

AI-Infused Immersive Inquiry Pedagogy Workshop for Physical Science Educators

14-18 September, 2026

Online Mode



ORGANISED BY

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

ABOUT IUCTE

The Inter University Centre for Teacher Education (IUCTE) is an autonomous institution established by the University Grants Commission (UGC) under section 12 (CCC). Its core mission is to promote excellence in higher education through pedagogical and technological innovations, advisory services, policy development, global partnerships, and networking. IUCTE envisions cultivating quality educators who contribute to a sustainable ecosystem, thus reshaping higher education in India. IUCTE plays a pivotal role in enhancing the Quality of Teaching and Research, Technology Integration in Education, Advisory Services, National & Global Collaborations, and Influencing the Policy Changes to advance the field of education in general and Teacher Education in particular. Teacher education is a cornerstone of a progressive, knowledge-based society.

ABOUT THE PROGRAM

Physical science education in India's higher education institutions faces huge pressure amid the challenges for Viksit Bharat@2047 and Education 5.0. Traditional lectures often fail to ignite curiosity in complex topics of physics like quantum mechanics, thermodynamics, or electromagnetism, leaving students disconnected from real-world applications. Teachers are worried about overcrowded classrooms, outdated labs, different types of students, and the big difference between rote learning and what Industry 5.0 needs, where AI-driven analysis and immersive simulations are the norm. NEP 2020 calls for a change, but many teachers don't have the tools they need to encourage inquiry-based, hands-on learning that helps students think critically and solve problems (both for the course and real-world issues).

This workshop on “AI-Infused Immersive Inquiry Pedagogy Workshop for Physical Science Teachers” can be a game-changer. This hands-on workshop gives teachers the most up-to-date tools they need to turn boring classrooms into active inquiry hubs. Imagine teachers using virtual reality to show students how wave-particle duality works or AI-powered models to predict chemical reactions. This would combine evidence-based teaching with immersive technology to help students understand more deeply.

Targeted modules help students overcome challenges, and AI tools customise learning paths to meet different speeds. Virtual labs get around equipment shortages and let students safely explore high-risk phenomena like nuclear decay and many other challenging concepts. Interactive simulations promote the Five Cs, critical thinking, collaboration, creativity, communication, and computational thinking. Multilingual interfaces make abstract ideas easier to understand in India's different languages. Faculty can learn how to make inquiry-driven units, use open educational resources, and use data analytics to measure outcomes, which connects theory to job readiness.

Hosted for innovators at institutions like IUCTE, BHU, this isn't a mere workshop, it's a launchpad. Participants emerge ready to cultivate resilient, tech-fluent physical science graduates, powering national innovation and equity. Join to redefine teaching, one immersive query at a time.

PROGRAM OBJECTIVES

The "AI-Infused Immersive Inquiry Pedagogy Workshop for Physical Science Educators" aims to equip faculty with cutting-edge teaching strategies through targeted, actionable objectives such as:

1. To equip educators with AI-driven tools to design adaptive simulations for exploring physical sciences, different concepts, and phenomena.
2. To foster immersive inquiry methods using VR labs and blended formats to promote student-led discovery in physical sciences.
3. To learn how to use ethical AI in the classroom and reducing bias in NEP 2020-aligned classrooms.
4. To enhance hybrid lesson planning to bridge conceptual understanding with hands-on experimentation for improved learning outcomes.
5. To empower participants to evaluate and refine inquiry-based assessments using AI analytics for real-time feedback.

THEMES OF PROGRAM

The training program will cover the following engaging topics and modules

1. AI-Powered Simulation and Personalized Learning
2. Hybrid and Blended Curriculum Design
3. Ethical AI and Inclusive Pedagogy
4. Data-Driven Assessment and Real-Time Feedback
5. Experiential and Discovery-Based Learning through Maker-Centered Practices

EXPECTED OUTCOMES

The "AI-Infused Immersive Inquiry Pedagogy Workshop for Physical Science Educators" yields tangible, transformative results for participants. Faculty gain practical tools to revamp physical sciences teaching, aligning with NEP 2020 and Education 5.0 for lasting classroom impact.

1. Faculty will master AI tools to create personalized simulations, boosting student engagement in difficult topics of Physical Sciences.
2. Participants will gain confidence in deploying VR-driven inquiry labs, enabling seamless hybrid sessions that enhance conceptual grasp in mechanics and optics.
3. Educators adopt ethical AI frameworks, reducing pedagogical biases and aligning practices with NEP 2020 for inclusive, equitable science instruction.
4. Attendees will develop hybrid curricula prototypes, ready for immediate classroom use, for tracking inquiry-based learning progress.
5. Faculty will form a peer network for ongoing collaboration, sustaining long-term improvements in physical sciences teaching effectiveness.

Training Delivery Methods

The training will utilize a blended learning approach that combines the following: Lectures, Online Workshops & Hands-on Training, e-Learning, Case-Studies, Peer Learning, Experiential Learning, Feedback and Assessment, etc.

Evaluation & Monitoring

Evaluation and monitoring will include the following methods: Pre- and post-program assessments, Feedback Surveys, Feedback from participants about organized programs, Post-program Follow-up Sessions, etc.

Participant Selection and Profile

The program is designed for physical science professionals with a vested interest in advancing teacher education. Selection will be based on demonstrated expertise, professional experience, and a clear alignment of interest with the program theme.

Eligible applicants will be drawn from the following cohorts:

1. **Academicians** (Assistant Professors, Associate Professors, Professors) from HEIs.
2. **Administrators** and academic leaders from HEIs.
3. **Distinguished professionals** from industry and civil society with relevant expertise.

The final composition of participants for each module will ensure a blend of perspectives, fostering academic richness, collaborative content development under the guidance of the assigned Resource Person. Academicians in Physical Science teaching and Administrators from Higher Education Institutions, as well as Well-Identified Persons from Industries & Society, could join this program.

Duration and Schedule

The training program will be delivered over five days in an online format.

REGISTRATION FEES & OTHER INFORMATION

- Final acceptance for participation will be based on the Pre-program survey.
- Pre-Registration Form Link: IUCTE Program Portal (<https://iucte.ac.in/program/>)
- Registration Fee: **Free**

Important Dates

Registration Start Date	Registration End Date
28 July 2026	05 September 2026

Duration of Program: 5 days

Targeted Audience: Higher Education Faculty members of Physical Sciences

Number of seats: 100

Mode of Program: Online

Registration Link: <https://iucte.ac.in/program/>

ORGANIZING COMMITTEE

Patron

Prof. Prem Narayan Singh

Director, IUCTE, Varanasi

Program Director

Prof. Asheesh Srivastava

Dean, Academic & Research, IUCTE, Varanasi

Program Coordinator

Dr. Gyanendra Singh

Assistant Professor, IUCTE, Varanasi

Note: 80 percent attendance in sessions is compulsory for eligibility to receive the certificate, along with the evaluation methods.

CONTACT US

Coordinator: Dr. Gyanendra Singh, Assistant Professor, IUCTE, Varanasi; Email: gyanendra@iucte.ac.in, Mob.: 9911576845

Technical Assistance: Vikas Janu, Webmaster, IUCTE, Mobile No.: 9785575456

Address: Inter University Centre for Teacher Education (IUCTE), B.H.U.

IUCTE Campus, Sundar Bagiya, Nariya-B.L.W. Road, Varanasi-221005

Contact: (0542)-2368823, E-mail: program@iucte.ac.in

