

REACT FOUNDATIONS

Course Code: 840204

Learn to build dynamic user interfaces with React in our comprehensive foundation course.

React Foundation offers a thorough introduction to React, a widely-used JavaScript library for building user interfaces. This course covers essential and advanced topics, including component-based architecture, state management with hooks, and styling techniques. Participants will learn to set up a React development environment, create reusable components, manage data flow, and handle side effects with the `useEffect` hook.

By the end of the course, you will learn to construct JSX elements, implement prop patterns, manage state, and debug React applications effectively. You will be equipped to build high-performance, scalable, and maintainable web applications.

This course includes hands-on practice through labs and exercises, reinforcing the concepts covered in the lectures - a balanced mix of theoretical knowledge and practical application, ensuring a comprehensive learning experience.

What You'll Learn

- Set up a React development environment and create an initial application structure.
- Construct JSX elements to build React component structures and handle dynamic content.
- Build reusable React components applying composition patterns.
- Implement prop patterns to pass data and event handlers between components.
- Use state hooks to manage component data and handle user interactions.
- Integrate data flow patterns to manage component communication and state sharing.
- Implement container and presentational component patterns to organize React applications effectively.
- Apply styling using CSS modules and styling organization patterns.
- Use the `useEffect` hook to manage side effects and component lifecycle needs.
- Build form interfaces using both controlled and uncontrolled form patterns.
- Use React Developer Tools to debug component issues and analyze application performance.

Who Needs to Attend

- Front-End Developers
- Web Developers
- Software Engineers
- Technical professionals

Prerequisites

This is an intermediate level course for those looking to expand their skill set and master REACT. Learners should have proficiency in JavaScript, HTML, and CSS.

[Fundamentals of Javascript](#)

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VIRTUAL CLASSROOM LIVE

\$1,950 CAD

2 Day

Virtual Classroom Live Outline

1. Introduction to React

- What is React and its history
 - ☒ Definition and differentiation
 - ☒ Key benefits and use cases
 - ☒ Component-based architecture for building UI
- Virtual DOM
 - ☒ Definition of the virtual DOM
 - ☒ How React uses the virtual DOM (conceptually)
 - ☒ Simple comparison with traditional web development
 - ☒ Why this matters for modern web apps
- React Development Setup
 - ☒ Development environment setup
 - ☒ Quick start with Create React App
 - ☒ Development tools associated with React (React Developer Tools)
- Project Structure
 - ☒ Generating first React app with Create React App
 - ☒ Folder structure: Component organization and file name conventions

2. JSX

- Getting Started
 - ☒ HTML entry point (root div)
 - ☒ createRoot and render
 - ☒ Basic React component structure with JSX
 - ☒ Understanding the relationship between files
- Fundamentals
 - ☒ What is JSX and why do we use it?
 - ☒ Rules of JSX (parent element, closing tags)
- Writing JSX
 - ☒ Basic syntax and attributes
 - ☒ Adding JavaScript expressions with {}

- Exploring JSX use cases
 - ☒ Variables and props
 - ☒ Simple conditional rendering
- 3. React Components
 - Component Basics
 - ☒ What is a component?
 - ☒ Creating your first component
 - ☒ Single line and multiline JSX in a component
 - ☒ Importing and exporting components
 - ☒ Rendering a component
 - More about React Components
 - ☒ Logic in a React component
 - ☒ Conditions in a React component
 - ☒ Handling user interactions in components
 - Component Composition
 - ☒ Putting components in other components
 - ☒ Reusing components
 - ☒ Component organization
- 4. Props
 - Prop basics
 - ☒ What are props?
 - ☒ Passing data to components
 - ☒ Receiving props
 - ☒ Prop types and defaults
 - ☒ Children prop
 - ☒ Rendering a component's props
 - ☒ Passing props from component to component
 - ☒ Dynamic rendering with props
 - More complex prop patterns
 - ☒ Pass an event handler as a prop
 - ☒ Receive an event handler as a prop
 - ☒ Event handler naming conventions
- 5. State and Events
 - Understanding State
 - ☒ What is state?
 - ☒ "stateful" components
 - ☒ When to use state
 - ☒ When not to use state
 - ☒ Component re-rendering basics
 - useState Hook
 - ☒ What is a hook?
 - ☒ Initializing state
 - ☒ State updates
 - ☒ Multiple state values

Brief recap of content covered in Day 1, focusing on creating components and state

1. Component Patterns

- Component Architecture
 - ☒ Container vs Presentational Components
 - ☒ When to separate components
 - ☒ Rendering presentational components in containers
- React Data Flow
 - ☒ One-way data flow concept
 - ☒ Parent/Child communication patterns
 - ☒ Sibling/Sibling communication
 - ☒ Understanding prop drilling
 - ☒ Lifting state up as a solution

2. Styling in React

- Regular CSS with className
- CSS modules basics
- Styling organization
- Component-specific styling

3. Effects and Lifecycle

- Working with Effects
 - ☒ What are side effects in React?
 - ☒ Why we need to manage effects
 - ☒ Basic syntax and usage of useEffect hook
 - ☒ When effects run
 - ☒ Effect dependencies
 - ☒ What is cleaning up an effect?
 - ☒ How to write cleanup functions
- Lifecycles
 - ☒ Component phases (initial, updates, cleanup)
 - ☒ Using effects for lifecycle needs

4. Forms

- Form Fundamentals
 - ☒ HTML forms vs React forms
 - ☒ React's two approaches: Controlled vs Uncontrolled
 - ☒ When to use each approach
- Uncontrolled Forms
 - ☒ useRef hook with forms
 - ☒ Accessing input values
 - ☒ Creating a basic uncontrolled form
 - ☒ Handling submit events
 - ☒ Getting form values
 - ☒ Use cases for uncontrolled forms
- Controlled Forms
 - ☒ Basic form elements
 - ☒ useState with single inputs
 - ☒ Managing multiple form fields
 - ☒ Handling different input types

- ☒ Handling form submission
- ☒ Preventing default behavior
- ☒ Gathering form data
- ☒ Basic validation
- ☒ Success/error states

5. Debugging React Applications

- React Developer Tools
 - ☒ Components tab
 - ☒ Props and state inspection
 - ☒ Component tree navigation
- Debugging React Applications
 - ☒ Common React errors and solutions

Jun 16 - 17, 2025 | 8:30 AM - 4:30 PM EDT

Jul 17 - 18, 2025 | 8:30 AM - 4:30 PM EDT

Aug 21 - 22, 2025 | 8:30 AM - 4:30 PM EDT

Sep 29 - 30, 2025 | 8:30 AM - 4:30 PM EDT

Oct 27 - 28, 2025 | 8:30 AM - 4:30 PM EDT

Dec 4 - 5, 2025 | 8:30 AM - 4:30 PM EST

Jan 12 - 13, 2026 | 8:30 AM - 4:30 PM EST



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PRIVATE GROUP TRAINING

2 Day

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