



# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟಿ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)

## Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)



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Ref. No.: VTU/PS/2024-25/ 2263

Date: 16 AUG 2024

### CIRCULAR

Sub: Participation in Three Days Faculty Development Program on Quantum Computing.

With reference to the above, this is to inform that the Department of Information Science and Engineering, Canara Engineering College, Mangaluru in association with Visvesvaraya Technological University, Belagavi is organizing **3-Day Faculty Development Program on "Quantum Computing"** from 22<sup>nd</sup> to 24<sup>th</sup> August 2024 at Seminar Hall, Canara Engineering College, Mangaluru.

Faculty Development Program Brochure is enclosed for further information.

You are hereby requested to bring the contents of this circular to the notice of all the concerned.

Sd/-

REGISTRAR

Encl: Brochure

To,

- 1) The Principals of all the Affiliated/Constituent/Autonomous Engineering Colleges and School of Architecture of VTU.
- 2) The Chairpersons/Programme Coordinators of all the Departments, Centers for PG Studies of VTU in Muddenahalli, Belagavi, Kalaburgi and Mysuru.

Copy to:

- 1) The Hon'ble Vice-Chancellor, through his Secretary, VTU, Belagavi for information.
- 2) The Regional Directors (I/c), VTU Regional Centres at Bengaluru, Belagavi, Kalaburgi & Mysuru for information.

  
REGISTRAR

3-Day Faculty Development Program  
on

**QUANTUM COMPUTING**

22<sup>nd</sup> to 24<sup>th</sup> August, 2024

Registration Form

Name:.....

Designation:.....

Department:.....

College/Organization:  
.....

Contact

Address:.....  
.....

Mobile Number:.....

E-Mail:.....

Declaration

All the above information are true to my knowledge and I will attend the FDP for the entire duration.

Signature of the  
Participant

Signature of the  
HoD/Hol

**Note:**

Participants need to take the printout of the above form and upload filled form to the registration link

**ABOUT VTU**

By the VTU Act 1994 of the Karnataka government, VTU was founded on April 1<sup>st</sup>, 1998, to foster the planned and sustainable growth of technical education. The university's head office is in Belagavi, Karnataka. More than a lakh students are receiving technical education from VTU through its 46 undergraduate and 94 graduate programs. Doctoral programs are available at VTU in 865 departments across numerous linked colleges that have earned recognition as research hubs. At Muddenahalli, Kalburgi, Belagavi, and Mysuru, VTU has developed fully functional Centers for Post Graduate Studies. In Mysuru, the VTU has a Center for Online Education.

**ABOUT THE INSTITUTION**

Canara Engineering College (CEC) is a premier engineering institute in the Mangalore region, established in 2001 by the Canara Group of Institutions, which was founded by the late Ammembal Subba Rao Pai. The college is affiliated with VTU, Belgaum, recognized by the Government of Karnataka, and approved by AICTE, New Delhi.

CEC is run by the Canara High School Association (CHSA), an organization based in Mangalore that contributes to Konkani linguistic minority education. Ammembal Subba Rao Pai, who also founded Canara Bank, established CHSA in 1891 with the goal of providing modern education infused with cultural values to the youth of Dakshina Kannada. The association's primary project, Canara High School, was established in 1891 and continues to operate today. Funded primarily by alumni, CHSA also runs several other educational institutions in and around Mangalore.

**ABOUT THE DEPARTMENT**

The Department of Information Science & Engineering emphasizes all-round development and fosters a vibrant interest in both academic and extracurricular activities. It boasts fully equipped laboratories and a team of well-qualified and experienced staff. The department regularly organizes seminars and workshops led by industry experts, as well as industry visits for students. Additionally, it offers add-on courses to keep pace with the latest technological trends.



