Research Facilities

WET LAB

- Isolation of Genomic DNA (Plant / Bacteria)
- Bacterial culturing and Plasmid isolation.
- Vector Construction
  (a) Restriction Enzyme (b) Ligation
- PCR
- Transformation / Cloning
- Culturing / Colony Screening
- Gel Documentation Expression (Protein Profiles)

PROTEOMICS LAB

- Phase Contrast Microscope
- Digicams
- 3 High end workstation.

SOFTWARES

- GCG Wisconsin Package - Genome Analysis
- PDQuest - 2D Gel Analysis
- Tripos - Molecular Modeling
- Other Softwares related to Scientific computation...

IRCB (Indo -Russian Centre For Biotechnology)

Foreign Collaboration speak volumes about the institute efforts in striving for establishment of worldwide linkage, Currently an Indo -Russian Centre has become operational.

IRCB is a joint Indo -Russian venture that contacts and co-ordinates research and other collaborative activities in the thrust area of Biotechnology especially Bioinformatics.

Indian Institute Of Information Technology Allahabad
(Deemed University)
A Centre Of Excellence in Information Technology, Estbld. By Ministry Of H. R. D., Govt. Of India

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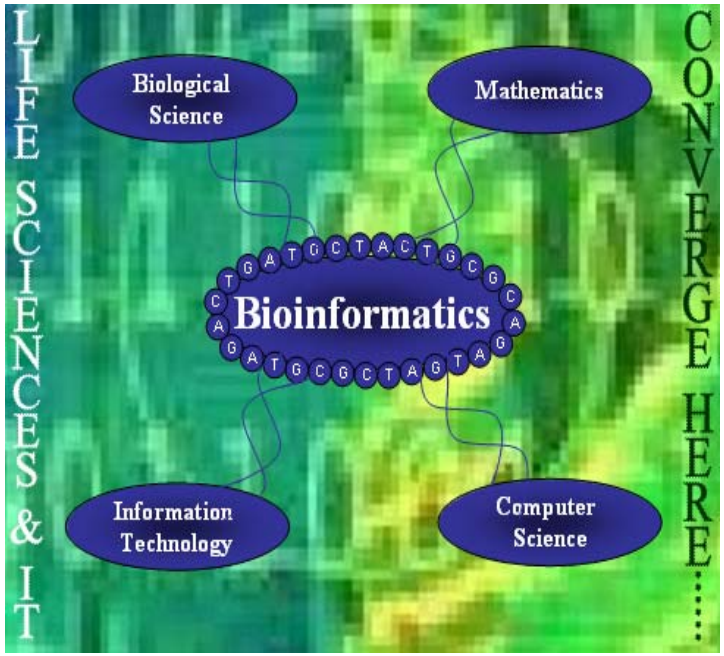
Indian Institute Of Information Technology Allahabad

M.Tech. [I.T.]
Specialization In Bioinformatics
2004-06



Encompass Expertise In……..

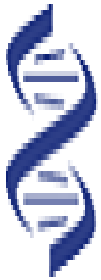
- Proteomics
- Gene Expression Analysis
- Computer Aided Drug Designing
- Mediinformatics
- Biological Databases
- Computational Neuroscience

……to reveal nature

First ever M.Tech. [I.T.] (Specialization in Bioinformatics) Brains !! In India.....

Candidates after being short listed on the basis of GATE (Graduate Aptitude Test in Engineering) Score go through a rigorous procedure of written test followed by personal Interviews conducted by IIIT-A for selection.

Curriculum



The state of the art course pedagogy of the M.Tech. Program is totally industry oriented and by far the best in India. Other than Basic computational and life sciences subjects, the course emphasises on latest trends in Bioinformatics & Computational Biology

The Course Structure comprises of :

- Biological Databases & Genetic Engineering
- Computer Aided Drug Design & Delivery
- Molecular Structure Prediction & Visualization.
- Proteomics & Transcriptomics
- Computational Neuroscience
- Computer Model Of Evolution
- Chemiinformatics
- Immuno computing
- Molecular Phylogeny

Including the exposure of Programming languages and Softwares like.....

- C, C++, JAVA, CORBA
- PERL, PYTHON, PHP
- MATLAB, ORACLE, MYSQL
- BIOPERL, BIOJAVA, BIOCORBA

Along with Individual Projects & Dissertation Work.....

Why IIITians

Multi-disciplinary nature, high-end Global Research Collaborations and Training procedure make the Curriculum radically distinct. IIIT grooms the students from various disciplines like B.Tech./B.Pharma./MBBS/MSc. empowering their skill set to the core for excelling in the field of Bioinformatics.

Several sponsored projects from CSIR, MHRD Govt. of India, MCIT Govt. of India, DST, DBT Govt. of India and foreign collaboration activities are also in the pipeline, which shall further boost the image of IIIT-Allahabad in being recognized as a hub of activity around the world in the field of Bioinformatics.

Our Faculty

Prof (Mrs.) Krishna Mishra [Course Coordinator]

Genetic Engineering, Molecular Biology, Antibiotic.

Prof A. K. Gupta

DNA Computing, Genetic Algorithms, Mathematical Modeling & Simulation.

Prof C. M. Bhandari

Artificial Neural Network, Quantum Computing, Molecular Physics

Dr. S. I. Rizvi

Anti Diabetic Drug based on Natural Products, Membrane Biochemistry.

Dr. T. Lahiri

Pattern Recognition, Soft Computing, Medical Image /Signal Processing, Proteomics

Dr. C. V. S. Siva Prasad

Genomics, Proteomics, Protein Engineering (in silico) & Wet Lab

Dr. O. P. Vyas

Database Design & Implementation, Data Mining & Warehousing

Mr. Pritish Varadwaj

Molecular Structure Prediction, Computer Aided Drug Designing, Chemiinformatics

Mr. Vikram Katju

Graph Spectral Analysis of Protein

Ongoing Project

- Development of a Fractal and Soft Computing Simulation based methodology to predict protein surface-roughness to help pharmaceutical designing of best possible small binding molecule— A drug design approach.
- Development of Small query database screening system (SQDS) to identify specific teratocarcinoma genes (Transcriptomics-in-Silico)
- Conversion of DNA sequence into signal to develop various gene identification, search and retrieval protocol.
- Finding out new drug target proteins in the Leshmania donovani through proteomics and bioinformatics approach.
- Development of software tools for prediction and evaluation of siRNA and miRNA.

And many more.....

Seminar And Workshops

- National Seminar on “IPR issue and effect on Indian Pharmaceutical industries” at IIIT-A.
- International Seminar on IT Trends at IIIT-A.
- International Seminar on Intelligent signal Processing and Robotics at IIIT-A.
- Workshop Mediinformatics sponsored by DST & DBT with IIIT-A.

Joint Academic And Scientific Research Collaboration

With the University of Carnegile Mellon and university of California, Riverside. This collaboration include exchange of faculty members, students and IT as well as participation in public events, seminars, conferences, internship and research projects.