

St Joseph's Degree College

Sunkesula Road, Kurnool-518004 A.P.

(Affiliated to Rayalaseema University, Kurnool)

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2026-2027

Faculty Development Programme
on
“Basic Concepts on Quantum Computing”

by

Mrs.N.Rajini Kiranmai

Mr.D.Mahaboob Basha

Mr.P.Harikrishna Reddy

Mr.A.Mallikarjuna

Assistant Professors,
Computer Science Department
St. Joseph's Degree College, Knl.

Academic Year

2026-2027

Faculty Attended:

20 Faculty members
of

Computer Science Department
St. Joseph's Degree College, Knl.

FDP-Broucher



St. Joseph's DEGREE COLLEGE

KURNOOL
(Affiliated to Rayalaseema University, Kurnool)
Department of Computer Science
Organizes

FACULTY DEVELOPMENT PROGRAM (FDP)
ON
**QUANTUM
COMPUTING**
+ Exploring the Future of Computing +



DURATION
4 Days
(10 Hours)

VENUE
Building-II,
Lab-II

DATES
22nd to 25th
June, 2026

OBJECTIVES

- ✓ To introduce the fundamentals of quantum computing.
- ✓ To provide hands-on experience using Qiskit.
- ✓ To understand quantum algorithms and their applications.
- ✓ To explore quantum communication and cryptography.
- ✓ To enhance research and innovation in quantum technologies.

WHO CAN PARTICIPATE?

- Faculty Members
- Research Scholars
- IIG Students



PROGRAM SCHEDULE

DAY-I
22-06-2026



Session-I 3:00 – 4:30 PM

- Foundations of Quantum Computing
- Mathematical Foundations
- Quantum Mechanics for Computing

Session-II 4:40 – 5:00 PM Quiz – I

DAY-II
23-06-2026



Session-I 3:00 – 4:00 PM

- Qubits and Quantum Gates
- Quantum Gates

Session-II 4:20 – 5:00 PM

Hands-on Session on
Quantum Gates in Qiskit

DAY-III
24-06-2026



Session-I 3:00 – 4:00 PM

- Quantum Algorithms
- Introduction to Quantum Algorithms
- Shor's Algorithm
- Grover's Algorithm
- Applications and Future Trends

Session-II 4:20 – 5:00 PM

Hands-on Session on
Quantum Algorithms

DAY-IV
25-06-2026



Session-I 3:00 – 4:20 PM

- Quantum Communication
- Quantum Cryptography
- Quantum Teleportation

Session-II 4:30 – 5:00 PM

Closing Session &
Feedback Session



RESOURCE PERSONS



Mr. D. Mahaboob Basha
Assistant Professor
Department of Computer Science & Applications,
St. Joseph's Degree College, Kurnool

- 13+ Years of Teaching Experience
- UGC-NET Qualified, Pursuing Ph.D.
- Research Interests: Machine Learning & Deep Learning



Mrs. N. Rajini Kiranmai
Assistant Professor
Department of Computer Science & Applications,
St. Joseph's Degree College, Kurnool

- 26+ Years of Teaching Experience
- MCA, M.Tech, M.Phil
- Expertise in Computer Science Education



Mr. P. Harikrishna Reddy
Assistant Professor
Department of Computer Science & Applications,
St. Joseph's Degree College, Kurnool

- 12 Years of Teaching Experience
- UGC-NET Qualified (June 2024 – 98.48 Percentile)
- Research Interests: Data Science & ML



Mr. A. Mallikarjuna
Assistant Professor
Department of Computer Science & Applications,
St. Joseph's Degree College, Kurnool

- 18+ Years of Teaching Experience
- Certified in Quantum Technologies (QT-02, QT-03 & QT-05)
- M.Tech, MCA | Research in Quantum & Computing



Co-ordinator
S. Latha Rani
HOD of Computer Science
St. Joseph's Degree College
Kurnool, Andhra Pradesh



LEARNING OUTCOMES

- 1 Understand the fundamental principles of quantum computing.
- 2 Explain qubits, superposition, entanglement, and quantum gates.
- 3 Develop simple quantum circuits using Qiskit.
- 4 Understand Shor's and Grover's quantum algorithms.
- 5 Explore applications in cryptography, optimization & communication.



Certificates will be provided to all the participants

Gist of the Faculty Development Programme (FDP):

The Department of Computer Science, St. Joseph's Degree College, Kurnool, organized a four-day Faculty Development Programme (FDP) on "Basic Concepts on Quantum Computing" during the academic year 2026–2027.

The programme was conducted to familiarize faculty members with the fundamentals of quantum computing, including mathematical foundations, qubits, quantum gates, quantum algorithms, quantum communication, and hands-on sessions using Qiskit.

The FDP enhanced participants understanding of emerging quantum technologies and their applications in computing, cryptography, optimization, and future research. The programme also included quizzes, interactive sessions, feedback, and certificate distribution, making it an effective platform for professional development.

