One Week Faculty Development Programme (Offline)

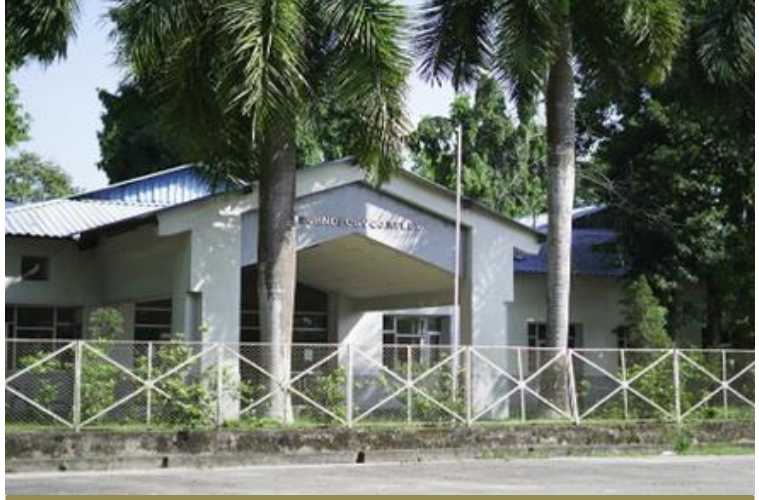
on

Frontiers in Quantum Technologies

31st August – 04th September, 2026

Organized by
E&ICT Academy IIT Guwahati
in association with
Global Academy of Technology, Bengaluru

Venue:
Global Academy of Technology, Bengaluru,
Aditya Layout, Rajarajeshwari Nagar,
Bengaluru, Karnataka 560098



About E&ICT Academy

Electronics and ICT Academy is an initiative of the Ministry of Electronics and Information Technology (MeitY), Govt. of India for conducting various Faculty / Research Scholar Development Programme. Academy has planned short term training programmes on fundamental and advanced topics in IT, Electronics & Communication, Product Design, Manufacturing with hands-on training and project work using the latest software tools and systems. In addition, the Academy will conduct specialized / customized training programmes and research promotion workshops for corporate sector & educational institutions.

Who Can Attend?

The Programme is open to Faculty Members and PhD Research Scholars from universities and colleges. Faculty members are requested to submit an NOC from their respective institute before attending the session.

For details of the Programme and course contents please log in to Electronics and ICT Academy website: https://eict.iitg.ac.in

Scan to Register

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Organizing Committee

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About Global Academy of Technology

Global Academy of Technology (GAT), established in 2001 under the National Education Foundation Trust, is a premier Autonomous Engineering Institution affiliated with Visvesvaraya Technological University (VTU), approved by AICTE, and accredited with an **'A' Grade by NAAC**. The institution offers a wide range of undergraduate and postgraduate programs in Engineering, Technology, and Management, supported by modern laboratories, advanced research facilities, industry collaborations, and a vibrant learning environment. With a strong focus on academic excellence, innovation, entrepreneurship, and holistic student development, GAT has emerged as a center of quality education, nurturing competent professionals and future leaders capable of addressing global challenges through technology and research.

Department overview

The Computer Science & Engineering (Artificial Intelligence & Machine Learning) [CSE(AIML)] and Artificial Intelligence & Machine Learning (AIML) programs at Global Academy of Technology (GAT) prepare students to become future-ready innovators and technology leaders. The programs combine strong foundations in Computer Science with emerging technologies such as Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision, Generative AI, Quantum Computing, Blockchain, and Intelligent Robotics. Through a blend of academic rigor, hands-on learning, industry collaborations, internships, and research opportunities, students develop the skills to solve complex real-world problems. Aligned with NEP 2020 and Outcome-Based Education principles, the programs foster innovation, critical thinking, ethical values, and leadership, empowering graduates to contribute meaningfully to industries and society while shaping a smarter, sustainable, and digitally connected future.

Course Objective

- **Provide Core Theoretical Foundations:** Introduce participants to fundamental quantum mechanics concepts, mathematical linear algebra prerequisites, and basic quantum information science.
- **Enable Platform Familiarity:** Familiarize participants with the Qniverse quantum computing platform, including its Circuit Builder, compute resources, and visualization/simulation tools.
- **Demonstrate Core & Advanced Quantum Algorithms:** Impart theoretical understanding and practical execution skills for foundational (Deutsch, Deutsch-Jozsa, Bernstein-Vazirani, Simon's) and advanced (QFT, QPE, Grover's, Teleportation, Superdense Coding) quantum algorithms.
- **Explore Practical Applications:** Introduce emerging domains like Quantum Machine Learning (QML) and hybrid quantum algorithms, including applications in Quantum SVM and Portfolio Optimization.

Course Outcome

- **CO1 (Foundations):** Explain the core postulates of quantum mechanics, linear algebra concepts, and represent single/multi-qubit systems on the Bloch sphere and quantum circuit models.
- **CO2 (Hands-on Platform Competency):** Construct, simulate, and analyze quantum circuits using single/multi-qubit gates, state visualization tools, and noise models on the Qniverse platform.
- **CO3 (Basic Algorithms):** Implement and evaluate foundational quantum algorithms (Deutsch, Deutsch-Jozsa, Bernstein-Vazirani, and Simon's) using the Qniverse environment.
- **CO4 (Advanced Algorithms & Protocols):** Apply advanced quantum computing protocols—including Quantum Fourier Transform, Quantum Phase Estimation, Grover's Search, Quantum Teleportation, and Superdense Coding—to solve complex problems.
- **CO5 (Quantum Applications & QML):** Analyze and execute hybrid quantum algorithms and Quantum Machine Learning techniques, such as QSVM and Quantum Portfolio Optimization.

Pre-Requisites

- The participants should possess any graduation degree from the recognised university and basic knowledge with computers..

For Online Transfer

Account Name: IIT Guwahati R and D, E and ICT Academy
Account No.: 36071160089
IFSC Code: SBIN0014262
Bank Name: State Bank of India

Registration Fee

Rs. 1180/- (Inclusive of GST)
Mode Of Payment: Online Only (NEFT/RTGS/IMPS)

Registration Link

https://forms.gle/smmpLJeo5UWLU7Cf7

Please Note

1. Registration fees includes E&ICT Academy kit, stationary, 5 days lunch and tea, evaluation, participation certificate and grade certificate.
2. Registration fees is refundable if the registration cancellation request is submitted before the last date of registration.
3. Participants have to submit UTR No. as the proof of payment while registering for the Faculty Development Programme.

Course Date

31st August – 04th September 2026

Last Date of Registration:

26/08/2026
(Online Registration Link will be open from: 04/08/2026)

Per Day Timing:

09:00 am to 05:00 pm

Contact Hours for the Course:

40Hrs (Theory, Activities, Case Studies & Evaluation)