



**RV College
of Engineering®**

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RVCE/463/21-22

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CIRCULAR

IBM Skills Academy Quantum Computing Certification Course

The Centre of Excellence in Quantum Computing, the CIRQuIT, R V College of Engineering, is starting the IBM certified course in Quantum Computing in association with IBM skills academy.

The course includes classes on understanding the basics of qubits, superposition, representations, mathematical view, insights into the concept of entanglement, quantum volume, gates and error rates, quantum hardware technologies, industrial use cases, quantum algorithms, and future research paths. The practical classes are conducted using IBM QisKit open-source SDK with IBM Quantum Experience.

The students interested in enrolling for this certification course may please contact the following for more details:

- Dr. B. Sathish Babu, Professor, Dept. of CSE, Ph: 9844488329
- Dr. Tribikram Gupta, Asst. Professor, Dept. of Physics, Ph: 6360490328

Mail your Name, USN, and Phone number to bsbabu@rvce.edu.in on or before 25/09/2021 to express your interest in the course.

The fee for the course is Rs. 10,000/- + GST (18%)

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Copy to: All HoDs & Deans – for information & needful.

Background

Quantum computation is the study of information processing tasks accomplished using quantum mechanical systems. A quantum computer harnesses some of the almost-mystical phenomena of quantum mechanics to deliver giant leaps forward in processing power. The development and growth of Noisy Intermediate-Scale Quantum (NISQ) computers have led to widespread use and implementation of applications.

To mention a few, Boeing is working with IBM's cloud-based Quantum Experience for materials testing and optimization, Daimler's Mercedes-Benz is working on battery research and development, JPMorgan and Barclays, using quantum computing in financial services for targeting and prediction, trading optimization, and risk profiling. Toyota and Mitsubishi Chemical are using IBM Quantum Computer to develop new materials, Airbus is working on Quantum Computational Fluid Dynamics (QCFD), The software and hardware tools provided by Google Quantum, IBMQ, Xanadu have made it possible for researchers and firms to run Quantum Machine Learning, Quantum Generative Adversarial Networks(QGAN), and Quantum Support Vector Machine(QSVM) to solve various problems ranging from the domain of Chemistry, Image Processing, and Financial Modeling.