

Emerging Technologies

Google Cloud Certification Program

Curriculum

Program Outline :

Module 1: Fundamentals of Google Cloud

1. Introduction to Google Cloud

- Core principles, services, and tools of Google Cloud.
- Benefits of using Google Cloud for cloud computing.
- Overview of Google Cloud global infrastructure and regions.

2. Google Cloud Service Models

- Understanding IaaS, PaaS, and SaaS on Google Cloud.
- Key differences and use cases for each service model.
- Selecting the appropriate service model for different applications.

Module 2: Advanced Google Cloud Solution Architecture

3. Designing Google Cloud Solutions

- Best practices for designing scalable and reliable Google Cloud solutions.
- Applying the Google Cloud Architecture Framework.
- Selecting the appropriate Google Cloud services for specific use cases.

4. Google Cloud Security and Compliance

- Ensuring security and compliance in Google Cloud solutions.
- Implementing identity and access management with Google Cloud IAM.

- Understanding data protection, encryption, and compliance requirements.

5. Optimizing Google Cloud Performance

- Techniques for optimizing performance and cost-efficiency of Google Cloud solutions.
- Implementing caching, content delivery networks (CDNs), and other performance-enhancing services.
- Monitoring and managing resource usage to optimize costs.

6. Google Cloud Deployment and Management

- Managing Google Cloud deployments using tools like Google Cloud Deployment Manager, Terraform, and Google Cloud CLI.
- Automating deployments and configuration management.
- Best practices for managing and monitoring Google Cloud resources.

Module 3: Practical Applications

7. Hands-on Google Cloud Projects

- Real-world projects to apply Google Cloud solution architecture skills.
- Designing and implementing cloud solutions for various scenarios.
- Collaborating with peers and mentors to solve complex challenges.

8. Google Cloud Integration

- Integrating Google Cloud solutions with existing on-premises and cloud systems.
- Using Google Cloud Hybrid Cloud solutions to create seamless integrations.
- Best practices for data migration and synchronization.

Module 4: Capstone Project

9. Integration of Learned Skills

- Apply tools and techniques to design and implement a comprehensive Google Cloud solution.
- Demonstrate your ability to solve real-world problems using Google Cloud services.

10. Advanced Google Cloud Techniques

- Deepening knowledge and exploring advanced Google Cloud capabilities.

- Implementing advanced networking, security, and data management solutions.

Elective Modules

11. Data Ethics and Privacy

- Ethical considerations, privacy laws, and compliance strategies.

12. AI for Google Cloud

- Implementing AI solutions in Google Cloud architectures.

13. Big Data in Google Cloud

- Managing big data applications in Google Cloud environments.

14. Google Cloud DevOps

- CI/CD pipelines, automation, and containerization with Docker and Kubernetes.

15. Google Cloud Project Management

- Leading Google Cloud projects and ensuring successful delivery.

16. Google Cloud for IoT

- Integrating Google Cloud solutions with IoT devices.

Websites:

- <https://chools.in/>
- <https://ramaqchools.com/>
- <https://www.choolsgroup.com/>