



Course Outline: Web Development with React

Course by:

IT Business Incubator, CUET
Chattogram-4349, Bangladesh.

Course Summary

No.	Subject	Comments
1	Course Duration	72 Hours (24 Classes, 12 Weeks)
2	Pre-requisites	Yes <ul style="list-style-type: none">• Basic understanding of programming concepts• Familiarity with HTML and CSS• Some knowledge of JavaScript• Comfortable using the command line interface (CLI)
3	Lab Facilities	ITBI, CUET will provide.

Schedule

Batch - 01 (Offline): Friday & Saturday 10 am to 1 pm

Batch - 02 (Online): Friday & Saturday 3 pm to 6 pm

Coordinator

Professor Dr. M. Moshiul Hoque

Professor, Dept of CSE, CUET

Director, IT Business Incubator in CUET

Former Dean, Faculty of Electrical & Computer Engineering, CUET

Chair, IEEE Bangladesh Section

Trainers

Ratul Bhowmick

Senior Software Engineer,
Programming Hero

Tanvir Ibn Touhid

Senior Software Engineer,
Diligite Ltd.

Avishek Chowdhury

Senior Software Engineer,
Diligite Ltd

What will you learn?



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- **JavaScript Fundamentals:** Master the core concepts of JavaScript including variables, control structures, functions, and ES6 features.
- **HTML and CSS with Tailwind:** Gain proficiency in HTML and CSS, and learn the utility-first approach of Tailwind CSS for efficient styling.
- **Git and Version Control:** Understand version control concepts and learn to use Git for collaborative development.
- **Introduction to Web Development with React:** Get familiar with React.js, setting up the development environment, and basic web technologies like HTML, CSS, and JavaScript.
- **React Components and Styling:** Learn to create and style React components using CSS or CSS-in-JS libraries.
- **Routing and Navigation in React:** Implement routing and navigation using React Router.
- **Working with APIs and Data Management:** Make API calls and manage application state using React Hooks.
- **Advanced State Management in React:** Master advanced state management patterns like Redux/Zustand and Context API.
- **Advanced Topics in React:** Dive into asynchronous data fetching, testing, debugging, deployment, and project optimization techniques in React.
- **Basic Knowledge in Next.js:** Understand the core concepts of Next.js and migrate projects to Next.js for enhanced performance and functionality.
- **Project Refinement and Q&A:** Review and refine projects while addressing common challenges and questions.

Course Modules

Web App Development with React.js & Tailwind (Module Planning)



Module	Topics Covered	Duration
Module 1: JavaScript Fundamentals	<ul style="list-style-type: none">-Understanding variables, data types, and basic operators in JavaScript-Mastery of control structures: if statements, loops, switch statements-Functions, scope, and closures in JavaScript-ES6 features: arrow functions, destructuring, spread/rest operators-Error handling and debugging techniques in JavaScript	10 hours
Module 2: HTML and CSS with Tailwind	<ul style="list-style-type: none">-Understanding HTML elements and attributes-Familiarity with CSS selectors, properties, and layout techniques-Introduction to Tailwind CSS and its utility-first approach-Hands-on exercises and projects to apply CSS styling using Tailwind CSS	8 hour
Module 3: Git and Version Control	<ul style="list-style-type: none">-Installing Git and setting up a Git repository-Basic Git commands (clone, commit, push, pull)-Branching, merging, and resolving conflicts in Git-Collaborative version control using GitHub or GitLab	3 hours
Module 4: Introduction to Web Development with React and Basic Web Technologies	<ul style="list-style-type: none">-Overview of web development technologies-Introduction to React and its advantages-Setting up the development environment with Create React App-Basic understanding of JavaScript, HTML, CSS, and Git	5 hours
Module 5: React Components and Styling	<ul style="list-style-type: none">-Exploring React components-Styling components using CSS or CSS-in-JS libraries-Handling user interactions and forms in React-Further exploration of Tailwind CSS integration with React	6 hours
Module 6: Routing and Navigation in React	<ul style="list-style-type: none">-Introduction to React Router-Setting up routes and navigation in a React application	3 hours
Module 7: Working with APIs and Data Management in React	<ul style="list-style-type: none">-Making API calls with Fetch or Axios-Managing application state with React Hooks	4 hours
Module 8: Advanced State Management in React	<ul style="list-style-type: none">-Understanding advanced state management patterns (Redux/Zustand, Context API)-Implementing state management in a React application	6 hours



Module 9: Advanced Topics in React	-Asynchronous Data Fetching and Error Handling in React -Testing and Debugging in React -Deployment and Hosting of React Apps -Project Development and Optimization in React	10 hours
Module 10: Basic Knowledge in Next.js	-Introduction to Next.js -Next.js structure & development structure -Understanding the concept of App Router -Migrating the previous project in Next.js	12 hours
Module 11: Project Refinement and Q&A	-Reviewing and refining the project -Addressing common challenges and questions	5 hours

Frequently Asked Questions (FAQ)

Can I register for multiple courses?

-Yes, participants can register for multiple courses.

Will there be an overlap in class schedules for multiple courses

-There may be minimal overlap in class schedules, Please check the routine available at the notice board.

What are the available payment methods for online enrollment?

-Payment can be made via cash or online using the "Bkash to Bank" option.

Are there evening batches available for job holders?

-Yes, evening batches will be available. Please check the routine available on the notice board of the website.

Can I switch between online and offline classes?

-Online and offline classes are separate batches, and transfer depends on seat availability.

How will admission be confirmed?

-Admission will be confirmed upon payment; no separate admission exam will be conducted.

Will classes be conducted in locations other than the chosen one?

-No, classes will only be conducted at the chosen location, not in other cities.

What is the profile of the trainers?

-Faculty members will include both academic and industry experts.

What is the last date of enrollment?

-There is no last date of admission. After filling out the batches, enrollment will be closed.



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Can I admit physically?

-Yes, Come to the third floor (Room no: 301,302) at the Multipurpose Building of IT Business Incubator, CUET.

Will classes be held during Ramadan?

-Yes, they will.

Will a recorded version be available?

Yes, you will get lifetime access to the recorded version of the classes.