**Advanced JavaScript Course**

The Purpose of this Advanced JavaScript Course is to prepare students to cover the latest JavaScript standard ES 6 (ES 2015) and those JavaScript topics, which are required before starting to learn, React, React Native, Angular 4 and Redux. It covers Functional Programming, Object-Oriented programming, and Asynchronous and Reactive Programming.

The prerequisite for this course is that the students have covered the book “The Smarter Way to Learn JavaScript” by Mark Mayers. The duration of this course will be two months or 8 weeks.

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| Week | Topic | Learning Material |
| 1 | Think functionally | Chapter 1 and topics 2.1, and 2.2 of Functional Programming in JavaScript by Luis Atencio  <https://www.slideshare.net/LuisAtencio3/functional-programming-in-javascript-by-luis-atencio> |
| 2 | Functions as First Class Objects, Callback Functions, Arrow Functions, Rest parameters and Default Parameters | Chapter 3 of Secrets of the JavaScript Ninja, 2nd Edition  Topic 2.3 of Functional Programming in JavaScript by Luis Atencio |
|  | This function parameter, invocation as a function, invocation as a method and function contexts | Topics 4.1.2, 4.2.1, 4.2.2, and 4.3 of Secrets of the JavaScript Ninja, 2nd Edition |
| 3 | Closures, using closures with callbacks, types of variables, and scopes | Topics 5.1, 5.2.2, 5.5.1, 5.5.2, and 5.6.3 of Secrets of the JavaScript Ninja, 2nd Edition  Topic 2.4 of Functional Programming in JavaScript by Luis Atencio |
| 4 | Pure Functions, Functional Programming, Maps, Searching Arrays, and Reduce | <https://medium.com/javascript-scene/master-the-javascript-interview-what-is-a-pure-function-d1c076bec976>  <https://medium.com/javascript-scene/master-the-javascript-interview-what-is-functional-programming-7f218c68b3a0>  Topics 9.2, SEARCHING ARRAYS (pages 237-240) AGGREGATING ARRAY ITEMS (pages 241-242) of Secrets of the JavaScript Ninja, 2nd Edition  Topic 3.3 of Functional Programming in JavaScript by Luis Atencio |
| 5 | Prototypes, using classes in ES 6, and defining getters and setters | Topics 7.1, 7.3.2, 7.4, and 8.1.1 of Secrets of the JavaScript Ninja, 2nd Edition and  <https://medium.com/javascript-scene/master-the-javascript-interview-what-s-the-difference-between-class-prototypal-inheritance-e4cd0a7562e9> |
| 6 | Modularizing JavaScript applications with AMD, CommonJS, and ES 6 | Topics 11.1.2, and 11.2 of Secrets of the JavaScript Ninja, 2nd Edition |
| 7 | Challenges of Working with Asynchronous code, working with Promises, Async functions, and Introducing Reactive Programming | Topics 6.3 and 6.4.1 of Secrets of the JavaScript Ninja, 2nd Edition  Topics 8.2 and 8.4 of Functional Programming in JavaScript by Luis Atencio |
| 8 | Reactive Programming using RxJS | Chapters 1, 2, 3, and 4 of RxJS in Action by Paul Daniels and Luis Atencio |
|  | Advanced JavaScript Test | Covering all the topics covered above |