

# Microsoft Excel – Developing Applications I

Course code: MSEX5

This course covers the basics of Visual Basic for Application (VBA), which is used for creating macros and automating work in Microsoft Excel. Participants will learn to work with Microsoft Excel object model, using the basic objects such as Workbook, Worksheet and Range. Topics will be presented and tested in many practical and useful macros to facilitate work with Microsoft Excel. For participation in the course is suitable basic knowledge of algorithmization and programming.

| Affiliate  | Duration | Course price | ITB |
|------------|----------|--------------|-----|
| Praha      | 5        | 20 000 Kč    | 50  |
| Brno       | 5        | 20 000 Kč    | 50  |
| Bratislava | 5        | 900 €        | 50  |

The prices are without VAT.

## Course terms

| Date       | Duration | Course price | Type     | Course language | Location                   |
|------------|----------|--------------|----------|-----------------|----------------------------|
| 07.04.2025 | 5        | 20 000 Kč    | Online   | CZ/SK           | Gopas Praha Online         |
| 07.04.2025 | 5        | 900 €        | Online   | CZ/SK           | Gopas Bratislava Online    |
| 12.05.2025 | 5        | 20 000 Kč    | Presence | CZ/SK           | Gopas Praha Prezenční      |
| 19.05.2025 | 5        | 20 000 Kč    | Presence | CZ/SK           | Gopas Brno Prezenční       |
| 02.06.2025 | 5        | 900 €        | Presence | CZ/SK           | Gopas Bratislava Prezenční |

The prices are without VAT.

## What we teach you:

- Basics of Visual Basic for Application (VBA), which will be used for writing macros and automating work in Microsoft Excel.
- Basic work with the Excel object model, especially objects Range, Worksheet, Workbook and Application.

## Required skills:

- Knowledge of working in Microsoft Excel on user level.
- The advantage is a basic knowledge of programming in any language.

## Teaching methods:

- Professional explanation with practical samples and examples.

## Teaching materials:

- Powerpoint handouts and module printouts.

## Course syllabus:

Introduction to Macros

- Basic concepts
- Recording macros
- Absolute, relative references
- Starting macros using keyboard shortcuts
- Personal Macro Workbook
- Editing Macros

Working with program code

### 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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# Microsoft Excel – Developing Applications I

- Modules
- Using the editor window
- Comments
- Setting Up the Environment
- Automatic code completion
- Configuration dialogs

## Variables and procedures

- Declaring variables
- Data Types
- Data Types conversions
- Constants
- Arrays

## Procedures and Functions

- Procedures and Functions
- Parameters of functions and procedures
- Optional parameters
- Passing parameters by value and by reference
- Selected built-in functions

## Program Flow Control

- Logical and comparison operators
- If ... Then
- Select ... Case
- Do ... Loop
- For ... Next
- Exiting Cycle

## Debugging

- Types of errors
- Watch window
- Immediate window
- Call Stack
- Locals window
- Break mode & Program stepping

## Catching errors

- Run-time error
- Err object
- Concatenation of errors
- Inline error handling

## Excel object model

- Basic characteristics of objects
- Properties, methods and events
- Object Browser
- Collection

## Object Range

- Basic work with the Range object
- Definition of contiguous and non-contiguous areas
- Passage cells area
- Collection of rows, columns, and cells

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Kodaňská 1441/46  
101 00 Praha 10  
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[info@gopas.cz](mailto:info@gopas.cz)

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- Working with the currently selected area
- Inserting values
- Inserting formulas

## Worksheet object

- Sheets Worksheets and Charts objects
- Inserting and removing sheets
- Protection
- Visibility
- Print Settings
- Sheet events

## Workbook object

- Creating a new workbook
- Opening and saving workbooks
- Data consolidation
- Workbook closing
- Workbook protection
- Workbook events

## Object Application

- Application object and MS Office
- Selected properties and methods of Excel.Application object

### **GOPAS Praha**

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

### **GOPAS Brno**

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