



1 Month
Hands-On
Skill
Development
Training

WINTER INTERNSHIP

FROM BASE PAIRS TO BIG DATA: BIOINFORMATICS BOOTCAMP FOR THE NEXT GENERATION

Dive into Data this Winter

- 1.0 Month | 29 Jan. to 03 Mar. 2026
- Registration Closes: 27 Jan. 2026
- 6:00 – 7:00 PM (IST) | Mon to Fri



MODULE I

Deep Dive into Bioinformatics

- Important Databases, Tools, Sequence Alignment, Primer Designing, Phylogenetic Analysis

MODULE II

Introduction to Proteomics

- Molecular Modelling, Molecular Docking.

MODULE III

Programming for Bioinformatics

- R, Python & Biopython

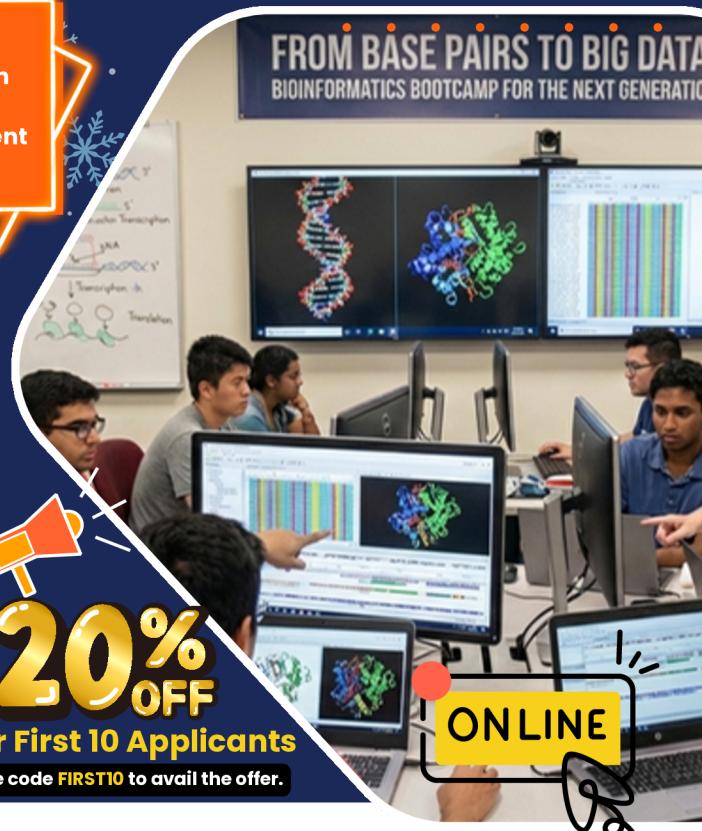
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20%
OFF
For First 10 Applicants

Use code FIRST10 to avail the offer.

ONLINE



MODULE IV

Machine Learning/AI for Bioinformatics

MODULE V

Next-Generation Sequencing Data Analysis

- Final Project Assignment

PROGRAM BENEFITS

Certificates | Live Sessions | Recordings | Workshop Materials | Technical Support

MORE DETAILS

SCAN
ME



Visit: www.cbirt.net/training

* This program will be held subject to a minimum enrollment of 8-10 participants.

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Training Schedule



MODULE I

Jan 29, 2026	6:00 - 7:00 pm	Introduction to Bioinformatics Biological Databases Types of biological databases (primary vs secondary) NCBI, EMBL-EBI, DDBJ, GenBank, Ensembl Sequence File Formats
Jan 30, 2026	6:00 - 7:00 pm	Sequence Alignment <ul style="list-style-type: none"> Basics of DNA/protein alignment Pairwise vs multiple sequence alignment Global vs local alignment Sequence Alignment <ul style="list-style-type: none"> Tools: BLAST, MSA Tools: Clustal Omega, T-Coffee, Muscle
Feb 02, 2026	6:00 - 7:00 pm	Phylogenetic Analysis (MEGA) Gene & Protein Annotation/Primer Design Gene prediction basics ORFs, exons/introns Gene & Protein Annotation Functional annotation (GO terms, KEGG pathways) Introduction to genome browsers (UCSC, Ensembl)

MODULE II

Feb 03, 2026	6:00 - 7:00 pm	Introduction to Proteomics Protein Databases (Sequence & Structure)
Feb 04, 2026	6:00 - 7:00 pm	Structure Visualization Protein Similarity Search Tool
Feb 05, 2026	6:00 - 7:00 pm	Protein Structure Prediction Molecular Modelling Molecular Docking

