

FULL STACK WEB DEVELOPMENT SYLLABUS COPY

Engineered for skill enhancement.



PROGRAM HIGHLIGHTS

Accredited Certificates :

- ✓ Program approved ISO Certification

Internships :

- ✓ Industry-relevant opportunities provided-

Placement Assistance :

- ✓ Career guidance from industry experts-

Basic to Advanced Level Training :

- ✓ Learn from experienced AI professionals .

Live & Recorded Lectures :

- ✓ Flexible learning at your convenience .

Real-Time Projects :

- ✓ Hands-on minor & major projects



ABOUT US

- **OUR MISSION :**

Nxt Sync is a pioneering EdTech company committed to bridging the gap between theoretical learning and practical application. Our mission is to empower students with cutting-edge AI skills that enhance employability and prepare them for a tech-driven future.

- **OUR VISION--UPSKILL:** Empowering minds for the future.
- **INNOVATE:** Fostering creativity and breakthroughs .
- **EXCEL:** Preparing industry-ready professionals.



WHY FULL STACK WEB DEVELOPMENT?

- ☐ High Demand for Web Developers
- ☐ End-to-End Development Skills
- ☐ Versatile Career Opportunities
- ☐ Competitive Salaries
- ☐ Enables Freelancing & Remote Work
- ☐ Rapidly Growing Industry
- ☐ Mastery of Frontend, Backend, and Database Technologies



LEARNING PATH

- **Introduction to Web Development**
- **Frontend Development (HTML, CSS, JavaScript)**
- **Responsive Web Design & UI/UX Basics**
- **JavaScript & Modern Frameworks**
- **Backend Development (Node.js, Express.js)**
- **Database Management (SQL & NoSQL)**
- **Authentication & Security**
- **RESTful APIs & GraphQL**
- **Deployment & DevOps**
- **Capstone Projects & Industry Case Studies**



DETAILED MODULE BREAKDOWN

Module 1: Introduction to Web Development

- Understanding Web Development Basics
- Client-Server Architecture
- Evolution of Web Technologies
- Setting up the Development Environment

Module 2: Frontend Development (HTML, CSS, JavaScript)

- HTML5 Semantic Elements
- CSS3 Styling, Flexbox & Grid
- JavaScript Fundamentals & ES6+ Features



Module 3: Responsive Web Design & UI/UX Basics

- Mobile-First Approach
- CSS Frameworks (Bootstrap, Tailwind CSS)
- Introduction to UI/UX Principles

Module 4: JavaScript & Modern Frameworks

- DOM Manipulation & Event Handling
- JavaScript ES6+ Concepts
- React.js / Vue.js / Angular (One Framework Deep Dive)

Module 5: Backend Development (Node.js, Express.js)

- Introduction to Backend Development
- Setting up a Node.js Server
- Routing & Middleware in Express.js



Module 6: Database Management (SQL & NoSQL)

- SQL Databases (MySQL, PostgreSQL)
- NoSQL Databases (MongoDB)
- CRUD Operations & Data Modeling .

Module 7: Authentication & Security

- User Authentication (JWT, OAuth)
- Data Encryption & Web Security Practices
- Handling CORS & API Security

Module 8: RESTful APIs & GraphQL

- Building RESTful APIs
- Introduction to GraphQL
- API Testing with Postman



Module 9: Deployment & DevOps

- Version Control (Git, GitHub)
- Hosting Platforms (Heroku, Netlify, Vercel)
- CI/CD Pipelines & Containerization (Docker)

Module 10: Capstone Projects & Industry Case Studies

- Hands-on Full Stack Projects
- Real-world Web Applications (E-commerce, Social Media, etc.)
- Industry Collaboration & Research-Based Projects



ASSIGNMENT'S & ASSESSMENTS

- **Weekly hands-on assignments**
- **Mid-term AI mini-projects**
- **Final capstone AI project**
- **Live presentations & discussions**



TOOLS & FRAMEWORKS USED

Programming & Development

- HTML, CSS, JavaScript, TypeScript
- VS Code, Git, GitHub

Frontend Libraries & Frameworks

- React.js, Vue.js, Angular
- Bootstrap, Tailwind CSS

Backend & Database

- Node.js, Express.js
- MongoDB, MySQL, PostgreSQL

Authentication & Security

- JWT, OAuth
- Bcrypt, Helmet.js

Deployment & DevOps

- Docker, Kubernetes
- Heroku, Netlify, Vercel



RECOMMENDED READING

Full Stack Development:

- "Eloquent JavaScript" - Marijn Haverbeke
- "You Don't Know JS" - Kyle Simpson
- "The Road to React" - Robin Wieruch



WHY CHOOSE NXTSYNC?

- ☐ Industry-Aligned AI Curriculum
- ☐ Hands-on Real-World Projects
- ☐ Expert Mentorship & Career Guidance
- ☐ Flexible Learning Schedule
- ☐ ISO-Certified AI Training Program

Start Your AI Journey with NxtSync Today!!!!



THANK YOU

