

CS621/CSL611

Quantum Computing For Computer Scientists

Course Intro

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IIT Bhilai



Logistics

Canvas

Course Format (LTP) : 2 – 0 – 2

Lecture	L–101	Monday 9:30 AM
Lecture	L–101	Tuesday 8:30 AM
Practical	ED1–320	Thursday 8:30 – 10:30 AM

Why are you here?

Whats with the course title Quantum Computing For Computer Scientists?

The Features of the Quantum World

- From Real Numbers to Complex Numbers
- From Single States to Superpositions of States
- From Locality to Nonlocality
- From Deterministic Laws to Probabilistic Laws
- From Certainty to Uncertainty

Implications of the Quantum World on Computer Science

- Architecture
- Algorithms
- Programming Languages
- Theoretical Computer Science
- Cryptography
- Information Theory
- Hardware