Emerging Technologies

Full Stack Architecture - MERN / MEAN / LERN

Curriculum

Program Outline :

Module 1: Fundamentals of JavaScript and Full Stack Technologies

1. **JavaScript Fundamentals**

   o Core principles, syntax, and programming concepts.

2. **Object-Oriented Programming in JavaScript**

   o Classes, objects, inheritance, polymorphism, encapsulation.

Module 2: Advanced JavaScript Frameworks

3. **Front-End Frameworks (React, Angular)**

   o Creating dynamic and responsive user interfaces.

4. **Back-End Frameworks (Express, Node.js)**

   o Developing server-side logic and APIs.

5. **Database Management (MongoDB, PostgreSQL)**

   o Data storage, retrieval, and management.

Module 3: Practical Applications

6. **Building Full Stack Applications**

   o Integrating front-end and back-end technologies.

7. **Data Integration and Visualization**

   o Using JavaScript libraries for data manipulation and visualization.

8. **Deployment and Scaling**

   o Deploying applications on web servers and scaling them.

Module 4: Capstone Project

9. **Integration of Learned Skills**

   o Apply tools and techniques to real-world full stack projects.

10. **Advanced Full Stack Development Techniques**

    o Exploring advanced concepts and optimizing applications.

Elective Modules

11. **Data Ethics and Privacy**

    o Ethical considerations, privacy laws, compliance strategies.

12. **Cloud Computing for JavaScript Development**

    o Deploying applications on cloud platforms.

13. **DevOps for Full Stack Development**

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

14. **Mobile App Development with JavaScript**

    o Creating cross-platform applications with React Native.

15. **Cybersecurity for Web Development**

    o Best practices, threat modeling, security testing.

Websites:

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