



**Dr.Omics** Labs  
The Doctor of your DNA



*Online Course*

# **BEGINNERS TO ADVANCED BIOINFORMATICS**

**HARNESS THE POTENTIAL OF DATA  
IN THE REALM OF LIFE SCIENCES.**



# WELCOME TO THE BIOINFORMATICS JOURNEY!

Are you ready to delve into the exciting world of Bioinformatics and take your knowledge to the next level? This comprehensive 1-month online course is designed to provide you with the skills and knowledge needed to tackle bioinformatics challenges with confidence.



## *About Us*

Dr.Omics Labs is a leader in the field of bioinformatics and genomics research. We are committed to pushing the boundaries of scientific knowledge and fostering the next generation of bioinformatics experts.

## Course Overview

Embark on a learning adventure that takes you from the basics to advanced concepts in Bioinformatics. Our online course offers a holistic approach, suitable for beginners and those looking to deepen their expertise.

- Duration: 1 Month
- Level: Beginners to Advanced
- Mode: Online



# Coursework Overview

- 1.** Overview of Bioinformatics, Its Scope, and Emerging Opportunities  
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- 2.** Understanding Bioinformatics tools & databases  
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- 3.** Understanding alignment tool [BLAST, Mega] for big data - Pairwise Alignment, Multiple Sequence Alignment  
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- 4.** LINUX & Cloud Computing (AWS basics)  
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## **MODULE 1:**

# **Overview of Bioinformatics, Its Scope, and Emerging Opportunities**

- Introduction to Bioinformatics
- Introduction to Databases & Biological Databases
- Database architecture & network
- Types of Databases (Primary, Secondary)
- Primary & Secondary Database Relation & Differences
- NCBI Exploration & its Databases

## **MODULE 2:**

# **Understanding Bioinformatics tools & databases**

- GenBank
- Kyoto Encyclopedia of Genes and Genomes (KEGG)
- Basic Local Alignment Search Tool (BLAST)
- Protein Data Bank (PDB)
- PubMed



## **MODULE 3:**

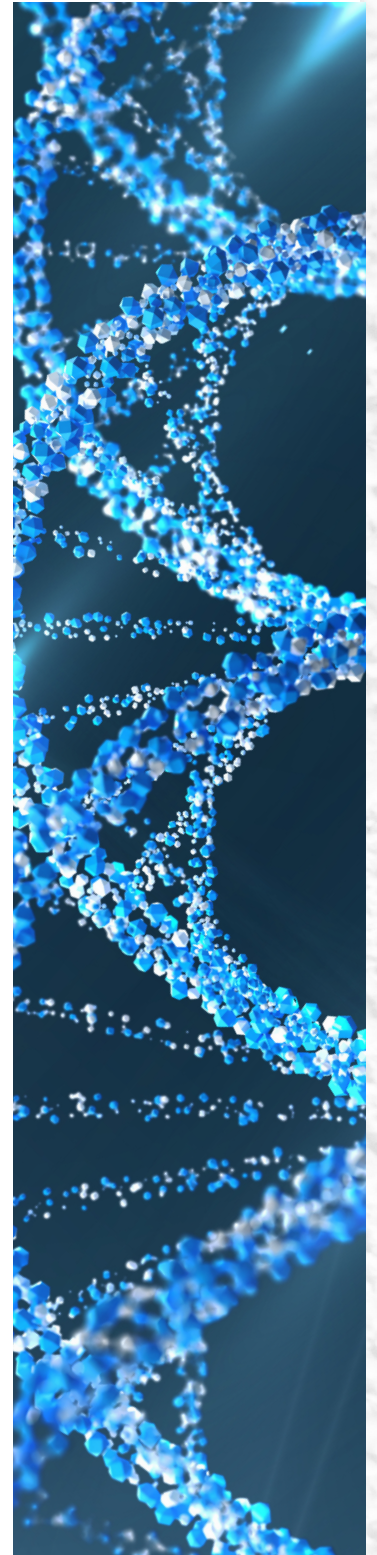
### **Understanding alignment tool [BLAST, Mega] for big data - Pairwise Alignment, Multiple Sequence Alignment**

- Overview of Sequence Alignment
- Types of Sequence Alignment: Pairwise & Multiple Sequence Alignment
- Introduction to MEGA (Molecular Evolutionary Genetics Analysis)
- Sequence Databases and Data Retrieval

## **MODULE 4:**

### **LINUX & Cloud Computing (AWS basics)**

- Linux overview and significance
- File and directory operations (create, copy, move, delete)
- Text file editing and creation
- Process management (introduction and termination)
- Basic networking and ownership overview
- Conclusion and further resources
- Basics of Cloud technology (AWS)
- Basics of Pipeline Engineering





## Program Structure

- Duration: 1 months

## Why Choose Our Course?

- **Expert Instructors:** Learn from industry professionals and leading researchers.
  - **Hands-On Learning:** Gain practical experience through real-world projects.
  - **Flexibility:** Study from the comfort of your own home with a flexible schedule.
  - **Community:** Join a network of like-minded learners and experts.
  - **Certificate:** Receive a valuable certificate upon course completion.
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## **Terms and Conditions**

- Maintaining Discipline during the Tenure.
  - It is mandatory to maintain 85% attendance for all students.
  - Students must maintain an average 'A2' grade throughout their training period.
  - Project completion is a must for research.
  - Publication Students must participate actively in the Project group
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NEED MORE INSIGHT & SUPPORT?

# CONTACT US!

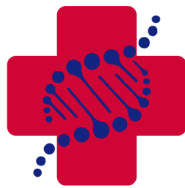
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*Thank you!*



**Dr.Omics Labs**  
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OUR CERTIFICATIONS & GRANTS

