

EC-Council CCSE: Certified Cloud Security Engineer

Course Outline

1) Introduction to Cloud Security

- Understand Cloud Computing Fundamentals
- Understand Cloud Security Objectives and Issues
- Understanding Cloud Security Insights
- Evaluate CSPs for Security before Consuming a Cloud Service
- Discuss Security Shared Responsibility Model in Amazon Cloud (AWS)
- Discuss Security Shared Responsibility Model in Microsoft Azure Cloud

2) Platform and Infrastructure Security in Cloud

- Understand Cloud Platform and Infrastructure
- Understand the Risks and Threats Associated with Cloud Platform and Infrastructure
- Learn how to Secure the Key Components of Cloud Platform and Infrastructure
- Learn how to Design a Secure Data Center in Cloud
- Understand Cloud Platform and Infrastructure Security in AWS
- Learn how to Implement Cloud Platform and Infrastructure Security in AWS
- Understand Cloud Platform and Infrastructure Security in GCP
- Learn how to Implement Cloud Platform and Infrastructure Security in Google
- Understand Cloud Platform and Infrastructure Security in Microsoft Azure
- Learn to Implement Cloud Platform and Infrastructure Security in Microsoft Azure

3) Application Security in Cloud

- Understand Cloud Application Security
- Discuss cloud application security risks
- Understand Secure Software Development Lifecycle (SSDLC) of Cloud Applications
- Understand DevOps and Continuous Integration/Continuous Deployment (CI/CD)
- Discuss cloud application security controls
- Understand Application Security Features in AWS
- Learn How to Implement Application Security in AWS
- Understand Application Security Features in Azure
- Learn How to Implement Application Security in Azure
- Understand Application Security Features in GCP
- Learn How to Implement Application Security in GCP

4) Data Security in Cloud

- Understand Data Security in Cloud
- Discuss cloud data storage fundamentals
- Understand the cloud storage architecture and life cycle phases
- Evaluate the risks, attacks, and issues in cloud data storage
- Understand data security strategies and technologies in the cloud
- Discuss Information Rights Management Systems
- Discuss Data retention and archiving strategies

- Discuss Storage and Analysis of Data events
- Understand storage services in Amazon Web Services (AWS)
- Learn how to implement data security in Amazon Web Services (AWS)
- Understand storage services in Google Cloud Platform (GCP)
- Learn how to implement data security in Google Cloud Platform (GCP)
- Understand storage services in Microsoft Azure
- Learn how to implement data security in Microsoft Azure

5) Security Operations in Cloud

- Discuss cloud security operations
- Understand elements (standards and methods) in cloud data center physical/logical operations
- Learn Security Operations to Build Cloud Infrastructure
- Learn How to Perform Security Operations for Cloud Infrastructures
- Learn Security Operations to Manage Cloud Infrastructure
- Discuss Security Configurations Management for Cloud Infrastructure
- Learn to Monitor Security Operations for Cloud Infrastructure
- Understand security operations in Microsoft Azure
- Learn to implement security operations in Microsoft Azure
- Understand security operations in Amazon Web Services (AWS)
- Learn to implement security operations in Amazon Web Services (AWS)
- Understand security operations in Google Cloud Platform (GCP)
- Learn to implement security operations in Google Cloud Platform (GCP)

6) Penetration Testing in Cloud

- Understand the scope of cloud penetration testing
- Learn generic penetration testing steps in the cloud
- Learn AWS-specific penetration testing steps
- Learn Azure-specific penetration testing steps
- Learn GCP-specific penetration testing steps

7) Incident Response in Cloud

- Understand Cloud Incident Response
- Understand Cloud Incident Response Lifecycle
- Understand How SOAR Accelerates Incident Response
- Discuss Security Incident Response in AWS
- Discuss AWS Investigation and Detection Tools
- Discuss Security Incident Response in Microsoft Azure Cloud
- Discuss Security Incident Response in Google Cloud Platform (GCP)

8) Forensic Investigation in Cloud

- Discuss cloud forensics
- Learn how to investigate security incidents in Amazon Web Services (AWS)
- Learn how to investigate security incidents in Microsoft Azure
- Learn how to investigate security incidents in Google Cloud Platform (GCP)

9) Business Continuity and Disaster Recovery in Cloud

- Discuss Cloud Disaster Recovery and Business Continuity
- Learn to Design Disaster Recovery and Business Continuity in Cloud
- Learn to Architect Recovery and Resilience in AWS
- Learn to Implement Recovery and Resilience in AWS
- Understand Business Continuity and Disaster Recovery in Microsoft Azure
- Learn Disaster Recovery Configurations in Azure
- Learn to Implement BC/DR with Azure SQL Database
- Learn to Configure BCDR for Azure Stack Edge VPN
- Understand Various Disaster Recovery Scenarios in Azure
- Learn to Implement BCDR in Azure
- Discuss Azure Partner Solutions for BCDR
- Discuss BC/DR in Google Cloud Platform (GCP)
- Discuss GCP Resources for Disaster Recovery (DR) and Business Continuity Plan (BCP)
- Understand Disaster Recovery for Data in GCP
- Understand Disaster Recovery for Applications in GCP
- Learn to Architect DR for Cloud Infrastructure Outages
- Learn to Implement BCDR in Google Cloud Platform (GCP)
- Discuss Partner Solutions for Implementing BCDR in GCP

10) Governance Risk Management and Compliance in Cloud

- Understand GRC in the Cloud
- Discuss Cloud Governance
- Learn to Implement and Maintain Governance for Cloud Computing
- Discuss Risk Management in the Cloud
- Discuss Risk Management Framework and Process in the Cloud
- Understand Cloud Compliance
- Learn to Implement GRC in the cloud
- Understand GRC in Amazon Web Services (AWS)
- Understand GRC in Azure
- Understand GRC in Google Cloud Platform (GCP)

11) Standards Policies and Legal Issues in Cloud

- Understand Laws Impacting Cloud Computing
- Learn the Cloud Computing Standards
- Describe the Legal Frameworks for Data Protection and Privacy
- Learn Audit Planning and Reporting in the Cloud
- Describe Outsourcing and Vendor Management
- Understand Standards, Policies, and Auditing in AWS
- Understand Standards, Policies, and Auditing in Azure
- Understand Standards, Policies, and Auditing in GCP