

ONLINE CERTIFICATION COURSE

AI IN BIOTECHNOLOGY

Concepts, Tools & Applications

23-26 April 2026 | 6:00 -7:00 PM IST

About The Course

A 4-day online course exploring the integration of Artificial Intelligence (AI) in Biotechnology. Learn how AI is transforming drug discovery, vaccine design, and omics data analysis with hands-on exposure to tools like AlphaFold, KNIME, Cytoscape, and IEDB. The course also covers future trends such as synthetic biology and genome editing, along with real-world case studies.

Key Benefits

- Explore AI in drug discovery & vaccine design
- Understand genomics, proteomics & multi-omics data
- Hands-on exposure to industry tools & databases
- Gain insights into future biotech innovations
- Learn through real-world case studies

Who Should Join?

Students (UG & PG – Life Sciences, Biotech, etc.)
Research Scholars / PhD Aspirants
Faculty & Academicians
Professionals (Biotech, Healthcare, IT)
Anyone interested in AI in Biology (No prior AI experience required)



Course Features

- Certificate of Completion
- Live & Interactive Sessions
- Access to Session Recordings
- Lecture PPTs & Study Materials
- Learn from Expert Faculty & Researchers
- Hands-on Demonstration of Tools
- Doubt Clearing & Discussion Sessions

Course Fee

Indian Participants: ₹999

International Participants: \$55

Register Now



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Course Module

Day 1 – Introduction to Artificial Intelligence in Biotechnology

- Introduction to Artificial Intelligence (AI)
- Why AI is important in biotechnology
- Types of biological data: Genomics, Proteomics, Transcriptomics
- AI workflow in biological research
- Biological databases such as: NCBI, EMBL

Day 2 – AI in Drug Discovery and Vaccine Design

- AI in drug discovery pipeline
- Target identification
- AI in vaccine design
- Epitope prediction
- Reverse vaccinology

Tools

- IEDB Analysis Resource for epitope prediction
- AlphaFold for protein structure prediction

Outcome

- Participants understand AI applications in modern therapeutics

Day 3 – AI for Omics Data Analysis

- Multi-omics data (genomics, proteomics, metabolomics)
- AI in transcriptomics
- Data integration approaches
- Biological network analysis

Tools Demonstrated

- KNIME for workflow-based data analytics
- Cytoscape for biological network visualization

Outcome

- Participants learn how AI helps interpret complex biological datasets.

Day 4 – Future of AI in Biotechnology

- Deep learning in biotechnology
- AI in synthetic biology
- AI for protein engineering
- AI-guided genome editing
- Ethical considerations of AI in biology

Case Study

- AI-based research during the
- COVID-19 pandemic

Final Activity

- Short quiz / discussion
- Course feedback