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# INTRODUCTION TO CLOUD COMPUTING & DEVOPS

Hello, aspiring cloud and DevOps professional! The Advanced Certification in Cloud Computing & DevOps program at Chools is designed to teach you how to use various cloud platforms and DevOps tools to design, develop, and manage cloud solutions. You will learn about cloud computing concepts and architectures, services and platforms such as AWS, Azure, Google Cloud, cloud security, governance and compliance, DevOps principles and practices, DevOps tools and frameworks like Docker, Kubernetes, and Terraform, continuous integration and continuous delivery (CI/CD) pipelines, cloud application development and deployment, cloud infrastructure and network management, and cloud data and analytics.





#### Numbers That Speak for Themselves:

- 10,000+ Successful Alumni: Join a network of impactful professionals.
- 95% Job Placement Rate: Secure your future with Chools' proven track record.
- 20+ Years of Excellence: Trust in a legacy of education and industry expertise.
- 200+ Industry Partnerships: Leverage our connections for real-world insights and opportunities.

## What Sets Us Apart?

- **Expert Instructors**: Learn from industry veterans with hands-on experience.
- **Hybrid Learning Model**: Balance online flexibility with in-person engagement.
- Comprehensive Curriculum: Stay ahead with courses designed to meet market demands.
- Community and Networking: Be part of an active community of learners and professionals.

## Who Can Apply?

#### **Eligibility Criteria:**

 A bachelor's degree in any discipline and an interest in learning cloud computing and DevOps.



#### **Information Technology**

 Background: A bachelor's degree in information technology and a desire to switch to the cloud computing sector.

## **Program Overview**

The Advanced Certification in Cloud Computing & DevOps Program at Chools provides an extensive education in cloud computing and DevOps. Our curriculum covers a wide range of topics to ensure a thorough understanding, combining theoretical knowledge with practical, hands-on experience.

#### **Learning Mode:**

- Hybrid Learning Model: Combines online learning with in-person sessions for flexibility and interactive engagement.
- Interactive Sessions: Includes live webinars, workshops, and Q&A forums with expert instructors and peers.
- Self-paced Learning: Access course materials anytime, allowing you to learn at your own pace.



### **Skills Learned**

- Cloud Computing Concepts and Architectures: Understanding core principles of cloud computing.
- Cloud Services and Platforms: Working with AWS, Azure, Google Cloud, etc.
- Cloud Security, Governance, and Compliance: Ensuring the security and compliance of cloud solutions.
- **DevOps Principles and Practices**: Implementing DevOps methodologies.
- DevOps Tools and Frameworks: Using Docker, Kubernetes, Terraform, etc.
- CI/CD Pipelines: Setting up continuous integration and continuous delivery pipelines.
- Cloud Application Development and Deployment: Developing and deploying cloud-native applications.
- Cloud Infrastructure and Network Management: Managing cloud infrastructure and networks.
- Cloud Data and Analytics: Analyzing and managing cloud data.

## **Job Positions and Opportunities**

- Career Paths: Cloud Developer, DevOps Engineer, Cloud Engineer, Cloud Consultant, Site Reliability Engineer, Cloud Security Specialist
- **Industry Demand**: High demand across various sectors, competitive salaries, and strong growth potential.

## **Key Industry Verticals**

 Skill Application Areas: Finance, Healthcare, Technology, Marketing, Manufacturing, Energy, Education, Telecommunications, Logistics and Supply Chain, Government and Public Services.

## **Curriculum Highlights**

- Fundamental Knowledge: Core principles of cloud computing and DevOps.
- Advanced Techniques: In-depth understanding of cloud platforms and DevOps tools.
- Real-World Applications: Practical projects and case studies.
- Professional Development: Continuous learning and networking opportunities.

By completing the Advanced Certification in Cloud Computing & DevOps Program at Chools, you'll gain the skills, knowledge, and certification needed to excel in cloud computing and DevOps, positioning yourself as a valuable asset to any organization

## **Program Objectives**

- Master technical skills in cloud computing and DevOps.
- Implement best practices for designing, developing, and managing cloud solutions.
- Explore various cloud platforms and DevOps tools.
- Address real-world cloud computing and DevOps challenges.
- Understand best practices in cloud security, governance, and compliance.
- Foster continuous learning.
- Encourage teamwork and collaboration.
- Prepare for advanced roles in cloud computing and DevOps.

### **Expected Outcomes**

- Proficiency in cloud computing and DevOps tools and techniques.
- Practical experience through hands-on projects.
- Strong analytical and problem-solving skills.
- Application of best practices in cloud computing and DevOps.
- Innovation in cloud solutions and DevOps practices.





## PROGRAM OUTLINE

## Stage 1: Fundamentals of Cloud Computing

## 1. Introduction to Cloud Computing Concepts

- o Core principles and architectures of cloud computing.
- o Benefits and challenges of cloud services.
- Key cloud computing models and services.

#### 2. Cloud Platforms Overview

- o Exploring major cloud platforms: AWS, Azure, Google Cloud.
- o Comparing features, services, and use cases.
- o Selecting the appropriate platform for specific needs.

#### **Stage 2: Advanced DevOps Practices**

#### 3. DevOps Principles and Practices

- o Understanding the core principles of DevOps.
- o Implementing DevOps methodologies to improve collaboration and efficiency.
- o Exploring the Dev<mark>ops lifecycle and its components.</mark>

#### 4. DevOps Tools and Frameworks

- o Using Docker for containerization.
- o Managing containerized applications with Kubernetes.
- o Infrastructure as Code (IaC) with Terraform.

## Stage 3: Cloud Application Development5. Cloud Application Development and Deployment

- o Developing cloud-native applications using modern frameworks.
- o Deploying applications on cloud platforms.
- o Best practices for cloud application development.

#### 6. CI/CD Pipelines

- o Setting up continuous integration and continuous delivery (CI/CD) pipelines.
- o Automating testing, deployment, and monitoring.
- o Ensuring reliability and efficiency in application deployment.

## Stage 4: Cloud Infrastructure Management

## 7. Cloud Infrastructure and Network Management

- o Managing cloud infrastructure and networks.
- o Implementing cloud security measures.
- o Monitoring and optimizing cloud resources.

#### 8. Cloud Data and Analytics

- o Analyzing and managing data in the cloud.
- o Using cloud-based analytics tools and services.
- o Ensuring data security and compliance.





# PROGRAM OUTLINE

#### **Elective Modules**

#### 9. Data Ethics and Privacy

o Ethical considerations, privacy laws, and compliance strategies.

#### 10. Al Integration for Cloud

o Implementing AI solutions in cloud architectures.

#### 11. Big Data Solutions in Cloud

o Managing big data applications in cloud environments.

#### 12. Cloud DevOps Practices

o Advanced CI/CD pipelines, automation, and containerization.

#### 13. Cloud Project Management

o Leading cloud computing projects and ensuring successful delivery.

#### 14. IoT Integration for Cloud

o Integrating cloud solutions with IoT devices.

#### **Enrollment Now Open!**

Take the first step towards becoming a cloud computing and DevOps expert. Enroll in our Advanced Certification in Cloud Computing & DevOps Program and enhance your career with Chools.