



INDIAN BIOSCIENCES AND RESEARCH INSTITUTE

भारतीय जैव विज्ञान एवं अनुसन्धान संस्थान

Comprehensive Program in Bioinformatics **[12 Months]**

Aims and Objectives

This course will provide an introduction to bioinformatics to interpret the rapidly expanding amount of biological information. The course will cover the basic concepts of Bioinformatics and focus how to identify, obtain, establish, maintain and exchange research information in biology.

The course aim to provide:

- The concepts of computer science that relate to problems in biological sciences.
- Commercial and academic perspectives on bioinformatics.
- The impact of bioinformatics on the methodologies used in biological science.
- The influence biological science has on computing science.

The aim of this course is to provide an intensive, high quality, one year training in bioinformatics with both taught components and extensive practical experience for students from a range of scientific backgrounds. The course will be relevant to a wide range of industries that involve knowledge of the networks and databases in bioinformatics and the use and development of computer software.

What Will You Learn?

- Biological processes in organisms
- How these processes go wrong in diseases
- Gene based drugs discovery
- Drug designing
- Disease Diagnosis

- Pharmacogenomics
- Toxicogenomics

Course Content

S.No	Modules	Contents
1	Module 1	Concepts of Bioinformatics
2	Module 2	Structural Biology
3	Module 3	Computational Biology and Phylogenetics
4	Module 4	Database Management Systems and Biological Databases
5	Module 5	Emerging Dimensions and its Industrial Applications
6	Module 6	Drug Designing and Discovery
7	Module 7	Biostatistics and Algorithms
8	Module 8	Research Study

Fees Structure

S.No	Programs	Fees
1	Registration Fees	Rs.500/-
2	Professional Designation in Bioinformatics[3 Months]	Rs.4500/-
3	Certificate Course in Applied Bioinformatics[6 Months]	Rs.6500/-
4	Comprehensive Program in Bioinformatics, Biological Databases and its Industrial Applications[12 Months]	Rs.10,000/-
5	Exam Fees	Rs.200Per paper

Career Opportunities

Bioinformatics promises tremendous potential and plays a crucial role in the future development of science and technology and job opportunities in Research, Pharmaceuticals and Chemical industries.

Bioinformatics is a career of the future. In India alone, Biotechnology and Bioinformatics is the fastest growing employment sector after computers and multi-media. Some of India's biggest industrial groups are entering in the Bioinformatics field, focusing on research in industrial, agricultural and medical biotechnology, clearly signaling a change in the market dynamics in this sector. Reliance Industries is building a new, world class research and development center, near Mumbai, encompassing research laboratories for all disciplines, laboratories for contract research, green house, animal house, transgenic plants and animal holding facility, and facilities for cell biology research and services for therapeutic proteins.

Type of companies hiring:

- Research institutions.
- Pharmaceutical companies.
- Chemical industries.
- IT Companies
- Agriculture and allied industries working to expand the realm of information.

Bioinformatics professional can get employment as:

- Genomics Head (Agilent Company)
- Proteomics Structural and Functional Analyst
- Bioinformatics Faculty or Head
- Software Developer
- Database Management
- Statistical Analytical Bioinformatics Tool Developer
- Research Assistant

- Research Scientist
- Bioinformatics Consultant
- R& D Sector
- Agricultural Sciences
- Computational Biologist

Course Methodology

After the Enrollment the student will be provided study material in form of Introduction Kit, delivered to participants of the program – this kit will contain study material and all necessary information about the program with important dates.

Evaluation will be examination/assignment based

Successful students will be awarded ‘Certificates in the respective areas by Distance participation along with the grade obtained.