React & React Native Training

The following are outlines for the React and React Native Professional Training course offered by Collegio Technologies. These module based courses are each 40 hours of training. They can be offered as stand-alone courses or combined into an 80 hour training program.

The React and React Native program will teach developers how to build, maintain and launch real world web and mobile applications. The course is a mix of theory and application, with students making their own apps during the course. At the end of this program, developers will have the core knowledge required to deeply understand and begin building and testing robust web apps in React, as well as mobile apps in React Native.

React

Module 1: React Introduction, Setting up your Environment	*We begin by talking about React, and why we should learn React as opposed to other Javascript frameworks. In addition, we'll go over all of the additional packages that we'll be using when developing our applications, and why we use them. Finally, we will ensure that our environment is set up so that we can begin coding our applications.*
Module 2: React Components and Basics	*Components form the basis of everything that we'll be working with in React. However, in order to properly use React components, we'll first need to go over some of the code extensions that we'll be using. In this module, we will discuss and work through examples involving JSX, and provide an introduction to the additional Javascript ES6 elements that we will be using moving forward.*
Module 3: Component Events and Attributes	*We now know how to build basic components, but we need more functionality in order to make our components robust and dynamic. In this module, we will go over how to pass dynamic variables into components, as well as how to process user-triggered events.*
Module 4: Styling React	*Let's start to make our application look nice! Both functionality and aesthetics are important to a positive user experience, and in this module we go over how to style your app using Webpack's SCSS pre-processor.*
Module 5: Routing with React-router	*Now that we've mastered building one-page apps, let's expand our knowledge! In this module, we will discuss how to set up routing in your app using React-Router, as well as the advantages and disadvantages to server vs. client routing, and how to set up default pages such as the 404 not found page.*

Module 6: Sharing state and data with Redux ○	***Let's level up our state-sharing with Redux! Even though component state has been working for us so far, it may not be sufficient for complex real-world applications. This is where Redux comes in. We will go through why we use redux, how it solves our problems, and implement reducers in our app to work with our React app.***
Module 7: Accessing third-party components and APIs	***Why reinvent the wheel when it's already been done? Even though React gives you the ability to code key components from scratch, there are already a lot of effective 3rd party options out there. In this module, we will go through the more popular options, and show how we will implement these in our apps.***
Module 8: Using Firebase with React	***Now that we know how to utilize 3rd party components and APIs, let's dig into Firebase for our BAAS (backend-as-a-service). This module will go through Firebase, how we can use it to quickly prototype our app backend, and how we can connect it to our React apps for authentication and data storage.***
Module 9: Testing out and troubleshooting your Application	***We've successfully created our apps via React, but how to we ensure that it is functioning correctly, and more importantly, how can we ensure that future developers will be confident that it is working? We will go through testing and writing unit tests for our apps, as well as go through some common troubleshooting tips.***
Module 10: Deploying your Application	***Finally, how do we deploy our app to a live environment for the world to see? In our final React module, we will show you how you can publish your apps so that they can be viewed by the web.***

React Native

Module 1: React Native Introduction and Basics, Setting up your environment	***Let's talk React Native! We begin the course by introducing React Native, and explaining the differences between React and React Native. We will also go over and set up our development environment so that we can begin developing right away.***
Module 2: React Native Components	***Now that we have our environment set up, it's time to roll up our sleeves and start coding! We'll begin by going over React Native Components, how they are the same as React Components, how they differ from React Components, and how to effectively use them. By the end of this module, you'll be comfortable***

	working with all of the basic React Native components available.
Module 3: Passing data between components and the component lifecycle.	*Let's work on understanding the component lifecycle of a React Native app. In this module, we will go over props, and how to pass props between different components. We will also discuss the various stages in the component lifecycle of a React Native component, and where we should be performing our updates.*
Module 4: Layout and Styling with Flexbox	*Like components, styling in React Native is done a little differently. In this module, we'll go over Flexbox, and how we can use it to master layout and styling of our mobile apps.*
Module 5: HTTP requests and API access	*We now have the beginnings of our app, so let's attempt to connect to an API and perform some HTTP requests. We'll explore making HTTP calls using Axios, and where these requests should be called. Finally, we'll connect to Twilio and send a text to a user!*
Module 6: Animations, Gestures and Push Notifications	*What good is a mobile app if we're not using mobile functionality? In this module, we will go over animations and gestures, as well as push notifications to really unleash the power of your mobile app.*
Module 7: Adding Authentication	*Authentication is paramount to any app containing user accounts. In this module, we will go over how to authenticate your users using JWT and Async/Await, as well as connect and authenticate our users using Firebase and the Facebook API.*
Module 8: React Native Navigation and Redux	*Now that we have built some React Native components and added functionality to them, let's discuss app navigation. We will explore navigation in your app using routes, displaying scenes, and handling corresponding actions. We will also go over data handling using Redux, and how it works in a React Native Environment.*
Module 9: Odds and Ends	*Let's go over some important concepts for React Native! In this odds and ends module, we will go over some features of React Native that are not specific to every app, but can really add to your functionality. Topics covered include rendering Maps using MapView, offline data storage and persistence, and component reusability.*
Module 10: Testing, troubleshooting and deploying React Native	*Finally, in our last module, we will discuss testing and troubleshooting practices for React Native apps, including how to implement unit tests to our application. Finally, we will go over deployment and how we can test our app on an actual device!*