



FRONTEND ENGINEERING CURRICULUM

COURSE OUTLINE

Week 1: Introduction to Frontend Development

- Course outline and objectives
- Brief introduction to web development
- HTML fundamentals
- Accessibility fundamentals

Week 2: Styling Frontend Applications with CSS

- CSS fundamentals
- Box model
- Design layout model
- Accessibility with CSS

Week 3: Advanced HTML, CSS, and Version Control

- Animating frontend apps
- Responsive design and media queries
- Version control with Git and GitHub

- Accessibility testing

Week 4: Introduction to JavaScript

- Variables, data types, operators
- Loops
- Numbers, dates, timers
- DOM and event fundamentals
- Accessibility with JavaScript

Week 5: Intermediate JavaScript

- Arrays
- Functions
- Asynchronous JavaScript
- Accessibility with JavaScript

Week 6: More Intermediate JavaScript

- Modules and third-party packages
- ES6 modules
- Accessibility with ES6 modules

Week 7: Object-Oriented Programming

- Classes and objects
- Inheritance
- Abstraction
- Accessibility with object-oriented programming

Week 8: Introduction to Frontend Libraries

- Frameworks vs. libraries
- React fundamentals
- Accessibility with React

Week 9: Introduction to React Hooks

- useState
- useRef
- useEffect
- useMemo
- Creating custom hooks
- Form handling in React
- Accessibility with React hooks

Week 10: Introduction to React State Management

- Context API
- Redux
- Accessibility with React state management

Week 11: Building SPAs and Calling APIs in a React App

- Sending HTTP requests
- Building SPAs with react-router
- Basic authentication and authorization
- Accessibility with React SPAs and APIs

Week 12: Deploying React Apps

- Authentication and authorization
- Tailwind CSS (optional)
- Deploying to Netlify

- Revision, reflection, and wrap-up
- Accessibility testing

GUEST SPEAKER SESSION

- Invite a Backend Developer from the industry.
- Insights and experiences sharing.
- Q&A session with students.

DESIGN PROJECT

- Students work on their final projects
- Consultation and feedback sessions

PROJECT PRESENTATION

- Create a portfolio.
- Students present their projects.