

## Day 1: Introduction to Cloud Computing

- Fundamentals of Cloud Computing Cloud Service Models
- Deployment Models
- Benefits and Challenges of Cloud Adoption
- Case Studies in Academia and Industry

## Day 2: Cloud Infrastructure and Virtualization

- Cloud Architecture and Components
- Virtualization Concepts and Tools
- Overview of Hypervisors
- Cloud Resource Management and Scalability
- Hands-on: Creating Virtual Machines using a Cloud Platform

## Day 3: Cloud Security Essentials

- Overview of Cloud Security Challenges
- Data Security and Encryption in the Cloud
- Identity and Access Management (IAM)
- Compliance and Legal Issues in Cloud Computing
- Case Studies on Cloud Security Breaches

## Day 4: Advanced Cloud Security

- Security in Multi-Cloud Environments
- Intrusion Detection and Prevention in the Cloud
- Secure APIs and Data Storage in Cloud
- Best Practices for Cloud Security
- Hands-on: Implementing Secure Solutions on AWS/Azure

## Day 5: Emerging Trends and Applications in Cloud Computing

- Role of AI and Machine Learning in Cloud Security
- Cloud-Native Applications and Microservices
- Research Opportunities in Cloud Computing and Security
- Feedback, Q&A

- **Course Date:** 17 March to 21 March, 2025
- **Last Date of Registration:** 12/03/2025 (Online Registration Link will be open from: 03/02/2025)
- **Per Day Timing:** 09:30 am to 05:30 pm
- **Contact Hours for the Course:** 40Hrs (Theory, Activities, Case Studies & Evaluation)
- **Venue:** Department of Information Science and Engineering at Bapuji Institute of Engineering and Technology, Davangere

### Details:

#### For Online Transfer

**Bank Name: State Bank of India**

**Account Name: IIT Guwahati R and D E and ICT Academy**

**Account No.: 36071160089**

**IFSC Code: SBIN0014262**

**Bank Name: State Bank of India**

**Rs. 500/- (Inclusive of GST)**  
Mode of Payment: Online Only  
(NEFT/RTGS/IMPS)

Registration fees includes E&ICT Academy kit bag, stationaries, 5 days lunch and high tea, evaluation and certificate of completion.

Registration Fees is Refundable if the registration cancellation request is submitted before the last date of registration.



सत्यमेव जयते



An Initiative of  
**Ministry of Electronics  
& Information  
Technology (MeitY),**  
Government of India



## Electronics & ICT Academy

**IIT Guwahati, Assam**

**One - Week Offline**

**Faculty Development Programme**

## Cloud Computing and Its Security

Organized in association with **Department of Information Science and Engineering at Bapuji Institute of Engineering and Technology, Davanagere** Support from Expert Organized by E&ICT IITG

# Course Objectives

- To provide an in-depth understanding of cloud computing concepts, architecture, and service models.
- To explore various cloud deployment models and assess their applications in academia and industry.
- To discuss security challenges and best practices in cloud computing.
- To introduce participants to hands-on tools and frameworks for implementing secure cloud solutions.
- To enhance participants' ability to integrate cloud computing concepts into their teaching and research activities.

# Course Outcomes

- Demonstrate a comprehensive understanding of cloud computing concepts, including IaaS, PaaS, and SaaS.
- Analyze cloud deployment models and select appropriate solutions for specific use cases.
- Identify and address security challenges in cloud environments, including data security, privacy, and compliance.
- Apply cloud-based tools and platforms for implementing secure cloud applications.
- Incorporate cloud computing and its security aspects into academic curriculum and research projects.

# How to Reach the Venue

For exact google map location, kindly scan the QR code



## Principal Investigator

**Prof. Gaurav Trivedi,**  
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## Course Coordinators

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## Expert Support From

**EarlyRise**

(A unit of Xdigics Technologies Private Limited)

## Course Coordinator from BIET

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## Course Patron

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**Website: <https://eict.iitg.ac.in>**

# Activities

## Project & Assignments:

Participants will be given hands-on practice during all sessions wherever applicable

## How to apply:

### Online:

The participants may log on to the E&ICT Academy, IIT Guwahati

### website:

[https://eict.iitg.ac.in/index\\_course\\_category?cate=em9DWXhJQTVkRkdXMUUhQT0dtSjkzQT09](https://eict.iitg.ac.in/index_course_category?cate=em9DWXhJQTVkRkdXMUUhQT0dtSjkzQT09)



**Scan the QR for registration**

## Who can attend:

Programme is open to Faculty Members and PhD Research Scholars from Universities and Colleges.

1. These FDPs can be considered at par with other QIP (Quality Improvement Programme) and other provisions for recognition/credits.
2. The Faculty/Staff are requested to submit the NOC from respective department before attending the session.
3. The participant need to carry the Institute/ Organization valid Identity Card (Both in Original & Photocopy). The participants need to carry their passport size photos.
4. Participants have to submit UTR No./Transaction receipt as the proof of payment while registering in the FDP.