

Start on 1st August 2025

✔ *Phase 1: Express.js Core (Day 1–15)*

Day	Topics
1	What is Express? Setup Node + nodemon + Express App ✔
2	app.listen(), req & res objects ✔
3	Routes: app.get(), app.post(), RESTful routes ✔
4	Route Parameters and Query Strings ✔
5	Express Middleware: Basics, Custom Middleware ✔
6	Serving Static Files (images, HTML, etc.) ✔
7	Templating Engines: EJS or Pug ✔
8	JSON Response & res.json() ✔
9	Project: Mini REST API without DB ✔
10	HTTP Status Codes & Headers ✔
11	Error Handling (next(), error middleware) ✔
12	Working with Postman ✔
13	Environment Variables using dotenv ✔
14	Route Modularization (express.Router) ✔
15	Recap + Practice Day ✔

✔ *Phase 2: Intermediate Concepts (Day 16–30)*

Day	Topics
16	SQLite3 Setup (install, DB Browser / CLI) ✔
17	Tables, Schemas & Data Types in SQLite3 ✔
18	CRUD Operations with SQLite3 + SQL basics ✔
19	Async/Await in Express ✔
20	MVC Pattern in Express + SQLite3 ✔
21	RESTful APIs with Controllers ✔
22	Relationships in SQLite3 (JOIN, FK) ✔
23	File Upload (Multer) with SQLite3 reference ✔
24	Validation with express-validator

Day	Topics
25	Pagination, Filtering, Searching (SQL + API)
26	Project: Blog API (SQLite3 + Express)
27	CORS and Security Headers
28	Rate Limiting and Helmet.js
29	Global Error Handler + Custom Errors
30	Recap + Project Review

✔ *Phase 3: Advanced APIs & Auth (Day 31–40)*

Day	Topics
31	JWT Authentication: Signup/Login
32	Protecting Routes with JWT
33	Refresh Tokens
34	Session & Cookies (express-session)
35	Role-Based Access Control
36	OAuth with Google or GitHub
37	WebSockets (Intro to socket.io)
38	API Rate Limiting, Throttling
39	Express Performance Optimization
40	Build: Secure Auth System

✔ *Phase 4: Final Projects & Deployment (Day 41–50)*

Day	Topics
41	Project Planning: Choose 1 Major Project
42	Set up folder structure, routes, models
43	Implement Auth with JWT
44	Core Features: CRUD Operations
45	Add File Upload or Real-time Feature
46	Add Validation + Error Handling
47	Connect Frontend (React/Vue/Vanilla) or Postman
48	Add Admin Panel / Roles

Day	Topics
49	Deployment to Render / Railway / Vercel
50	Final Review + Resume / GitHub / Portfolio Update

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### *Project Ideas:*

- Blog API
  - Chat App (with socket.io)
  - E-commerce backend
  - Todo API with Auth
  - Expense Tracker
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### *Tech Stack Suggestions:*

- *DB*: SQLite3 (or PostgreSQL , MongoDB if needed)
- *Security*: Helmet, bcrypt, express-rate-limit
- *Auth*: JWT, OAuth, sessions
- *Tools*: Postman, Nodemon, GitHub