

# MATLAB Basics: Data Manipulation and Programming

Course code: HSMATLAB2

You will master the efficient handling of data in various formats and learn how to write computational programs that process this data.

## Who is the course for

Intended for everyone who is starting to work with the MATLAB environment.

## What we teach you

You will learn how to perform typical data analysis steps in MATLAB, from import and preprocessing to modeling and creating custom visualizations. You will discover how to select and sort data using conditions and how to process it in parts with the help of loops. You will also learn how to create your own computational functions, which will make your solutions more organized and allow for repetition and sharing of intermediate calculations between your programs.

## Required skills

- Knowledge at the level of the "MATLAB Basics: Working with the Environment" training.

## Teaching materials

- Printed lecture in Czech/Slovak language, certificate of completion.

## Covered tools:

- MATLAB

## Course outline

- Working with different types of data
- Fitting data with a model
- Modifying visualizations
- Searching and selecting data from vectors and matrices using logical indexing
- Programmatic constructs for controlling the flow of calculations: branching, loops
- Creating, running, and debugging functions
- Analyzing tabular data

### GOPAS Praha

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

### GOPAS Brno

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

### GOPAS Bratislava

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



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