Objectives of the Faculty Development Programme (FDP) on "Basic Concepts on Quantum Computing"

1. To introduce faculty members to the fundamental concepts and principles of quantum computing.
2. To provide an understanding of the mathematical foundations and quantum mechanics relevant to quantum computing.
3. To provide practical exposure to designing and implementing basic quantum circuits using Qiskit through hands-on sessions.
4. To introduce quantum algorithms, including Shor's and Grover's algorithms, and their real-world applications.
5. To create awareness of emerging areas such as quantum cryptography, quantum communication, and quantum teleportation and encourage them to integrate these concepts into teaching and research.

Faculty Development Program (FDP) on Quantum Computing

Duration: 4 Days (10 Hours)

St. Joseph's Degree College, Kurnool

Day	Time	Topics	Resource person
Day-I 22-6-2026	2:45–3:00 PM	Inaugural Session	
	Session-I 3:00-4:30 P.M	Foundations of Quantum Computing Mathematical Foundations Quantum Mechanics for Computing	Mrs.N. Rajini Kiranmai Assistant Professor Department of Computer Science St. Joseph’s Degree College
	Session-II 4:40 to 5:00	Quiz-I	
Day-II 23-6-2026	Session-I 3:00-04:00 P.M	Qubits and Quantum Gates Quantum Gates	Mr.D.Mahaboob Basha Assistant Professor Department of Computer Science St. Joseph’s Degree College
	Session-II 4:20 to 5:00	Hands-on Session on Quantum Gates in Qiskit	
Day-III 24-6-27	Session-I 3:00-04:00 P.M	Quantum Algorithms Introduction to quantum algorithms Shor's Algorithm Grover's Algorithm Applications and Future Trends	Mr.P. HariKrishna Reddy Assistant Professor Department of Computer Science St. Joseph’s Degree College
	Session-II 4:20 to 5:00	Hands Session on Quantum Algorithms	
Day-IV 25-6-2026	Session-I 3:00-04:20 P.M	Quantum Communication Quantum cryptography Quantum teleportation	Mr.A. Mallikarjuna Assistant Professor Department of Computer Science St. Joseph’s Degree College.
	Session-II 04:30-05:00	Closing session of FDP & Feedback Session	

FDP PHOTOS

DAY-1



DAY-2



DAY-3



DAY-4



Attendance Details:

Staff Attendance						
Basic Concepts on Quantum Computing 4 Day FDP (22-06-2026 to 25-06-2026)						
Sno	Name of the Faculty	22-06-2026	23-06-2026	24-06-2026	25-06-2026	Remarks
1	Dr C Venkata Satyanarayana					
2	S Latharani	S. Latharani	S. Latharani	S. Latharani	S. Latharani	
3	K Amarnath	K. Amarnath	K. Amarnath	K. Amarnath	K. Amarnath	
4	A Mallikarjuna					
5	G Penchalaiah Babu					
6	P Sai Srujana					
7	P Siva Kumar					
8	A Viswanatha Rao		ABSENT	ABSENT		
9	P Armila Devi					
10	B Manju Bhargavi	B. Manju Bhargavi	B. Manju Bhargavi	B. Manju Bhargavi	B. Manju Bhargavi	
11	N Rajini Kiranmai					
12	O Kiran Kumar					
13	J Rajarathnam	ABSENT				
14	J Ramesh	Ramesh	Ramesh	Ramesh	Ramesh	
15	I S Raghuram			ABSENT	ABSENT	
16	K Chaitanya Lakshmi	ABSENT	ABSENT	ABSENT	K. Chaitanya Lakshmi	
17	P Hari Krishna Reddy					
18	D Mahaboob Basha					
19	S Haseena	S. Haseena	S. Haseena	S. Haseena	S. Haseena	
20	Abdul Azeem Naik					

