

Microsoft Excel – basics of VBA programming

Description: The course is aimed at familiarising participants with Visual Basic editor and basic constructions used in building VB code. Additionally, the training is to demonstrate the same elements of VB environment for all applications of the Office package.

Duration: 16 hours

Initial requirements: The participants of the training should be familiarised with the Microsoft Office environment.

For whom: The training is dedicated for all those who wish to develop software in the Microsoft Office environment, in particular for those intensely using Microsoft Excel program for data processing.

Module: Fundamental constructions of Basic language (VBA01)

- 1) **Structure of the Visual Basic editor**
- 2) **Basic language elements**
 - a. Variables, constants, data types
 - b. Assigning instructions
 - c. Use of embedded dialogue fields
 - d. Functions embedded in examples (calculations, text transformations)
- 3) **Steering the course of the program, taking decisions**
 - a. If instruction
 - b. Select Case instruction
- 4) **Repeating actions, loops**
 - a. Iteration
 - b. Logical
 - c. Early loop exit
 - d. Loop embedding
- 5) **Using tables**
 - a. Declaration, static and dynamic tables
 - b. Tables and loops
 - c. Errors in tables
 - d. Use cases
 - i) Value searching
 - ii) Sorting
- 6) **Disc operations**
 - a. Creating sequence file
 - b. Operations: save, read

Module: Errors in programs (VBA02)

- 1) **Types of errors**

- 2) **Interruption mode, code analysis**
- 3) **Handling execution errors**
- 4) **Table of error codes**

Module: Basic applications of Visual Basic in Microsoft Excel (VBAEX01)

- 1) **Macro recording**
 - a. Recording sequence of actions
 - b. Code reading and correction
 - c. Use cases of macros in work automation
- 2) **Personal tool bars**
- 3) **Using personal functions at the level of spreadsheet**
 - a. Function characteristics
 - b. Triggering
 - c. Use cases of function during data processing
- 4) **Use of controls in a sheet**
 - a. Formula bar
 - b. Control toolbox
 - c. Definition and characteristics of event programming
 - d. Using function to control data correctness