Magenic Masters: React JS

**Course Outline**

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| **Topics** | **References** | **Timeline** |
| 1. React JS Introduction    1. What is React JS    2. Thinking in Components    3. Virtual DOM    4. Brief introduction on JSX    5. Basic Syntax    6. Environment Setup  * NodeJS/NPM * Webpack * Babel * Bootstrap | Facebook React Docs:  <https://facebook.github.io/react/>  Learning React - Concepts:  <https://scotch.io/tutorials/learning-react-getting-started-and-concepts>  Pluralsight React JS –Getting Started: <https://app.pluralsight.com/library/courses/react-js-getting-started/table-of-contents> | Week 1 |
| 1. React JS Components    1. JSX    2. Basic Intro to Babel (Transpiler)    3. Rendering in DOM    4. Component Life Cycle    5. Components Hierarchy | Facebook React Docs: <https://facebook.github.io/react/docs/thinking-in-react.html>  <https://facebook.github.io/react/docs/components-and-props.html>  <https://facebook.github.io/react/docs/react-component.html> | Week 2 |
| 1. React JS Props and State    1. Properties    2. States    3. Events    4. List and Keys    5. Composition vs Inheritance | Facebook React Docs: <https://facebook.github.io/react/docs/state-and-lifecycle.html>  <https://facebook.github.io/react/docs/components-and-props.html> | Week 3 |
| 1. Flux    1. Architecture and Unidirectional Flow    2. Actions    3. Dispatcher    4. Store    5. Flux Utilities | Facebook Flux Reference:  <https://facebook.github.io/flux/>  <https://github.com/facebook/flux>  Flux Architecture Guide:  <https://scotch.io/tutorials/getting-to-know-flux-the-react-js-architecture>  Pluralsight Flux: <https://app.pluralsight.com/library/courses/react-flux-building-applications/table-of-contents> | Week 4 |
| 1. Unit testing with JEST | Jest Documentation and API Reference: <http://facebook.github.io/jest/>  <http://facebook.github.io/jest/docs/api.html>  Pluralsight – Mastering Jest:  <https://app.pluralsight.com/library/courses/jest-mastering-react-testing/table-of-contents> | Week 5 |
| 1. ES6 Introduction    1. Changes in ES6 | ES5 vs ES6 Comparison:  <https://facebook.github.io/react/docs/react-without-es6.html>  ES6 Fundamentals: <https://app.pluralsight.com/library/courses/javascript-fundamentals-es6/table-of-contents> | Week 6 |

**Tools to Use**

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| **Name** | **Purpose** |
| React JS v15.X | Course Subject, UI Framework |
| Flux | Unidirectional Architecture |
| Node JS and NPM | JS runtime environment |
| Webpack | Script bundling and module compiler |
| Babel | JSX transpiler |
| Visual Studio/Visual Studio Code | Recommended IDE |
| Others   * Lodash * Bootstrap |  |

**Grading System (Passing Grade 85%)**

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| --- | --- | --- |
| **Criteria** | **%** | **Details** |
| Final Project | 40% | Pomodoro App (Time Management App) |
| Assignment | 20% | 5 Assignments |
| Quiz | 20% | 4 Quizzes |
| Attendance | 20% | 12 Sessions (Every 3PM)   * 6 Tutorials (Every Tuesday, 75 Mins) * 6 Quiz/Assignment demo/Q and A (Every Thursday, 45 Mins) |