IIIT Dharwad

ज्ञानेन विकासः

M.Tech in Computer Science & Engineering

(Specialization: Cloud Computing)

Master the architecture behind scalable, secure, and intelligent cloud systems.

2 years | Live Interactive Online Sessions

About IIIT Dharwad

The Indian Institute of Information Technology Dharwad (IIIT Dharwad), recognized as an Institute of National Importance, is at the forefront of India's technology education and research landscape. Located in the educational and innovation hub of Hubballi-Dharwad, the institute is redefining how technology drives learning, research, and societal impact. With a commitment to academic excellence, research-driven education, and strong industry collaboration, IIIT Dharwad nurtures a new generation of engineers and researchers equipped to lead the digital revolution. Its modern infrastructure, dynamic learning environment, and vibrant campus culture foster creativity, curiosity, and collaboration among students, empowering them to innovate and excel in a rapidly evolving technological world.

Guided by its vision to be a globally renowned academy of information technology for societal development, IIIT Dharwad integrates ethical values, interdisciplinary learning, and global perspectives across all programs. The institute's mission is to produce globally competent technology professionals who combine deep technical expertise with ethical, societal, and environmental awareness, while addressing local and global challenges through innovative, interdisciplinary solutions.

IIIT Dharwad is recognized for its strong research ecosystem, with ongoing projects in Artificial Intelligence, Cybersecurity, and the Internet of Things (IoT). The institute boasts dedicated research centers, cutting-edge laboratories, and collaborations with leading global technology firms, providing students with opportunities to engage in applied research and innovation. An upcoming Tech Park and Startup Incubation Centre will further strengthen entrepreneurship and real-world problem-solving opportunities for students and researchers.

Beyond academics, IIIT Dharwad offers a vibrant and holistic campus life. Students actively participate in clubs, societies, and annual technical and cultural fests, which foster leadership, teamwork, and creativity. Modern facilities, including hostels, digital libraries, laboratories, and sports complexes, support personal growth and enrich the overall learning experience. Through this integrated ecosystem of excellence, research, and innovation, IIIT Dharwad empowers students to transform ideas into impact and prepares them to become leaders shaping the future of technology.

About The Program

The M.Tech in Computer Science & Engineering (Specialization in Cloud Computing) is a two-year online postgraduate program with campus immersion components designed for learners aspiring to master the architecture, deployment, and management of scalable, secure, and efficient cloud systems.The program blends theoretical depth with practical experience, enabling participants to design and implement cloud-native solutions, optimize resource utilization, and ensure data security in distributed environments. With a focus on research, innovation, and hands-on application, graduates will emerge as skilled cloud professionals ready to drive digital transformation across industries.

Who is this program is ideal for

- Working professionals and graduates seeking to advance their expertise in Cloud Computing technologies.
- Software engineers, DevOps professionals, and IT administrators aiming to specialize in cloud architecture and infrastructure management.
- Individuals aspiring to build careers in Cloud Development, Cloud Security, or Systems Engineering.

Key Program Details

Duration
2 Years

Mode
Online

Course Fees
₹ 3,54,000
Easy EMI Options are Available

Campus Immersion
A seven-day in-person session at IIIT Dharwad

Eligibility

1. Educational Qualification : B.E. / B.Tech / M.Sc / MCA degree.

2. Employment Status : Candidate should be a working professional, currently or previously employed.

3. Academic Performance:
General / OBC category - Minimum CGPA/CPI: 6.5 on a 10-point scale, or Minimum aggregate percentage: 60%.

SC / ST / PwD category - Minimum CGPA/CPI: 6.0 on a 10-point scale, or Minimum aggregate percentage: 55%.

Why Choose IIIT Dharwad?

Prestigious M.Tech Degree
Earn an M.Tech degree in Computer Science & Engineering (Specialization in Cloud Computing) from an Institute of National Importance.

Cutting-Edge Curriculum
Gain expertise in cloud architecture, virtualization, DevOps, containerization, distributed computing, and cloud security — aligned with global industry standards.

Campus Immersion
Participate in a 7-day on-campus immersion at IIIT Dharwad for experiential learning, networking, and mentorship from industry experts.

Distinguished Faculty
Learn from IIIT Dharwad's expert faculty and industry professionals with years of experience in cloud systems, AI, and software engineering.

Capstone Project
Conclude the program with an applied project, solving real-world cloud challenges like infrastructure optimization, data security, and scalable solution design.

Networking Opportunities
Engage with a diverse professional cohort and build connections with engineers, architects, and thought leaders from across industries.

