

SCHEDULE OF THE QT-03 (BASIC QUANTUM PROGRAMMING) AND SOME TOPICS OF QT-04 (QUANTUM TECHNOLOGIES LAB)

MAY 16 to JUNE 6, 2025 - DAILY 2:00 - 4:00 PM

S. No	Date	Hours	Time	Topic	Subject Matter Expert
1	May 16, 2025	1	2:00 - 3:00 PM	Inaugural Session - Intro to Course and Subject Matter Experts	Dr. Pilli Emmanuel Shubhakar
2	May 16, 2025	1	3:00 - 4:00 PM	Basics of Programming, Data Structures	Dr. Jayakumar Vaithiyashankar
3	May 17, 2025	2	2:00 - 4:00 PM	Object-Oriented Programming, Data storage, Memory allocation	Dr. Jayakumar Vaithiyashankar
4	May 19, 2025	2	2:00 - 4:00 PM	Scientific plotting, Simple algorithms and Benchmarking run time	Dr. Jayakumar Vaithiyashankar
5	May 20, 2025	2	2:00 - 4:00 PM	Sorting and Searching, Algorithms like GCD, Prime Factorisation	Dr. Jayakumar Vaithiyashankar
6	May 21, 2025	2	2:00 - 4:00 PM	Numerical Integration and Differential equations	Dr. Aswath Babu
7	May 22, 2025	2	2:00 - 4:00 PM	Linear 2nd Order ODEs, Boundary value problems	Dr. Aswath Babu
8	May 22, 2025	0	4:00 - 5:00 PM	Quiz - 1	Dr. Pilli Emmanuel Shubhakar
9	May 23, 2025	2	2:00 - 4:00 PM	Numerical Techniques in Linear Algebra, Matrix Inverse, Eigenvalue	Dr. Mostafizur Rahaman
10	May 24, 2025	3	2:00 - 5:00 PM	Diagonalisation, Singular value decomposition, Programs	Dr. Mostafizur Rahaman
11	May 26, 2025	2	2:00 - 4:00 PM	Quantum Simulators (QT-04) - Qiskit, PennyLane, Qsim, Qniverse	Dr. Jayakumar Vaithiyashankar
12	May 27, 2025	2	2:00 - 4:00 PM	Quantum Simulation using Java, String package	Dr. Sathyaprakash Palaniyappan
13	May 28, 2025	2	2:00 - 4:00 PM	Implementing Algorithms on cloud-based Quantum Computers (QT-04)	Ms. Janani A
14	May 29, 2025	2	2:00 - 4:00 PM	Running Algorithms on cloud-based Quantum Processors (QT-04)	Ms. Janani A
15	May 22, 2025	0	4:00 - 5:00 PM	Quiz - 2	Dr. Pilli Emmanuel Shubhakar
16	May 30, 2025	2	2:00 - 4:00 PM	Numerical Techniques in Probability and Statistics	Dr. Mostafizur Rahaman
17	May 31, 2025	3	2:00 - 5:00 PM	Least Squares fitting, Error Analysis, Hypothesis Testing, Programs	Dr. Mostafizur Rahaman
18	June 2, 2025	2	2:00 - 4:00 PM	Integration of HPC with Quantum Computer (CUDA-Q and Nvidia)	Mr. A. Ananda Raman
19	June 3, 2025	1	2:00 - 3:00 PM	Fire Opal and Qiskit	Dr. Pathy Iyer
20	June 3, 2025	1	3:00 - 4:00 PM	Quiz - 3	Dr. Pilli Emmanuel Shubhakar
21	June 4, 2025	2	2:00 - 4:00 PM	Computer Vision using Quantum Machine Learning and Deep Learning	Dr. Santosh Vipparthi
22	June 5, 2025	2	2:00 - 4:00 PM	Optics - Interferometry, Diffraction, Microscopy Polarization (QT-04)	Dr. Anindita Banerjee
23	June 6, 2025	2	2:00 - 4:00 PM	Industry Perspective and Challenges	Dr. Anindita Banerjee
24	June 6, 2025	0	4:00 - 4:30 PM	Valedictory Session	Dr. Pilli Emmanuel Shubhakar
Total	20 days	40	40 Hours	20 Sessions	9 Faculty