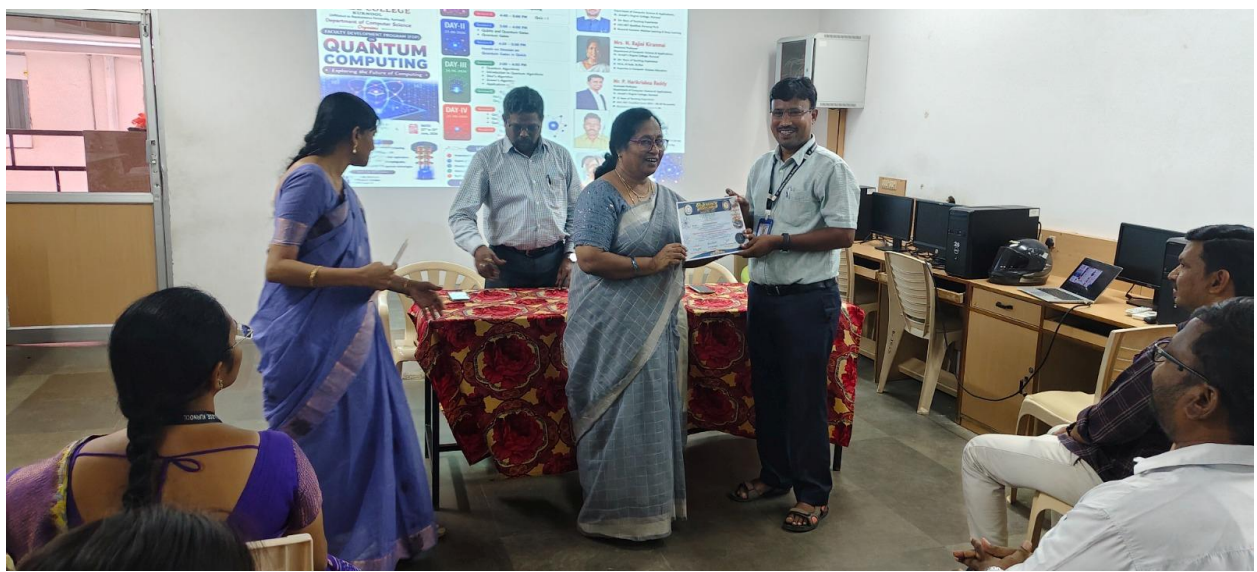
S. Latharani
Signature of HOD

Learning Outcomes:

After successful completion of the FDP, participants are able to:

1. Understand the fundamental principles of quantum computing.
2. Explain the concepts of qubits, superposition, entanglement, and quantum gates.
3. Develop simple quantum circuits using Qiskit.
4. Understand basic quantum algorithms such as Shor's and Grover's algorithms.
5. Explore applications of quantum computing in cryptography, optimization, and communication.

Certificate Distribution:





Feed Back:

St.Joseph's Degree College FDP on Basics of Quantum Computing from June 22-25,2026. FEED BACK Form												
S.no	Name of the Faculty	1.Were the objectives of the FDP clearly defined and achieved.	2.How would you rate the expertise of the resource persons?	3.How useful were the practical demonstrations using Qiskit/IBM Quantum Composer?	4. Were the sessions well planned and organized.	5. Was adequate time provided for interaction and discussion?	6. How would you rate the technical arrangements (audio/video/internet)?	7. To what extent did the FDP improve your understanding of Quantum Computing?	8. Did the resource persons demonstrated thorough knowledge of the FDP Content	9. How far the FDP will be useful in your teaching/research activities.	10. Overall Rating of the FDP	Suggestions for improving future FDPs
1	Lt I S Raghuram	Excellent	Excellent	Very Useful	Very Good	Agree	Excellent	Improved	Excellent	Very Good	5 Stars (Excellent)	Conduct continues the series of FDPs to upgrade.
2	S.Lathrani	Very Good	Excellent	Useful	Very Good	Agree	Very Good	Slightly Improved	Very Good	Satisfactory	4 Stars (Very Good)	Continue to share ur knowledge to others daily a little
3	P ARMILA DEVI	Excellent	Very Good	Very Useful	Very Good	Strongly Agree	Very Good	Improved	Excellent	Very Good	4 Stars (Very Good)	Overall Good
4	P Sai Srujana	Very Good	Excellent	Very Useful	Excellent	Agree	Excellent	Improved	Very Good	Good	5 Stars (Excellent)	"Be better than yesterday, not better than everyone else."
5	J Raja Ratnam	Excellent	Excellent	Very Useful	Excellent	Strongly Agree	Very Good	Significantly Improved	Excellent	Very Good	5 Stars (Excellent)	Improve hands on skills
6	A Viswanatha Rao	Excellent	Excellent	Extremely Useful	Excellent	Strongly Agree	Excellent	Significantly Improved	Excellent	Excellent	5 Stars (Excellent)	and informative.
7	Kiran kumar	Excellent	Excellent	Extremely Useful	Excellent	Strongly Agree	Excellent	Significantly Improved	Excellent	Excellent	5 Stars (Excellent)	Still more light on subject
8	S.Haseena	Excellent	Excellent	Extremely Useful	Very Good	Agree	Excellent	Improved	Very Good	Excellent	4 Stars (Very Good)	Practical knowledge
9	B.Manju Bhargavi	Very Good	Excellent	Extremely Useful	Excellent	Strongly Agree	Excellent	Significantly Improved	Excellent	Excellent	5 Stars (Excellent)	.
10	J Ramesh	Excellent	Excellent	Extremely Useful	Excellent	Strongly Agree	Excellent	Significantly Improved	Excellent	Excellent	5 Stars (Excellent)	Longer durations to get more knowledge
11	K.Amarnath	Very Good	Very Good	Very Useful	Very Good	Agree	Very Good	Improved	Very Good	Good	4 Stars (Very Good)	Very well conducted and managed