Robust Industry Ties
Strong collaborations with top tech companies providing hands-on exposure and future-ready skills.

Flexible Online Learning
Study from anywhere with live interactive sessions, self-paced learning, and flexible scheduling designed for working professionals.

IIIT Dharwad Alumni Status
Earn prestigious recognition and join IIIT Dharwad's network of innovators and technology leaders shaping the future of Cloud Computing.

Programme Module

Sl. No	Course Type	Course Name	Credit
		SEM 1	
1	DisCore	**Applied Mathematics for Computer Science**	3
		Unit 1: Linear Algebra Unit 2: Optimization Unit 3: Probability and Stochastic Process	
2	DisCore	**Advanced Data Structures and Algorithms**	3
		Unit 1: Growth Functions Unit 2: Trees Unit 3: Graph Algorithms Unit 4: Algorithm Design Strategies Unit 5: Complexity Classes	
3	DisCore	**Programming Paradigms Lab**	2
		Unit 1: Procedural Programming Unit 2: Object-Oriented Programming (OOP) Unit 3: Functional Programming Unit 4: Concurrent & Parallel Execution Unit 5: Declarative and Logic Programming Unit 6: Scripting & Automation	
4	Elective	**Introduction to AI/ML**	1
		Unit 1: Introduction to AI Unit 2: Problem Solving using Search Unit 3: Knowledge Representation Unit 4: Introduction to Machine Learning Unit 5: Supervised Learning Unit 6: Unsupervised Learning Unit 7: Applications of AI & ML	

5	Elective	**Introduction to Cybersecurity**	1
		Unit 1: Introduction to Cybersecurity Unit 2: Identity & Access Management Unit 3: Standards & Regulations	
6	Elective	**Introduction to Cloud Computing**	1
		Unit 1: Introduction to Cloud Computing Unit 2: Cloud Service Models and Deployment Models	
7	Master's Core	**Introduction to Research**	2
		Unit 1: Introduction Unit 2: Literature Review Unit 3: Research Exploration Unit 4: Patenting and Publications Unit 5: Presentation, Report and Thesis Writing Unit 6: Conclusions and Future Scope Unit 7: Principles & Ethics in Research	
8	Project	**Project-I**	3
		Total	15
SEM 2			
9	DisCore	Advanced Computing Lab	2
10	Master's Core	Literature Review and Seminar	2
11	Elective	Electives (1/2/3/4 credits)	5
12	Project	Project-II	6
		Total	15
SEM 3			
13	Project	Project-III	9
14	Elective	Electives (1/2/3/4 credits)	6
		Total	15
SEM 4			
15	Project	Project-IV	12
16	Elective	Electives (1/2/3 credits)	3
		Total	15
		Total Program Credits	60

Cloud Computing Specialization

Sl. No	Course Name
1	Distributed and Parallel Systems
2	Security in Cloud Computing
3	Site reliability engineering in Cloud Computing
4	Biometric Security and Forensics
5	Big Data Systems
6	Edge AI
7	High Performance Computer Architecture

Alumni Privileges

Students will receive an official Institute Email ID and ID card, and will be eligible to participate in institute events and activities. Upon completion, they become part of the institute's alumni network.

Assessment & Evaluation

Students will be evaluated through a combination of **quizzes, assignments, case studies, and end-term examinations.** These diverse assessment methods ensure continuous learning and a well-rounded understanding of the subject.

Tools you'll Master

TensorFlow Keras PyTorch WIRESHARK

Azure git GitLab Jenkins kubernetes

aws scikit learn jupyterlab

*Tool exposure varies by specialization; students may not work with all tools listed.

Programme Structure

7 Days
On-Campus Immersion

5 Program Modules
(including a seven day on-campus immersions)

Each module incorporates real-world projects, allowing participants to apply concepts in AI, ML, and advanced computing domains

Pedagogy & Delivery

The program follows a blended learning approach, combining multiple instructional methods to enhance learning outcomes:

Interactive Live Sessions

Engage with faculty and peers through discussions, Q&A, and case study analysis.

Self-Paced Learning

Access recorded lectures, readings, and practice exercises to reinforce concepts.

Experiential Learning

Apply knowledge through projects, simulations, and hands-on assignments.

Collaborative Activities

Participate in group exercises, peer learning, and forums to foster teamwork and practical understanding.

Attendance Policy

Participants are required to maintain a minimum of 75% attendance to successfully complete the program, structured as follows:

60% Synchronous Attendance: Participation in live lectures, discussions, and interactive sessions.

