

Backend Development

Course Overview

- Node.js and Express.js
- Fundamentals of SQL and NoSQL Databases
- Building RESTful APIs
- Implementing Authentication and Authorization
- Structuring an Express.js Applications for Maintainability
- Capstone Project

Objectives and Learning Outcomes

- Understand the basics of Node.js and Express.js
- Learn to design and implement REST APIs
- Gain practical experience with SQL and NoSQL databases
- Implement secure authentication and authorization
- Develop a full-stack application as a capstone project

Week-by-Week Breakdown

Week 1: Express.js Basics

- Quick refresher on Node.js
- Introduction to Express.js, setting up basic web applications
- Designing RESTful APIs, handling requests and responses

Week-by-Week Breakdown

Week 2: Databases

- Introduction to Databases
- Database Design and Modeling
- SQL
- Integrating SQL Databases with Express.js
- Implementing CRUD Operations

Week-by-Week Breakdown

Week 3: Authentication and Authorization

- Implementing secure authentication (token-based)
- Role-based access control in web applications

Week 4: Deep Dive

- NoSQL Databases
- Structuring Express.js Applications
- Testing Express.js Applications
- Deployment

Week-by-Week Breakdown

Week 5-6: Capstone Project

- Planning and starting the development of the capstone project
- In-depth application development, troubleshooting, and refinement
- Final presentations and project review

Course Expectations and Requirements

- Commitment to Weekly Assignments
- Active Participation in Discussions
- Completion of Capstone Project