

Department of Computer Science

Course Syllabus for Next-Gen Engagement Program – Batch II

Course Title: JavaScript ES6 Fundamentals **Timeline:** July 28 – August 31, 2025 (5 weeks)

In-class hours: 3h/week (15h in total)

Prepared by: NEXT-GEN Engagement Team

1. Course description

Welcome to JavaScript ES6 Fundamentals!

This course introduces you to modern JavaScript, focusing on ES6 features that have transformed the way we write JavaScript. You will begin with the basics and progress to mastering functions, destructuring, spread/rest operators, and key array methods through hands-on examples and weekly projects.

2. Course Learning Outcomes

By the end of the course, you should gain the following outcomes:

Knowledge

- Understand JavaScript basic and ES6 syntax
- Describe and apply core ES6 features: arrow functions, destructuring, rest/spread, and array methods

Skills

- Convert code from languages C to JavaScript
- Use modern JavaScript to write clean and efficient code

Attitudes

- Encourage clean coding practices.
- Daily practice

3. Course sessions

What we will go through each week

W1: Introduction to JavaScript + Converting C to JS				
S1	Learning	Introduction:		

		• Array				
		Object				
		Convert C To JS				
		Control statement				
		• Loop				
		•				
		Practice				
		• Lab				
S2	Practice	Mini quiz				
		Homework				
W2: Function a	W2: Function and intro to ES6 + intro to Arrow function					
		Function				
		• Return + Parameter				
		Return without parameter				
		No return but accept parameter				
		No return no parameter				
S1	Learning	-				
		Intro To ES6				
		• What is ES6?				
		• Why ES6?				
		Arrow Function				
		Default Parameter				
		Practice				
62	D (• Lab				
S2	Practice	Mini quiz				
		Homework				
W3: Arrow function + destructuring Assignment						
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		Destructuring Assignment				
S1	Learning	Array destructuring				
		Object destructuring Practice				
		• Lab				
S2	Practice					
		Mini quizHomework				
W4: Rest and Spread Operators						
S1	Learning	Rest and Spread Operator				
S2	Practice	Practice				
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		Mini quiz Homework		
W5: Array methods: Find, Map, Filter, ForEach				
S1	Learning	Array Method • Find • Map • Filter • ForEach		
S2	Practice	Practice Lab Mini quiz Homework		

^{**} Quiz: Trainer can design their own quiz (Kahoot, Quizzes, etc.)

References:

freeCodeCamp.org

Code With Bubb

^{**} This subject to be changed according to each class