

Asynchronous and reactive programming in JavaScript

Course code: JS_ASYNC

This course is designed for JavaScript programmers who want to improve their ability to write asynchronous code in this language. We will show you how to use built-in asynchronous mechanisms such as timers, fetch functions, or asynchronous filesystem access from Node.js. We'll explain the Promise object and the async and await keywords, as well as the external rxjs library and its Observables. This course assumes moderately advanced knowledge of JavaScript at the [JS_PROG2] course level.

Affiliate	Duration	Course price	ITB
Praha	3	23 100 Kč	30
Brno	3	23 100 Kč	30
Bratislava	3	990 €	30

The prices are without VAT.

Course terms

Date	Duration	Course price	Type	Course language	Location
29.10.2025	2	15 400 Kč	Presence	CZ/SK	GOPAS Praha
 28.01.2026	3	23 100 Kč	Telepresence	CZ/SK	GOPAS Praha
 28.01.2026	3	990 €	Telepresence	CZ/SK	GOPAS Bratislava
 28.01.2026	3	23 100 Kč	Telepresence	CZ/SK	GOPAS Brno
 20.04.2026	3	23 100 Kč	Telepresence	CZ/SK	GOPAS Brno
 20.04.2026	3	23 100 Kč	Telepresence	CZ/SK	GOPAS Praha
 20.04.2026	3	990 €	Telepresence	CZ/SK	GOPAS Bratislava

The prices are without VAT.

For whom the course is intended

This course is designed for JavaScript programmers who want to improve their skills in writing asynchronous code in this language.

What we will teach you

- The difference between asynchronous and parallel programming
- How the JS event loop works
- Built-in asynchronous functions
- The importance of callbacks in asynchronous programming
- Promise and async / await pattern
- Reactive JS and Observables

Required Entry Knowledge

- Knowledge of JavaScript at the course level [JS_PROG2].

Course outline

Introduction to asynchronous programming

- Timers (setTimeout, setInterval)
- Promise and async / await (basic usage)
- Observable (basic usage)
- Asynchronous vs. parallel

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JS event loop

Callback

Promise

- Creating a promise
- How to combine Promises

rxjs and Observable

- Creating an Observable
- rxjs operators
- synchronizing multiple Observables

Asynchronous denegators

- what is a generator
- how to write an asynchronous generator

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