**CANARA ENGINEERING COLLEGE**

Sudhindra Nagara, Benjanapadavu, Bantwal Taluk,  
Mangalore D.K. District Karnataka, INDIA - 574219



3-Day Faculty Development Program  
on

**"QUANTUM COMPUTING"**

22<sup>nd</sup> to 24<sup>th</sup> August, 2024

Organized by  
Department of  
Information Science and Engineering

In Association with  
Visvesvaraya Technological University,  
Belagavi



Venue:  
Skill Lab

**CANARA ENGINEERING COLLEGE**  
Sudhindra Nagara, Benjanapadavu, Bantwal Taluk  
Mangalore, D.K. District  
Karnataka, INDIA - 574219



## ABOUT FDP

This FDP aims to equip educators and researchers with a deep understanding of the principles, applications and challenges posed by quantum computing. This program will foster a collaborative environment for participants to delve into the fascinating realm of quantum mechanics and quantum information science. Through a combination of theoretical sessions and hands-on labs, participants will gain knowledge and skills required to integrate quantum computing concepts into their curriculum and research.

## OBJECTIVES OF THE PROGRAMME

- To understand the concepts of the Basics of Quantum Computing, Quantum Bits and Quantum Gates Quantum Circuits
- To understand the applications of Quantum Algorithms
- To understand case studies of Quantum Cryptography, Quantum Machine Learning, Optimization with Quantum Computing

## OUTCOMES OF THE PROGRAMME

- Understand the basics of Quantum Computing
- Impart knowledge to the learners both in theoretical and practical sessions
- Apply the knowledge in multidisciplinary areas

## WHO CAN PARTICIPATE

*Faculty members of AICTE approved Institutions, Research Scholars, PG scholars.*

## CHIEF PATRONS

**Sri. D Vasudeva Kamath**  
President, C.H.S. Association

**Sri. K Suresh Kamath**  
Vice-President, C.H.S. Association

**Sri. M Ranganath Bhat**  
Hon. Secretary  
C.H.S. Association & Correspondent CEC

## PATRONS

**Dr. Vidyashankar S**  
Hon. Vice Chancellor, VTU, Belagavi

**Dr. B E Rangaswamy**  
Registrar, VTU

**Dr. T N Sreenivasa**  
Registrar (Evaluation), VTU

## ORGANIZING CHAIR

**Dr. Nagesh H R**  
Principal, CEC Mangaluru

## PROGRAM CONVENER

**Dr. H Manoj T Gadiyar**  
Associate Professor & HOD, IS&E  
Phone: +91 9743703840  
Email: [manojgadiyarecanaraengineering.in](mailto:manojgadiyarecanaraengineering.in)

## ORGANIZING COMMITTEE

**Dr. Usha G R**  
Associate Professor, Dept. of ISE  
CEC, Mangalore  
Contact No. 8971195656

**Mr. Ranganatha K**  
Assistant Professor, Dept. of ISE  
CEC, Mangalore  
Contact No. 9611133286

## RESOURCE PERSONS:

**Dr. Thyagaraju G S**  
Professor and Head, Department of Computer Science and Engineering, SDMIT, Ujire

**Mr. Durai Karthi Ganesh**  
Founder & CEO, Kwantum Reseach Labs Pvt Ltd, Bengaluru

**Mr. Prashanth Kumar A**  
Manager II, Product Management Center Head  
7EDGE Private Limited - MLR - DK

## Topics Covered and Program Schedule

### ◆ Inauguration at 9.30 AM

Venue : Seminar Hall, CEC, Mangalore

### ◆ After the Inaugural function

#### Day 1:

- Basics of Quantum Computing
- Quantum Bits and Quantum Gates, Quantum Circuits.
- Implementing Quantum Algorithms in Python/Qiskit, Quantum Algorithms Applications.

#### Day 2:

- Writing and executing simple quantum programs using Qiskit, Cirq.
- Real-world applications and projects in quantum computing.
- Challenges and future prospects in the quantum industry.

#### Day3:

- Case Studies: Secure Communication Networks, Financial Modeling for Fraud Detection, Supply Chain Logistics Optimization etc..

### ◆ Valedictory Function

## Registration

- Registration Fees 500 (in Rupees)
- Working Lunch will be provided.
- Participants are advised to bring laptop.

## REGISTRATION DETAILS

NAME : CANARA ENGINEERING COLLEGE  
BANK NAME : CANARA BANK  
BRANCH : BENJANAPADAVU  
A/C NO : 2999201005001  
IFSC : CNRB0002999

### Registration Link :

<https://forms.gle/JWxTvGDxsPaYSsvr5>



For Registration



For Payment

**Last date for registration : 17-08-2024**