



Module PMRF-ISSS024/II/2025

# Basics of Quantum Computing

## Name of the PMRF student

Nikhil Kodali

## Details of the content of the module

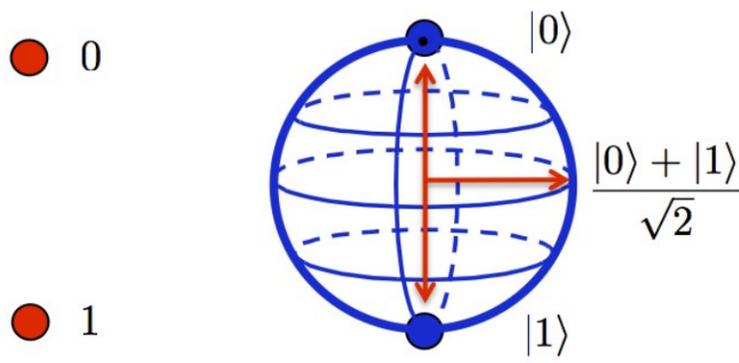
## Required background of the students taught

Students from any discipline are welcome. Understanding of Linear algebra and vector spaces would be helpful. No prior knowledge of quantum mechanics needed.

Quantum computing holds tremendous promise for reshaping various sectors like finance, healthcare, AI, and automotive in the coming years. This program offers a foundational overview of quantum computing, delving into the fundamental concepts that blend quantum mechanics, linear algebra, and computing.

The following topics will be covered:

- Classical vs Quantum computing
- Mathematical Foundations of Quantum Computing
- Postulates of Quantum mechanics
- Qubits and Qubit gates
- Entanglement
- Quantum Algorithms



**Classical Bit**

**Qubit**

## Schedule of the module

Start Date : 20 March, 2025 (Tentative)

End Date : 13 April, 2025 (Tentative)

Total number of sessions: 12 (Tentative)

Lectures: Thu-Sat 6:30 PM to 8:30 PM

Meeting link : Will be shared later

[Link](#)

Contact email ID: [iss.forum@gmail.com](mailto:iss.forum@gmail.com)

Registration link: <https://forms.gle/DqWMfDvkckxSps7C7>