

SCHEDULE OF THE SESSIONS IN QT-06 (QUANTUM COMMUNICATION)

AUGUST 18, 2025 to SEPTEMBER 11, 2025 DAILY 2:00 - 4:00 PM

S. No	Date	Hours	Time	Topic	Subject Matter Expert
1	August 18, 2025	0	2:00 - 2:30 PM	Inaugural Session - Introduction to Course and Subject Matter Experts	Dr. Rajendra Mitharwal
2	August 18, 2025	1	2:30 - 3:30 PM	Introduction to Polarization and Light-Matter Interaction	Prof. Arnab Kumar Ray
3	August 18, 2025	1	3:30 - 4:30 PM	Polarization Optics: Theory and Applications	Prof. Arnab Kumar Ray
4	August 19, 2025	1	2:00 - 3:00 PM	Quarter-Wave and Half-Wave Plates	Prof. Arnab Kumar Ray
5	August 19, 2025	1	3:00 - 4:00 PM	Polarizing Beam Splitters and their Applications	Prof. Arnab Kumar Ray
6	August 20, 2025	1	2:00 - 3:00 PM	Photomultiplier Tubes and Avalanche Photodiodes	Prof. Arnab Kumar Ray
7	August 20, 2025	1	3:00 - 4:00 PM	QAM, Introduction to Detectors: Types and Characteristics	Prof. Yash Vasavada
8	August 21, 2025	1	2:00 - 3:00 PM	Linear Detectors and Quadrature Amplitude Modulation	Prof. Yash Vasavada
9	August 21, 2025	1	3:00 - 4:00 PM	Square-Law Detectors and Intensity Measurements	Prof. Yash Vasavada
10	August 22, 2025	1	2:00 - 3:00 PM	Basics of Digital Communication, Information Theory	Prof. Yash Vasavada
11	August 22, 2025	1	3:00 - 4:00 PM	Information Entropy	Prof. Yash Vasavada
12	August 23, 2025	1	2:00 - 3:00 PM	Noiseless channel encoding	Prof. Yash Vasavada
13	August 23, 2025	1	3:00 - 4:00 PM	Noisy channel encoding	Prof. Yash Vasavada
14	August 25, 2025	1	2:00 - 3:00 PM	Shannon Quantum Information Theory	Dr Mostafizur Rahaman
15	August 25, 2025	1	3:00 - 4:00 PM	Shannon Quantum Information Theory	Dr Mostafizur Rahaman
16	August 26, 2025	1	2:00 - 3:00 PM	Noisy Quantum Channels	Dr Mostafizur Rahaman
17	August 26, 2025	1	3:00 - 4:00 PM	The No-Cloning Theorem and its Implications	Dr Mostafizur Rahaman
18	August 27, 2025	0	GANESH CHATHURTHI		
19	August 28, 2025	2	2:00 - 4:00 PM	Quantum Memories: Requirements and Implementations	Dr. Aswath Babu
20	August 28, 2025	1	4:00 - 5:00 PM	Quantum Repeaters and Entanglement Swapping	Dr. Aswath Babu
21	August 29, 2025	1	2:00 - 3:00 PM	Introduction to QKD: Motivation and Challenges	Dr. Anindita Banerjee
22	August 29, 2025	1	3:00 - 4:00 PM	BB84 Protocol: Theory and Security	Dr. Anindita Banerjee
23	August 30, 2025	1	2:00 - 3:00 PM	E91 Protocol: Entanglement-Based QKD	Dr. Anindita Banerjee
24	August 30, 2025	1	3:00 - 4:00 PM	BBM92 Protocol, B92 Protocol: Simplified QKD	Dr. Anindita Banerjee
25	September 1, 2025	1	2:00 - 3:00 PM	Coherent One-Way (COW) Protocol	Dr. Nivedita Dey
26	September 1, 2025	1	3:00 - 4:00 PM	Differential Phase Shift (DPS) QKD	Dr. Nivedita Dey
27	September 2, 2025	1	2:00 - 3:00 PM	Post Quantum Cryptography	Ms. Janani A
28	September 2, 2025	1	3:00 - 4:00 PM	Entanglement for Quantum Communication Protocols	Ms. Janani A
29	September 3, 2025	1	2:00 - 3:00 PM	Quantum Entanglement and Bell Theorems	Dr Harish Sahu
29	September 3, 2025	1	3:00 - 4:00 PM	Bell Measurements and CHSH Inequality Tests	Dr Harish Sahu
30	September 4, 2025	1	2:00 - 3:00 PM	Quantum Teleportation: Theory and Protocol	Dr Harish Sahu
31	September 4, 2025	1	3:00 - 4:00 PM	Quantum Dense Coding: Concept and Implementation	Dr Harish Sahu
32	September 5, 2025	0	MILAD UN NABI		
33	September 6, 2025	1	2:00 - 3:00 PM	Quantum Internet: Architecture and Challenges	Prof. Sandeep Kumar Singh
34	September 6, 2025	1	3:00 - 4:00 PM	Quantum Network: Topologies C Protocols	Prof. Sandeep Kumar Singh
35	September 8, 2025	1	2:00 - 3:00 PM	Free-Space Quantum Communication	Prof. R. P. Singh
36	September 8, 2025	1	3:00 - 4:00 PM	Free-Space Quantum Communication	Prof. R. P. Singh
37	September 9, 2025	1	2:00 - 3:00 PM	Satellite-Based Quantum Communication	Mr. Shaik Muhammad Abdillan Bin Hanifah Marican
38	September 9, 2025	1	3:00 - 4:00 PM	Satellite-Based Quantum Communication	Mr. Shaik Muhammad Abdillan Bin Hanifah Marican
39	September 10, 2025	1	2:00 - 3:00 PM	Fiber-Optic Quantum Communication	Prof. Bhaskar Kanseri
40	September 10, 2025	1	3:00 - 4:00 PM	Fiber-Optic Quantum Communication	Prof. Bhaskar Kanseri
41	September 11, 2025	1	2:00 - 3:00 PM	Application of Quantum Communication in India	Prof Anil Prabhakar
42	September 11, 2025	0	3:00 - 4:00 PM	Panel Discussion	Resource Persons
43	September 11, 2025	0	4:00 - 4:30 PM	Valedictory Session	Dr. Rajendra Mitharwal
	20 days	40	40 Hours	40 Lectures	12 Subject Matter Experts