



<http://www.mnit.ac.in/eict>

## QT-06: Quantum Communication

Aug 18 – Sep 10, 2025

Twenty Days (Mon to Sat)

Time: 2 – 4 PM (Daily 2 Hours)



Innovation Centre for Education

### Chairman, EICT Academy & Director MNIT Jaipur

Prof. Narayana Prasad Padhy

### Chief Investigator, EICT Academy

Prof. Vineet Sahula, ECE

### Coordinator, EICT Academy

Dr. Satyasai Jagannath Nanda, ECE

### Co- Chief Investigators, EICT Academy

Prof. Lava Bhargava, ECE

Prof. Pilli Emmanuel Shubhakar, CSE

Dr. Ravi Kumar Maddila, ECE

### Objective (Electronics & ICT Academy-Phase II)

- 1) To conduct specialized FDPs for faculty/mentor training in line with the vision of MeitY by promoting emerging areas of technology and other high-priority areas that are pillars of both the "Make in India" and the "Digital India" programs.
- 2) To promote synergy and collaboration with industry, academia, universities and other institutions of learning, especially in emerging technology areas.
- 3) To support the National Policy on Electronics 2019 (NPE 2019) which envisions positioning India as a global hub for ESDM sector, including MeitY Schemes/policies such as Programme for Semiconductors and Display Fab Ecosystem; India AI; National Programme on AI, Production Linked Incentive Scheme for IT Hardware & Large-Scale Electronics Manufacturing; EMC; SPECS; Chips to System (C2S); etc.
- 4) To promote standardization of FDPs through Joint Faculty Development Programmes.
- 5) To support the vision of the National Education Policy (NEP 2020), which mandates that Indian educators go through at least 50 hours in professional development programmes per year.
- 6) To design, develop & deliver specialised FDPs on emerging technologies/ niche areas/ specialised modules for specific research areas for Faculty in Higher Education Institutions (HEI), besides FDPs on multi-disciplinary areas connected with ICT tools and technologies and other digital hybrid domains, covering a wide spectrum of engineering and non-engineering colleges, polytechnics, ITIs, and PGT educators.

An intensive **20 Day - 40 Hours** Training Programme in Online Mode is being organized for faculty and doctoral students of engineering, science and technological institutions. It is also open to working professionals from industry / organizations. The programme will be run for **only two hours** in the afternoon from **14:00 to 16:00 hours Daily (Mon to Sat)**.

**QT-06: Quantum Communication** is the **sixth** in a series of Faculty Development programmes aligning to the courses in the recently approved **Minor Course Curriculum** on **Quantum Computing** by AICTE, DST and IBM.

<https://facilities.aicte-india.org/Minor Quantum Technologies.pdf>

### Experts/Speakers-

- 1) **Prof. Arnab Kumar Ray**, Dhirubhai Ambani University
- 2) **Prof. Yash Vasavada**, Dhirubhai Ambani University
- 3) **Dr Harish Sahu**, Scientist -F, DRDO
- 4) **Prof. Sandeep Kumar Singh**, Center for Photonics and Quantum Communication, IIT Roorkee

### Modules:

**Foundation of Optical Physics:** Polarization Optics, Light-Matter Interaction, Quarter-Wave and Half-Wave Plates, Polarizing Beam Splitters.

**Classical Communication Theory:** Detectors, Quadrature Amplitude Modulation, Basics of Digital Communication, Information Theory, Source Coding

**Quantum Communication:** Quantum Information, Qubits, Superposition, Measurement, Quantum Entanglement and Bell States, Quantum Teleportation: Theory and Protocol, Quantum Dense Coding: Concept and Implementation.

**Quantum Networks:** Quantum Internet, Network Topologies and Protocols, Free-Space Quantum Communication, Satellite-Based Quantum Communication, Fiber-Optic Quantum Communication, Overview of Quantum Hardware: Sources, Detectors, and Interfacing, Review, Open Problems, and Future Directions in Quantum Communication.

Mode of programme	Academia (faculty/Students): India/SAARC/Africa	Others: India/SAARC/Africa	Rest of the world
Online	Rs. 500/-	Rs. 1500/-	US \$ 60/-
Classroom	Rs. 2000/-	Rs. 4000/-	--

### Principal Coordinator

**Dr. Rajendra  
Mitharwal**  
8239633089 (M)

### Joint-Principal Coordinator

**Dr. Kavita Lalwani**  
9549650180 (M)

[fdp.academy@mnit.ac.in](mailto:fdp.academy@mnit.ac.in)

### Registration:

Registration is open to faculty, working professionals, industry persons, doctoral, postgraduate and graduate students. Participants will be admitted on first-come first-served basis.

Register online at-(<http://online.mnit.ac.in/eict/>)

### Certification Fee:

- A) Fee once paid will not be refunded back.
  - B) The fee covers online participation in the programme, tutorial notes and examination, certification charges etc.
  - C) The registration amount may be paid through online mode- NEFT/UPI/Cards/SWIFT, provided at the registration portal
  - D) Detailed schedule will be shared after receiving registration form.
- For any other query, email us at [fdp.academy@mnit.ac.in](mailto:fdp.academy@mnit.ac.in)

