

Emerging Business

DevOps Practitioner

Curriculum

Program Outline :

Module 1: Fundamentals of DevOps Practitioner

- **Understanding DevOps:**

Learn the core principles and practices of DevOps, including the cultural and technical aspects that drive successful DevOps implementation.

- **Continuous Integration and Continuous Delivery (CI/CD):**

Understand the importance of CI/CD and how to implement these practices to automate the software development and deployment process.

- **Automation and Infrastructure as Code (IaC):**

Gain knowledge of automation tools and practices, including Infrastructure as Code (IaC), to manage and provision infrastructure using code.

Module 2: Advanced DevOps Practitioner

- **Continuous Integration and Continuous Deployment (CI/CD):**

Deep dive into CI/CD practices, including advanced techniques for automating the software development and deployment process.

- **Infrastructure as Code (IaC):**

Advanced use of IaC to manage and provision infrastructure using code, ensuring consistency and scalability

- **Containerization and Orchestration:**

Mastery of containerization technologies like Docker and orchestration tools like Kubernetes to manage and deploy applications efficiently.

Module 3: Practical Applications

- **Automating Software Development and Deployment:**

Implement Continuous Integration (CI) and Continuous Delivery (CD) pipelines to automate the software development and deployment processes. Use tools like Jenkins, GitLab CI, and Azure DevOps to streamline code integration, testing, and deployment.

- **Infrastructure Automation:**

Utilize Infrastructure as Code (IaC) practices to automate the provisioning and management of infrastructure. Tools like Terraform and Ansible can help you define and deploy infrastructure configurations consistently and efficiently.

- **Monitoring and Performance Management:**

Set up robust monitoring and logging systems using tools like Prometheus, Grafana, and ELK Stack (Elasticsearch, Logstash, Kibana) to track application performance, detect issues, and ensure system reliability. Implement automated alerting and incident response mechanisms to address issues promptly.

Module 4: Capstone Project

- **Assessment and Planning:**

Conduct an assessment of the current software development and deployment processes.

Identify areas for improvement and define the scope and objectives of the DevOps implementation.

- **CI/CD Pipeline Development:**

Design and implement a Continuous Integration (CI) and Continuous Delivery (CD) pipeline using tools like Jenkins, GitLab CI, or Azure DevOps.

Automate the build, test, and deployment processes to ensure faster and more reliable software releases.

- **Infrastructure as Code (IaC):**

Implement Infrastructure as Code (IaC) practices using tools like Terraform or Ansible.

Define and provision infrastructure configurations consistently and efficiently through code.

Elective Modules

- **Advanced CI/CD Pipelines:**

Dive deeper into the design and implementation of advanced Continuous Integration and Continuous Delivery (CI/CD) pipelines. Learn how to optimize and automate build, test, and deployment processes for greater efficiency and reliability.

- **Cloud DevOps:**

Explore cloud-based DevOps practices and tools. Gain proficiency in using cloud platforms like AWS, Azure, or Google Cloud to implement and manage DevOps processes at scale.

- **DevSecOps:**

Integrate security into the DevOps pipeline. Learn how to implement security practices and tools to ensure that applications are secure throughout the development and deployment lifecycle.

Websites:

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