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Training Schedule

MODULE III

Feb 06, 2026	6:00 - 7:00 pm	Introduction to Programming (R) Getting Started with R and RStudio Overview of R and its applications Working with RStudio projects and managing environments
Feb 09, 2026	6:00 - 7:00 pm	Data Structures in R Working with R Data Types: Vectors, matrices, data frames, and lists
Feb 10, 2026	6:00 - 7:00 pm	Looping and Control Flow in R Writing and Executing R Code <ul style="list-style-type: none"> Running Basic R Code: Interacting with the console and writing reusable scripts
Feb 11, 2026	6:00 - 7:00 pm	Data Visualization <ul style="list-style-type: none"> Introduction to ggplot2 package Creating basic plots (histograms, bar plots, box plots, scatter plots)
Feb 12, 2026	6:00 - 7:00 pm	<ul style="list-style-type: none"> Sequence Analysis Feature Extraction of Protein Sequence Using ProtR Package
Feb 13, 2026	6:00 - 7:00 pm	Introduction to Python Overview of Python and its uses Writing and running your first Python script
Feb 16, 2026	6:00 - 7:00 pm	2. Python Basics <ul style="list-style-type: none"> Syntax and Semantics: Understanding Python's syntax Variables and Data Types
Feb 17, 2026	6:00 - 7:00 pm	<ul style="list-style-type: none"> Control Flow Conditional Statements: <ul style="list-style-type: none"> <i>if, else, elif statements</i>
Feb 18, 2026	6:00 - 7:00 pm	Loops: <ul style="list-style-type: none"> Nested loops Loop control statements (break, continue, pass) List Comprehensions: Understanding and using list comprehensions for concise loops

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Training Schedule

MODULE III *Contd.*

Feb 19, 2026	6:00 - 7:00 pm	Setting up the environment (Python + Biopython) Overview of Python basics relevant to Biopython (data types, loops, functions, etc.) Working with Biological Sequences
Feb 20, 2026	6:00 - 7:00 pm	Working with Biological Databases Fetching Data from NCBI, Uniprot, Parsing from Databases

MODULE IV

Feb 23, 2026	6:00 - 7:00 pm	Introduction to Machine Learning Machine Learning in Bioinformatics Machine Learning Algorithms Used in Bioinformatics
Feb 24, 2026	6:00 - 7:00 pm	Types of Machine Learning and algorithms <ul style="list-style-type: none"> Kernels in Machine Learning
Feb 25, 2026	6:00 - 7:00 pm	Classification with WEKA using Different algorithm
Feb 26, 2026	6:00 - 7:00 pm	Ensemble Methods: Bagging, Boosting, Random Forest. Applying Ensemble Techniques to Improve Prediction Accuracy. Introduction to Neural Networks and their Application in Protein Prediction. Practical Session: Implementing Ensemble Methods in WEKA.

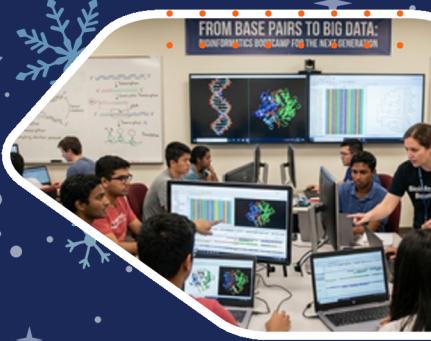
MODULE V

Feb 27, 2026	6:00 - 7:00 pm	Introduction to Next Generation Sequencing <ul style="list-style-type: none"> First Generation Sequencing Second Generation Sequencing Third Generation Sequencing Next-Generation Sequencing
Mar 02, 2026	6:00 - 7:00 pm	Introduction to RNA Seq (Reference Based)
Mar 03, 2026	6:00 - 7:00 pm	Introduction to different tools for RNAseq data analysis

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SUMMER TRAINING/INTERNSHIP

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Registration

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To register for the workshop, please submit the registration form along with your payment details. We accept multiple payment methods to ensure a convenient and secure registration process.

REGISTER NOW

Registration Form Link:
<https://forms.gle/jzBWVASVhRAzPnTw6>
 or Scan the QR Code



INTERNSHIP FEE

STUDENTS (UPTO PHD LEVEL)

INR-4999



POSTDOC/RESEARCH SCHOLARS

INR-5499

STAFF/FACULTY

INR-5999



INDUSTRY PROFESSIONALS

INR-6499

INTERNATIONAL PARTICIPANTS

(Including all Living, Working, or Studying Abroad at the time of the Workshop).

**STUDENTS
(UPTO PHD LEVEL)**

USD 65

**POSTDOC/
RESEARCH SCHOLARS**

USD 70

STAFF/FACULTY

USD 80

**INDUSTRY
PROFESSIONALS**

USD 90

**20%
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**Fee after 20% Discount
(First 10)**

PAYMENT METHODS

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UPI ID



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