Emerging Technologies

Full Stack Cloud Developer Program

Curriculum

Program Outline :

Module 1: Fundamentals of Web Development

1. **Introduction to HTML & CSS**

   o   Learn the basics of HTML for creating web pages.

   o   Understand CSS for styling and layout.

   o   Explore best practices for web development.

2. **JavaScript Basics**

   o   Understand the fundamentals of JavaScript.

   o   Learn to manipulate the DOM and handle events.

   o   Implement basic interactive features.

Module 2: Advanced Front-End Development

3. **React and Front-End Frameworks**

   o   Learn to build interactive and dynamic user interfaces with React.

   o   Understand state management and component lifecycle.

   o   Explore other front-end frameworks and libraries.

4. **Responsive Design with Bootstrap**

   o   Understand the principles of responsive web design.

   o   Use Bootstrap to create mobile-first websites.

o Implement grid systems and responsive elements.

Module 3: Advanced Back-End Development

5. **Node.js and Express**

   o Learn to build server-side applications with Node.js.

   o Use Express to create RESTful APIs.

   o Understand middleware and routing.

6. **Back-End Development with Django**

   o Explore Django for building robust back-end systems.

   o Implement authentication and authorization.

   o Connect Django with databases like MySQL.

Module 4: Cloud Infrastructure and Services

7. **Introduction to Docker**

   o Learn containerization with Docker.

   o Create Docker images and containers.

   o Understand Docker Compose and orchestration.

8. **Kubernetes and OpenShift**

   o Deploy and manage containerized applications with Kubernetes.

   o Explore OpenShift for cloud infrastructure management.

   o Implement CI/CD pipelines.

Elective Modules

9. **Data Ethics and Privacy**

   o Ethical considerations, privacy laws, and compliance strategies.

10. **AI Integration for Web Applications**

    o Implementing AI solutions in web applications.

11. **Big Data Solutions in Cloud**

    o Managing big data applications in cloud environments.

12. **Cloud DevOps Practices**

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

13. **Project Management in Cloud Development**

    o Leading cloud development projects and ensuring successful delivery.

14. **IoT Integration for Web Applications**

    o Integrating web applications with IoT devices.

Websites:

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