

Full Stack Developer Syllabus

1. Web Foundations

Goal: Build static, responsive web pages and understand web fundamentals.

Topics:

- HTML5: Structure, forms, semantic tags, accessibility
- CSS3: Flexbox, Grid, Media Queries, Animations
- Responsive Design: Mobile-first approach
- JavaScript Basics: Variables, Loops, Functions, Arrays, Objects, DOM Manipulation, Event Listeners
- Version Control: Git, GitHub basics (clone, push, pull, branch)

Tools:

• VS Code, GitHub, Chrome DevTools

2. JavaScript Advanced

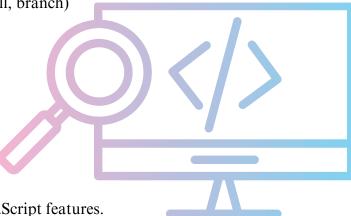
Goal: Build dynamic web applications with modern JavaScript features.

Topics:

- ES6+: Arrow functions, promises, async/await, modules
- Fetch API & Axios
- LocalStorage / SessionStorage

Tools:

• Node.js + npm, Postman





3. Frontend Framework (React.js)

Goal: Build dynamic, component-based single-page applications.

Topics:

- Components, Props, State
- Hooks: useState, useEffect
- Routing (React Router)
- Conditional Rendering
- Forms & Controlled Inputs
- Advanced React: Performance Optimization, Custom Hooks, Lazy Loading
- State Management: Context API or Redux Toolkit



• React Developer Tools

4. Backend Development (Node.js + Express + MongoDB)

Goal: Build REST APIs and connect frontend with backend.

Topics:

- Node.js: Modules, npm scripts, event loop
- Express.js: Routing, middleware, REST APIs
- MongoDB: CRUD operations, Mongoose ORM
- Authentication: JWT, bcrypt
- Error Handling & Validation
- Advanced Node: Caching (Redis), Queues (BullMQ), File Storage (S3)

Tools:

• Postman, MongoDB Atlas, VS Code REST Client

5. Full Stack Integration (MERN)

Goal: Combine frontend + backend into a full MERN project and deploy.

Topics:

- Connect React frontend to Express API
- File Uploads: Multer / Cloudinary
- Deployment:
- Frontend \rightarrow GCP
- Backend \rightarrow GCP
- Environment Variables (.env)
- CORS and Security (Helmet, Rate Limiting)

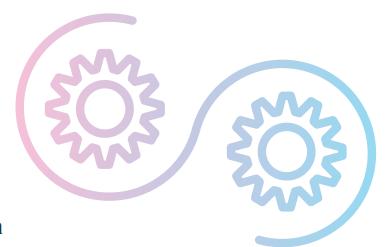




6. CI/CD, DevOps & Cloud Basics

Topics:

- CI/CD: GitHub Actions
- Docker Fundamentals
- GCP / Cloud Deployment Overview



7. Final Portfolio & Job Preparation

- Build a Resume & LinkedIn Portfolio
- Add all projects on GitHub with README.md files

8. Recommended Tech Stack (MERN)

Layer	Tech
Frontend	React.js
Backend	Node.js + Express
Database	MongoDB
Deployment	GCP

Apart from above course details, we will also deliver below: -

- We will guide you what kind of questions can be asked in interview.
- We will help you in building your resume.
- We will take mock interview to prepare you for real time interview.
- Upon completion of the course, learners will be issued a formal certificate recognizing their achievement.
- The total duration of the course is five months.
- All sessions will be conducted through live online classes.
- Gain valuable insights from an industry veteran with more than ten years of hands-on experience.

Sharing of videos to another person is strictly prohibited.

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