Excel automation with VBA (macros)

*Work more efficiently by learning how to automate recurring tasks and create user applications.*

What to Expect?

The Excel VBA training lasts for two days during which you progress through many exercises as you learn about different functionalities and practical applications of VBA.

Duration:
One day
09:30 - 17:30

Locations:
Amsterdam
Berlin
Düsseldorf
Münich
Zürich

Price:
995 € (excl. VAT)
Group discounts available

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Objectives

VBA in Excel will enhance your productivity and allow you to build macro-driven applications, automate repetitive operations and create custom functions. You will have the ability to optimize reporting and data management processes by streamlining recurring tasks within your department.

Who is It For?

The Excel VBA training is designed for individuals that would benefit from automation and creation of custom user applications. Some prior knowledge of basic excel functionalities is required.

About us

The transformation of data into meaningful information is crucial for making the right business decisions. We help you to manage the ever widening stream of data in the most time-efficient ways. With trainings that are adjusted to your industry and function, you will quickly become an expert in organizing, analyzing, and visualizing data to gain more insights. In a nutshell - our trainings enable you to do more work in significantly less time and with better results.
Training Topics

Introduction to VBA

Beyond all the great tools available within the workbook user interface, Excel also offers an additional working environment that enables automation of routine tasks or even development of user applications. This environment is the programming language embedded in Microsoft Excel – Visual Basic for Applications (VBA). This training begins with an introduction to VBA language and macros.

Example questions

*How can I access the Visual Basic editor?*
*What are the main objects I can work with in VBA?*
*How can I record and clean macros?*

Focus points

- **Introduction to object-based programming**
  Understanding the basic concepts of VBA language – objects, methods, properties. Exploring the relationship between Excel and VBA code.

- **Recording and cleaning macros**
  Using Excel’s macro recorder to create a simple macro. Comparing recorder code to the most efficient VBA code. Discussing the basics of cleaning macros.

- **Working with the Visual Basic editor**
  Exploring the Visual Basic editor interface, working with properties and methods for ranges, worksheets and workbooks.

- **Using debugging tools**
  Learning to handle common errors in VBA. Navigating through code with the debugger.

VBA programming fundamentals

The VBA language relies on a set of conventions and elements that allow you to manipulate application objects. One of the key elements you will be working with in your code are variables. In this section of the training you will learn how to declare variables, discuss their types and apply them in built-in functions.
Example questions

What does Option Explicit statement mean and is it a best-practice to declare variables?
What kind of data types can I used in VBA?
How do I define a constant?
Can I use standard Excel functions in my VBA code?

Focus points

- Declaring and scoping variables
  Understanding the importance of declaring variables. Referring to public variables from different VBA modules.

- Defining data types
  Discussing various data types, their limitations and guidelines on choosing the best one for specific cases.

- Working with constants, strings, and dates
  Defining and referring to constants in procedures. Dealing with text and date information.

- Assigning statements
  Building and debugging expressions in Visual Basic editor.

- Using built-in functions
  Incorporating worksheet functions in the VBA code.

Controlling code execution

One of the most useful features of VBA is its ability to automate routine tasks. This potential is enabled by incorporating logic statements and loops inside macros. You will learn how to use VBA to perform a set of task automatically for a virtually infinite number of times.

Example questions

How can I incorporate decision-making capability in my code?
How can I loop blocks of code in procedures or functions?
Focus points

- Incorporating logic with If-Then and Select Case constructs
  Controlling code with logic constructs. Executing scenarios with Select Case.

- Automation with looping blocks of instructions
  Overview of different loop types: For, For Each, Do While, Do Until. Building nested loops in a procedure.

Event programming

The VBA environment is programmed to monitor events for variety of objects such as workbook, worksheet, application etc. This part of the training will help you understand Excel’s event and use them to your advantage when creating responsive applications.

Example questions

Where can I find all events relating to a particular object?
How can I disable VBA events?
How to run a block of code when opening a workbook?

Focus points

- Entering event-handler code and understanding event sequences
  Exploring predefined event sub procedures in the Visual Basic editor.

- Examining worksheet and workbook events
  Learning how to correctly store the code. Working with worksheet and workbook event examples.

- Monitoring with application events
  Overview of monitoring events for all open workbook and worksheets. Enabling application-level events.

Userforms

VBA allows you to build sophisticated user applications. Incorporating dialog boxes and userforms in your VBA project enables users to interact with the application through an interface that you can fully customize. This section introduces userforms and shows you how to control them from within the procedure.
Example questions

How can I receive input from users and store it as a variable in my application?
What are toolbox controls?
How can I display a userform based on application user’s action?

Focus points

- Using custom dialog box alternatives
  Exploring available dialog boxes such as InputBox, MsgBox, GetOpenFileName and GetSaveAsFilename.

- Adding and adjusting toolbox controls
  Learning about various toolbox controls that can be used in a user form.

- Displaying and closing userforms, incorporating userform events
  Creating userforms in design mode and controlling them from the VBA procedure. Combining userforms and application events.

- Adding controls at runtime
  Creating user forms from within the procedure. Working with dynamic user inputs.

- Using modeless and transparent forms
  Creating userforms that do not require action from the application user and working with transparent forms.

Creating user defined functions

Even though Excel includes over 450 predefined worksheet functions, you may find it helpful to build custom functions. They have a potential to simplify your work in Excel to a large extent. You will also be able to use them in other sub procedures. This section introduces function procedures through various examples.

Example questions

How can I use VBA to create custom functions?
How can I recall custom functions while in a worksheet?
Can I use my custom functions inside a VBA module?
Focus points

- Working with function arguments. Insert function dialog box and custom functions
  Creating functions with and without arguments. Using loops to build functions with
  indefinite number of arguments. Working with public user-defined functions argument
  descriptions in the insert function dialog box.

- Calling functions from sub procedures and debugging function
  Working with VBA syntax to call functions from within other procedures. Discussing
  common errors when working with VBA functions.

- Sharing user defined functions and add-ins
  Creating installable add-ins, storing functions in the personal workbook.
Why Choose our Trainings?

**Business Focus**
You will learn practical skills and methods that can be applied straight away. Exercises and cases are based on common business challenges while content is continuously validated by working professionals from different industries.

**Online resources**
You will gain access to our online resource database XL+. Every day new information is added here that helps you to apply what you had learned during our trainings sessions and stay on top of the latest developments.

**Expert Knowledge**
Our trainers are experts in the field of data analysis and automation with Excel. They have helped many companies build cost effective solutions with Excel and incorporate this experience in our trainings.

**Continuing Support**
To ensure that you can apply what you have learned during our trainings, our team stands ready to give you a timely response to any questions you may still have.

**Flexible**
We take greatest care that the training content as well as the facilities satisfy your training requirements.

**International**
We operate internationally and the training content as well as delivery method are very well suited to professionals working in multinational organizations.