

# Workshop on Integrating Artificial Intelligence in Life Sciences Teaching and Learning

18-22<sup>th</sup> May 2026

Online Mode

Registration Fee: Free

Registration Form Link:

[IUCTE Program Portal \(https://iucte.ac.in/program/\)](https://iucte.ac.in/program/)



ORGANISED BY

**Inter University Centre for Teacher Education**  
BHU, Varanasi, Uttar Pradesh

## Background and Rationale

The rapid advancement of Artificial Intelligence (AI) is transforming scientific research, healthcare, and biotechnology, thereby redefining the competencies expected from life science graduates. In higher education, particularly in life sciences, faculty members play a crucial role in translating these technological advancements into meaningful teaching–learning experiences. However, many educators face challenges in understanding AI concepts, identifying relevant tools, and integrating them effectively into curriculum design, pedagogy, and assessment.

In alignment with contemporary higher education trends, especially the shift towards blended and digitally enriched pedagogy, there is a growing need to capacitate life science faculty with AI literacy and pedagogical strategies. This online workshop is conceptualized to address this need by providing hands-on exposure, pedagogical frameworks, and discipline-specific applications of AI in life sciences education.

## Objectives of the Workshop

The workshop aims to:

- Develop a foundational understanding of Artificial Intelligence concepts relevant to life sciences.
- Familiarize faculty with AI-enabled tools for teaching, learning, and assessment.
- Enable participants to integrate AI-based approaches into core life sciences subjects.
- Promote innovative, student-centered, and inquiry-driven pedagogical practices.
- Encourage ethical, responsible, and inclusive use of AI in higher education.
- Support faculty in designing AI-integrated lesson plans and learning activities.

## Broad Themes and Day-wise Structure

### Day 1: Foundations of Artificial Intelligence in Life Sciences Education

- Introduction to AI, Machine Learning, and Data-driven approaches
- Relevance of AI in life sciences research and education
- Mapping AI competencies with higher education learning outcomes

### Day 2: AI Tools for Teaching Core Life Sciences Concepts

- AI-supported teaching of molecular biology, genetics, cell biology, and ecology
- Visualization, simulation, and virtual labs using AI
- Active learning and AI

### Day 3: AI for Student Engagement, Assessment, and Feedback

- Personalized learning and adaptive teaching using AI
- AI-assisted formative and summative assessment
- Designing higher-order thinking tasks with AI support

## Day 4: Curriculum Design and Pedagogical Innovation using AI

- Integrating AI within existing life sciences curricula
- Designing AI-enabled lesson plans and activities
- Case studies and best practices from higher education institutions

## Day 5: Ethics, Challenges, and Future Directions

- Ethical considerations, academic integrity, and data privacy
- Responsible and inclusive use of AI in education
- Group presentations, reflections, and action plans

## Expected Outcomes

At the end of the workshop, participants will be able to:

- Demonstrate AI literacy relevant to life sciences education
- Use AI tools to enhance teaching effectiveness and student engagement
- Design AI-integrated lesson plans and assessment strategies
- Critically evaluate ethical and pedagogical implications of AI
- Contribute to institutional innovation in life sciences pedagogy

## Pedagogical Approach

The workshop will adopt an interactive and blended approach including:

- Expert talks and demonstrations
- Hands-on sessions and guided practice
- Case studies and peer discussions
- Reflective exercises and collaborative tasks

## Conclusion

This five-day online workshop will serve as a capacity-building platform for life science faculty to meaningfully integrate Artificial Intelligence into teaching and learning practices. By bridging disciplinary knowledge with emerging educational technologies, the programme aims to strengthen pedagogical innovation, enhance student learning outcomes, and prepare higher education institutions for the future of life sciences education.

## Target Participants

- Faculty members teaching **Life Sciences** (Biology, Biotechnology, Microbiology, Biochemistry, Zoology, Botany, Environmental Science, allied disciplines)
- Faculty from **colleges and universities** offering undergraduate and postgraduate programmes
- Research scholars with teaching responsibilities

## Mode and Duration

- Mode: Online (18-22 May 2026)
- Duration: Five Days
- Time: 2:00 PM – 5:00 PM daily
- Fees: NA (Free)

## Important Dates

Registration Start Date	03 <sup>rd</sup> April 2026
Registration End Date	11 <sup>th</sup> May 2026

### CHIEF PATRON

**Prof. Prem Narayan Singh**

Director, IUCTE, Varanasi

### PATRON

**Prof. Asheesh Srivastava**

Dean, Academic & Research, IUCTE, Varanasi

### PROGRAM CONVENOR

**Dr. Kushagri Singh**

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## Contact Us

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