
SYLLABUS FOR BOARD OF STUDIES ADOPTION — generated from the live catalogue record

Full Stack Web Development Essentials

C-06 · 5 days (configurable 1–5 days) · Informatics · Software Engineering · Years: 2nd, 3rd

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OVERVIEW

A working front end, a REST API, a database and a deployed URL the student can show an interviewer. The classic portfolio builder, and five days at the same price as three — the best value in Part A.

HOURS AND CREDIT POSITION

Contact hours: 40 Guided project: 20 Self-study: 0 Notional total: 60

Credit claim: 2

60 notional hours ÷ 30 hours per credit (NSQF track, UGC Micro-credentials Guidelines §5.3.3) = 2 credits.

COURSE OUTCOMES

- CO1. Build responsive pages with semantic HTML and modern CSS layout (K3)
- CO2. Construct a REST API in Express with correct routes and status codes (K3)
- CO3. Design a database schema and connect it to the API with full CRUD (K5)
- CO4. Apply token-based authentication to protect selected routes (K3)
- CO5. Deploy a full-stack application and demonstrate it from a public URL (K3)

COURSE CONTENT — MODULES

Hours shown are the recommended format; module time scales proportionally when the engagement runs 1–5 days.

Module 1 — The web platform (5h recommended)

Theory: HTTP, browsers, HTML structure, semantic markup

Lab: Build the page skeleton for the capstone product

Output: Semantic HTML pages

Module 2 — Styling and layout (5h recommended)

Theory: CSS selectors, flexbox, grid, responsive breakpoints

Lab: Make the pages work at 375px, 768px and desktop

Output: Responsive styled site

Module 3 — JavaScript in the browser (5h recommended)

Theory: DOM, events, fetch, rendering data

Lab: Wire interactive behaviour into the pages

Output: Interactive front end

Module 4 — A REST API with Node and Express (5h recommended)

Theory: Routes, JSON, status codes, middleware

Lab: Build the capstone's API surface

Output: Running Express API

Module 5 — The database layer (5h recommended)

Theory: Tables, CRUD, connecting the API to a real database

Lab: Persist the capstone's data

Output: API backed by a database

Module 6 — Joining front to back (5h recommended)

Theory: Fetch against your own API, forms, validation, error states

Lab: Complete the full request cycle

Output: Working full-stack feature

Module 7 — Authentication basics (5h recommended)

Theory: Sessions vs tokens, password handling, protecting routes

Lab: Add sign-in to the capstone

Output: Protected user area

Module 8 — Deployment and demo day (5h recommended)

Theory: Environment variables, deploying, the live URL; capstone completion

Lab: Deploy and present to the cohort

Output: Deployed URL + presentation

ASSESSMENT SCHEME (100 MARKS)

Continuous lab exercises — 30 marks

Capstone application — 50 marks

Demo & viva voce — 20 marks

CO-PO MAPPING

CO1 !' PO3 (strength 2)

Front-end craft is the visible half of the product.

CO2 !' PO3 (strength 2)

API design is contract thinking.

CO3 !' PO2 (strength 2)

Schema design forces analysis of the data's true shape.

CO4 !' PO1 (strength 2)

Authentication is the first security concept every developer needs.

CO5 !' PO5 (strength 2)

A deployed URL is the difference between homework and a portfolio.

EVERY PARTICIPANT RECEIVES

- Certificate of completion
- Course material
- LMS access
- Interview question bank
- Mock interview & viva practice
- Optional nasscom NSQF assessment (priced per candidate on your quotation)

FEE

13,200 per student, incl. GST

Excludes the optional nasscom assessment where offered. Final pricing on your college's quotation.

DESIGNED BY

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