



## Training course outline

### ITU and Academy of Digital Innovations

Title	<b>Basics of information technologies: Javascript technology</b>
Modality	Face to face
Dates	28 March -1 April 2022
Duration	5 days
Registration deadline	28 March
Training fees	Free
Description	Javascript is one of the most popular programming languages in the world, which is used to create interactive web pages, in server-side development. It works on Windows, macOS, Linux and mobile platforms, that is, everywhere. The course contains all the fundamental concepts: algorithms, object-oriented model, data structures.
Code	

#### **1.LEARNING OBJECTIVES**

Raising awareness of the course participants of basics of information technologies, and in particular of Javascript technology.

#### **2.LEARNING OUTCOMES**

As a result of the training, participants will possess skills of competent and appropriate work on PC, including the work with office programmes, as well as knowledge of safe behaviour when working with computer programs, search for information in the Internet, and will be able to successfully use the ICT to settle their practical tasks.

#### **3. TARGET POPULATION**

The course is intended for students from socially vulnerable segments of the population from 18 to 35 years old who want to learn Javascript, since you can start JavaScript without having any idea about programming at all. JavaScript is a good choice for those who want to commit their future to web development. Any programming knowledge would be a plus. JavaScript is a good choice for those who want to commit their future to web development. Any programming knowledge would be a plus.

#### **4. ENTRY REQUIREMENTS**

The course is designed to teach how to work with a computer for both users with a "zero" level of knowledge in the field of ICT, and for those who already have some basic PC skills.

## 5. TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Ms. Zhanna Barakova Candidate of Science (Engineering), Associate Professor	Email: <a href="mailto:Janna05_05@mail.ru">Janna05_05@mail.ru</a>
Ms. Apel Sarybayeva Acting Associate Professor	Email: <a href="mailto:aasarybaeva@mail.ru">aasarybaeva@mail.ru</a>

## 6. TRAINING COURSE CONTENTS

- Internet capabilities
- Email and social networks
- Basics of Javascript.

## 7. TRAINING COURSE SCHEDULE / AGENDA

28 March 2022, Monday	Topics / Activities
09:00 – 09:30	<b>Registration of participants</b>
09:30 – 10:00	Test to evaluate the knowledge level
10:00 – 10:30	<b>Coffee break</b>
10:30 – 11:30	<b>Javascript Basics</b> Comments Instructions Syntax errors Arithmetic operations Operators
11:30 – 12:30	<b>Operations in Javascript</b> Commutative operation Composition of operations Operation Priority Floating point numbers Infinity NaN Linter
<b>12:30 – 14:00</b>	<b>Lunch</b>
14:00 – 15:30	<b>Working with the program</b> Quotes Escape sequences Concatenation Encoding
15:30 – 16:00	<b>Coffee break</b>
16:00 – 17:00	<b>Variables in Javascript</b> What is a variable Changing a variable Choosing a variable name Errors when working with variables Expressions in definitions Variables and concatenation

	Naming styles
<b>29 March 2022, Tuesday</b>	<b>Topics / Activities</b>
09:00 – 10:00	Magic numbers Constants Interpolation
10:00 – 10:30	<b>Coffee break</b>
10:30 – 11:30	Extracting characters from a string <b>Data Types in Javascript</b> Data types Immutability of primitive data Weak typing
11:30 – 12:30	<b>Calling Functions</b> Functions and their calls Javascript math functions
<b>12:30 – 14:00</b>	<b>Lunch</b>
14:00 – 15:30	Function signature Default Arguments Variable Parameter Functions Function call – expression
15:30 – 16:00	<b>Coffee break</b>
16:00 – 17:00	Arguments as expression Calling Functions in Function Arguments
<b>30 March 2022, Wednesday</b>	<b>Topics / Activities</b>
09:00 – 10:00	Determinism Side effects Standard Library
10:00 – 10:30	<b>Coffee break</b>
10:30 – 11:30	<b>Properties and Methods</b> Properties Methods Immutability Properties and Methods as Expressions Call chain
11:30 – 12:30	<b>Function definition</b> Creating (defining) a function Passing one argument Passing Multiple Arguments Returning values Default return Default Options naming Simplified function syntax
<b>12:30 – 14:00</b>	<b>Lunch</b>
14:00 – 15:30	<b>Logics</b> Boolean type Predicates Combination of operations and functions Logical operators Negation Logical operators 2 Weak typing
15:30 – 16:00	<b>Coffee break</b>
16:00 – 17:00	Conditional constructs Conditional construction (if, else)

	else if construct
<b>31 March 2022, Thursday</b>	<b>Topics / Activities</b>
09:00 – 10:00	Ternary operator Switch design
10:00 – 10:30	<b>Coffee break</b>
10:30 – 11:30	<b>Cycles</b> while loop Data aggregation (numbers)
11:30 – 12:30	Data aggregation (rows) Line traversal
<b>12:30 – 14:00</b>	<b>Lunch</b>
14:00 – 15:30	Conditions inside the loop body Forming strings in loops
15:30 – 16:00	<b>Coffee break</b>
16:00 – 17:00	Syntactic sugar Increment and decrement
<b>1 April 2022, Friday</b>	<b>Topics / Activities</b>
09:00 – 10:00	Return from loops for loop
10:00 – 10:30	<b>Coffee break</b>
10:30 – 11:30	Return from loops for loop
11:30 – 12:30	Programming with Loops
<b>12:30 – 14:00</b>	<b>Lunch</b>
14:00 – 15:30	Final test
15:30 – 16:00	<b>Coffee break</b>
16:00 – 17:00	Official closure

## 8. METHODOLOGY (Didactic Approach)

Methodology used for the training course includes individual and group training of persons with specific needs, guided and supervised by the trainers.

In the face-to-face training, trainers use traditional methodology, including lessons, workshops and practical exercises. The training course also foresees using ICT and other technical means.

During the entire training course, each participant will have access to PC.

## 9. EVALUATION AND GRADING

In addition to the evaluation based on the results of the training, the participants will be evaluated depending on how actively they participated in the sessions and other training activities, i.e. based on quality and quantity index of time they spent to complete the training.

Pass grade to obtain certificate – at least 60% of the course total. Weight (in %) for the evaluation: 20% - participation; 20% - group work; 60% final test at the end of the training.

## 10. TRAINING COURSE COORDINATION

<b>Course coordinator:</b>  Mr. Kubanychbek Murzakmatov Academy of Digital Innovations Email: <a href="mailto:murzakmatov.k@gmail.com">murzakmatov.k@gmail.com</a>	<b>ITU coordinator:</b>  Mr. Farid Nakhli, Programme Coordinator, Regional Office for CIS Region Email: <a href="mailto:farid.nakhli@itu.int">farid.nakhli@itu.int</a>
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