

## Course duration

- 3 days

## Course Benefits

- Learn about the benefits of writing user interfaces with React.
- Learn how data flows in a React user interface.
- Learn how to write a React component.
- Learn what a virtual DOM is.
- Learn to use Create React App to make your first React user interface.
- Learn the role of JSX in React.
- Learn how JSX is different from HTML.
- Learn how to use expressions in JSX.
- Learn about best practices for writing React components.
- Learn how to pass data between components with props.
- Learn what "state" is in React.
- Learn how to create stateful variables.
- Learn how to update state.
- Learn how to implement routing in a React application.
- Learn how to style React components and applications.
- Learn to work with your new React skills.
- Learn what purpose hooks serve.
- Learn how to use the useEffect hook.

## Available Delivery Methods

### Public Class

Public expert-led online training from the convenience of your home, office or anywhere with an internet connection. Guaranteed to run .

### Private Class

Private classes are delivered for groups at your offices or a location of your choice.

### Self-Paced

Learn at your own pace with 24/7 access to an On-Demand course.

## Course Outline

1. Introduction to React
  1. What is React?
    1. React is Fast
    2. React is Scalable
    3. React is Reliable
  2. React Essentials
    1. Rendering in React
  3. Get Started with Create React App
  4. Introducing Our Project: Mathificent
  5. Learning the Structure of a React App
2. JSX and React Elements
  1. Using JSX in React
  2. JSX Rules
    1. JSX Syntax
    2. JSX is an Extension of JavaScript
    3. Using Custom Elements in JSX
    4. Using JavaScript in JSX
  3. Using JSX
3. React Components
  1. Assembling User Interfaces
    1. Understanding F.I.R.S.T
    2. Passing Data with Props
  2. Breaking an App into Components
  3. Passing Props Between Components
  4. Organizing Your Components
  5. Semantic HTML and the Fragment Element
  6. Using Fragment
  7. Destructuring props
4. React State
  1. Understanding State
  2. Getting React to React
  3. Why is count a Constant?
  4. Child Components and State
  5. Adding State
5. React Routing
  1. Routing
  2. Implementing Routes
6. Styling React Apps
  1. Plain-old CSS
  2. Importing CSS Modules to Components
  3. Cleaning Up App.css
  4. Styling the Main Component
  5. Inline Styles
  6. Creating the Game Component
  7. A Word of Caution
7. Implementing Game Logic
  1. Setting the Equation

2. Getting the User's Answer
3. Checking the User's Answer
4. Creating the Timer
8. React Effects
  1. React Hooks
  2. The useEffect Hook
  3. The Need for useEffect
  4. useEffect to the Rescue
  5. Mount and Unmount
  6. Passing Functions to State Variable Setters
  7. Fixing the Timer
  8. Catching Keyboard Events
  9. Building and Deploying Your React App

## Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

### Class Prerequisites

Experience in the following *is required* for this React class:

- HTML
- JavaScript

Experience in the following *would be useful* for this React class:

- CSS
- Bootstrap