15% Asynchronous Engagement: Completion of recorded content and self-paced learning activities.

Program Objectives

Develop Advanced Cloud Expertise: Build a deep understanding of cloud architecture, virtualization, DevOps, and microservices for scalable, efficient solutions.

Design & Optimize Cloud Systems: Learn to plan, deploy, and manage secure, cost-effective, and performance-driven cloud infrastructures.

Enable Research and Innovation: Foster analytical and research skills to address challenges in distributed computing, data management, and network optimization.

Hands-On Technical Proficiency: Gain practical experience with cloud platforms such as AWS, Azure, and Google Cloud through guided projects and case studies.

Security and Compliance Leadership: Strengthen expertise in cloud governance, compliance frameworks, and data protection mechanisms.

Career and Leadership Development: Equip graduates for leadership roles in cloud engineering, architecture, and technology consulting.

Learning Outcomes

- **Implement DevOps Practices:** Apply CI/CD pipelines, container orchestration, and automation tools for efficient deployment.
- **Ensure Cloud Security and Compliance:** Apply encryption, identity management, and regulatory frameworks for data protection.
- **Optimize Cloud Resources:** Analyze and improve performance, cost, and availability using monitoring and analytics tools.
- **Drive Innovation in Cloud Ecosystems:** Develop innovative applications leveraging serverless computing and edge technologies.
- **Demonstrate Technical and Strategic Impact:** Deliver measurable outcomes through the capstone project that reflect real-world cloud challenges.

Fee Structure

Application Fee: ₹ 2,000
Program Fee (Inclusive of Application Fee) : ₹ 3,56,000

Semester	I	II	III	IV	Total
Fee	88500	88500	88500	88500	**354000**

*Easy EMI Options are Available

*The application fees is strictly non-refundable and non-transferable.

Refund Policy

A refund is applicable after a deduction of 10000 before commencement of the batch, provided the course material has not been accessed or downloaded.

No refund will be provided on or after the batch commencement date

Program Certificate

Admission Process

1. Fill the application form
And pay the application fee

2. Appear for an interview round

3. If selected,
you will receive the offer letter

4. Pay the Programme fees and
confirm your admission

Program Director

Dr. Sunil Kumar P V
Assistant Professor

Indian Institute of Information Technology, Dharwad

Dr. Sunil Kumar P V is an accomplished academician and researcher in the field of Computer Science and Engineering, with a specialization in Machine Learning for Bioinformatics. He completed his PhD from NIT Calicut and has over 15 years of experience in teaching, research, and industry collaboration. Currently serving as an Assistant Professor at Indian Institute of Information Technology, Dharwad, Dr. Sunil has previously held faculty positions at CMR Institute of Technology, MES College of Engineering, and MEA Engineering College. He has published extensively in peer-reviewed journals and international conferences and has delivered numerous invited lectures and workshops on advanced computing, AI, and bioinformatics. With strong expertise in AI, ML, data analytics, and computational biology, he brings a rich blend of research excellence, teaching acumen, and industry engagement to lead and inspire the next generation of technology professionals.

Program Faculty

Dr. Abdul Wahid
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Dhanbad)

Dr. Animesh Roy
Assistant Professor

Computer Science & Engineering
Ph.D. (IIEST)

Dr. Dibyajyoti Guha
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Bhubaneswar)

Dr. Girish G N
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK)

Dr. Krishnendu Ghosh
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Kharagpur)

Dr. Malay Kumar
Assistant Professor

Computer Science & Engineering
Ph.D. (NIT Raipur)

Dr. Milind Chabbi
Professor of Practice

Computer Science & Engineering
Rice Univeristy

Dr. Pavan Kumar C
Assistant Professor

Computer Science & Engineering
Ph.D. (VIT Vellore)

Dr. Prabhu Prasad B M
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK Surathkal)

Dr. Pramod Yelmewad
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK Surathkal)

Dr. Shrinivas Kulkarni
Professor of Practice

Computer Science & Engineering
PhD - University of Edinburgh

Dr. Sunil C K
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK Surathkal)

Dr. Sunil Kumar P V
Assistant Professor

Computer Science & Engineering
Ph.D. (NIT, Calicut)

Dr. Suvadip Hazra
Assistant Professor

Computer Science & Engineering
Ph.D. (NIT Durgapur)

Dr. Vivekraj V K
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Roorkee)

Prof. Rajesh Vasa
Adjunct Professor

Computer Science & Engineering
PhD - Swinburne Univ. of Technology

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