QM2C | Physics Insights: From Quantum Mechanics to Computation							
29th June to 9th July 2026, CV 402, SRM University AP							
Program Schedule							
Week	Day	Date	Day of the week	Time	Course title	Topics	Instructor
1	1	29/6/2026	Monday	8:45 - 9:20	Introduction to Quantum Mechanics	Registration	Prof. Mukul Kabir
				9:30 - 10:15		Inaugural Session	
				10.15-10.20		Group Photo	
				10:20 - 10:55		Tea Break	
				11:00 - 12:30		Wave function and probability interpretation + Schrödinger equation (time-dependent & independent)	
				12:05 - 13:55		Lunch	
				14:00 - 15:30		Model systems: particle in a box, harmonic oscillator	
				15:35 - 15:55		Tea Break	
				16:00 - 17:00		Talk by Prof. Somnath Bhattyacharya on Quantum Computation at SRM University-AP	
	2	30/6/2026	Tuesday	9:30 - 11:00	Introduction to Linear Algebra	Linear vector space + basis transformation + vectors and matrices	Prof. Mukul Kabir
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Operators and matrices + Eigenvalues and eigenvectors + Adjoints and Hermitian operators + Pauli matrices	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Hilbert space of quantum states and Bra-ket notation + Inner product and norms	
				16:05 - 16:25		Tea Break	
				16:30 - 17:15		Discussion / Tutorial	
	3	1/7/2026	Wednesday	9:30 - 11:00	Linear Algebra and Quantum States	Mathematical postulates of quantum mechanics + Superposition principle + No-cloning theorem	Prof. Arijit Bhattacharyay
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Qubits and Bloch sphere - Pure and mixed states	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Introduction to Quantum measurements - Projective, POVM	
				16:05 - 16:25		Tea Break	
				16:30 - 17:15		Eigenstates and measurement outcomes, Stern-Gerlach experiment	
	4	2/7/2026	Thursday	9:30 - 11:00	Composite Systems and Entanglement	Composite systems and partial trace + Schmidt decomposition + 2-qubit entanglement	Prof. Arijit Bhattacharyay
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Bell measurement + Bell nonlocality + Practical tests with polarized lights	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Tutorial by Dr. Nilakantha Meher	
				16:05 - 16:25		Tea Break	
	5	3/7/2026	Friday	9:30 - 11:00	Quantum computing and circuit model	Introduction to Quantum Computing	Dr. Shashank Gupta
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Circuit-Based Quantum Computing	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Universal and Fault-Tolerant Quantum Computing	
				16:05 - 16:25		Tea Break	
				16:30 - 17:30		Talk by Dr. Subhash Kalidindi - TBD	
	6	4/7/2026	Saturday	9:30 - 11:00	Quantum algorithms	Introduction to Quantum Algorithms	Dr. Shashank Gupta
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		What is Quantum in Grover's and Shor's Algorithms?	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Tutorial	
				16:05 - 16:25		Tea Break	

				16:30 - 17:30		Talk by Dr. Haripriya S. - TBD	
Break on Sunday							
2	7	6/7/2026	Monday	9:30 - 11:00	Quantum Information Theory	Lecture 1	Prof. Manik Banik
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Lecture 2	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Lecture 3	
				16:05 - 16:25		Tea Break	
				16:30 - 17:15		Discussion	
	8	7/7/2026	Tuesday	9:30 - 11:00	Quantum information theory + Popular lecture	Lecture 4	Prof. Manik Banik
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Lecture 5	
				13:05 - 14:25		Lunch	
						Break	
				16:00 - 17:00		Public Lecture: From Bits to Qubits Communication, Physics, and Reality	
				17:15 - 17:30		Group Photo	
				19:30 - 21:30	Special Dinner		
	9	8/7/2026	Wednesday	9:30 - 11:00	Variational quantum algorithm + Qiskit	Introduction to Qiskit and and with primitives V2	Dr. Ritajit Majumdar
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Hybrid quantum-classical variational algorithm	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Running variational algorithm with Qiskit	
				16:05 - 16:25		Tea Break	
				16:30 - 17:15		Discussion / Tutorial	
	10	9/7/2026	Thursday	9:30 - 11:00	Quantum error correction	Introduction to noise in quantum systems	Dr. Ritajit Majumdar
				11:05 - 11:25		Tea Break	
				11:30 - 13:00		Introduction to error mitigation	
				13:05 - 14:25		Lunch	
				14:30 - 16:00		Sample based diagonalization algorithm	
				16:05 - 16:25		Tea Break	
16:30 - 17:15						Thanksgiving and closure	