologies (ACP-BST)
6-Months, Full-time

The study of bioinformatics and computational biology includes the areas of development of new computational methods for studying organization and evolution of genes and genomes, computational approaches to macromeolecular structure and dynamics, comparative evolutionary genomics, and prediction and analysis of structure. However, there is a huge gap between industry needs and the quality and content provided to the students of bioinformatics and computational biology. The industry needs expertise in programming and algorithm implementation with basic understanding of modern biological concepts. They expect their potential candidates to be proficient in handling voluminous biological data. The goal of this Advanced Certificate Programme is to fill this gap between the current academic syllabus and the industry requirements.

Focus Areas: Basics of Molecular Biology, Software Design and Analysis, Biological Algorithms, Programming Languages, Scripting Languages, Web Application Development

Course Structure

Course Code	Course name	Credits
BST-001	Molecular Biology	[2 T+1 L]
BST-002	BioSoftware Tools and BioDatabases	[2 T+1 L]
SCT-001	Object-Oriented Analysis and Design using Unified Modelling Language and Design Patterns	[2 T+1 L]
NWT-002	Programming / Scripting Languages	[2 T+1 L]
SCT-017	Web Application Development	[2 T+1 L]
BST-006	Biological Algorithms	[2 T+1 L]
SSD-001	Soft Skills Development - I	2 T
	Total credits	**20**

Note: One credit of Theory (T) equals 16 hrs. of teaching contact hours and one credit of Lab (L) equals 32 hours of laboratory work.

Lab Infrastructure

- Hi-end PC Systems
- BioPERL
- R programming Environment
- ClustalX
- CCP4
- EMBOSS
- AUTODOCK
- BioConductor
- BOSv2.0
- K/X/Ubuntu
- Windows XP

Knowledge Partners

TATA
TATA CHEMICALS

Eligibility	B.Tech (Computer Science, Electronics) / MS and MSc in Life Sciences / MTech (CS, Biotech, Bioinformatics) with at least 60% aggregate from a recognised University

Faculty	• Dr. Prasad V.L.S. Burra • Prof. Suresh S.S. • Dr. Sudhir Kumar • Dr. Iyer • Visiting Faculty (Industry Experts)	**Contact - HoD** Dr. Prasad V.L.S. Burra Ph.D.(IISc,Bangalore) Bioinformatics & Systems Biology Phone: +91 20 22934590 / 91 Email: bst@isquareit.com

For application & selection process, please visit www.isquareit.com
You can also contact Admissions Department

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CENTRE FOR ADVANCED STUDIES

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