Microsoft® **Visual Basic**® for Applications

Automating Excel Functions and Routines with VBA
in Microsoft Excel

VBA (Visual Basic for Applications) is an Object Oriented Language. This programming language can be used to automate tasks by developing procedures and functions. It is useful for programmers and for people who wish build procedures (macros) in order to automate tasks and increase their own productivity and the productivity of the people of their departments.

CODE: ED22B24

DURATION: 28 hours

START DATE: Πέμπτη, 01/12/2022

AUDIENCE PROFILE:

This course is intended for Programmers/Developers, Managers in small / medium enterprises and people who work with Excel intensively in positions where automation of Excel tasks is imperative such as Accountants, Actuaries, Financial Controllers, Project Managers, Scientific personnel that wishes to build macros to automate routines

PREREQUISITES FOR PARTICIPATION:
Participants should have a very good knowledge of Excel .

TRAINING LANGUAGE:

Greek

TRAINING MATERIALS:

The training manual is in the English Language.

METHODOLOGY:

Lecture, discussion, demonstration and practice.

COURSE OBJECTIVES:
- Describe the Essential VBA Language Elements
- Distinguish between VBA Sub and Function Procedures
- Name and Describe Looping techniques/commands
- Use the Excel Macro Recorder
- Create Macros with Range Objects
- Control flow of Sub and Functions Procedures with Decisions and Looping
- Create Automatic Procedures and Events
- Apply Error-Handling Techniques
- Use Bug Extermination Techniques
- Create Simple Dialogue boxes for data input

EdiTC EDUCATION & INFORMATION TECHNOLOGY CENTRE

Automating Excel Functions and Routines with VBA
in Microsoft Excel

VBA (Visual Basic for Applications) is an Object Oriented Language. This programming language can be used to automate tasks by developing procedures and functions. It is useful for programmers and for people who wish build procedures (macros) in order to automate tasks and increase their own productivity and the productivity of the people of their departments.

VENUE: Webinar

DATES & TIMES:

Thursday, 1/12/2022 8:15-16:00

Friday, 2/12/2022 8:15-16:00

Saturday, 3/12/2022 8:15-16:00

Friday, 9/12/2022 8:15-16:00

PARICIPATION COST:
The cost incudes the course notes and certificate.
In the event of classroom led training, coffee, snacks and lunch (only for full day courses) are offered complimentary.

Participation Cost
- Total Cost: €770
- HRDA Subsidy: €476
- Net Cost: €294

For Unemployed
- Please contact us

Contact us
77 77 72 52

Writing Macros with VBA

COURSE TOPICS

Unit 1: What Is VBA?

What Is VBA?
What Can You Do with VBA?
- Inserting a bunch of text
- Automating a task you perform frequently
- Automating repetitive operations
- Creating a custom command
- Creating a custom button
- Developing new worksheet functions
- Creating custom add-ins for Excel
- Creating complete, macro-driven applica-tions
- Advantages and Disadvantages of VBA
- VBA in a Nutshell
An Excursion into Versions

Unit 2: Jumping Right In
- Taking the First Steps
- Recording the Macro
- Testing the Macro
- Examining the Macro
- Modifying the Macro
- Saving Workbooks That Contain Macros
- Understanding Macro Security
More about the NameAndTime Macro

Unit 3: Working in the Visual Basic Editor
 What Is the Visual Basic Editor?
- Activating the VBE
- Understanding VBE components
Working with the Project Window
- Adding a new VBA module
- Removing a VBA module
- Exporting and importing objects
Working with a Code Window
- Minimizing and maximizing windows
- Creating a module
- Getting VBA code into a module
- Entering code directly
- Using the macro recorder
- Copying VBA code
Customizing the VBA Environment
- Using the Editor tab
- Using the Editor Format tab
- Using the General tab
- Using the Docking tab

Unit 4: Introducing the Excel Object Model
 Excel Is an Object?
Climbing the Object Hierarchy
Wrapping Your Mind around Collections
Referring to Objects
- Navigating through the hierarchy
- Simplifying object references
Diving into Object Properties and Methods
- Object properties
- Object methods
- Object events
Finding Out More
- Using VBA's Help system
- Using the Object Browser
Automatically listing properties and methods

Unit 5: VBA Sub and Function Procedures
 Subs versus Functions
- Looking at Sub procedures
- Looking at Function procedures
- Naming Subs and Functions
Executing Sub procedures
- Executing the Sub procedure directly
- Executing the procedure from the Macro dialog box
- Executing a macro by using a shortcut key
- Executing the procedure from a button or shape
- Executing the procedure from another procedure
- Executing Function procedures
  - Calling the function from a Sub proce-dure

Calling a function from a worksheet formula

Unit 6: Using the Excel Macro Recorder
- Is It Live, or Is It VBA?
- Recording Basics
- Preparing to Record
- Relative or Absolute?
- Recording in absolute mode
- Recording in relative mode
- What Gets Recorded?
- Recording Options
- Macro name

Writing Macros with VBA

COURSE TOPICS

- Shortcut key
- Store Macro In
- Description
- Is This Thing Efficient?

Unit 7: Essential VBA Language Elements
Using Comments in Your VBA Code
Using Variables, Constants, and Data Types
- Understanding variables
- What are VBA's data types?
- Declaring and scoping variables.
- Working with constants
- Pre-made constants
- Working with strings
- Working with dates

Using Assignment Statements
- Assignment statement examples
- About that equal sign
- Smooth operators

Working with Arrays
- Declaring arrays
- Multidimensional arrays
- Dynamic arrays

Using Labels

Unit 8: Working with Range Objects
A Quick Review
Other Ways to Refer to a Range
- The Cells property
- The Offset property

Some Useful Range Object Properties
- The Value property
- The Text property
- The Count property
- The Column and Row properties
- The Address property
- The HasFormula property
- The Font property
- The Interior property
- The Formula property
- The NumberFormat property

Some Useful Range Object Methods
- The Select method
- The Copy and Paste methods
- The Clear method

The Delete method

Unit 9: Using VBA and Functions
What Is a Function?
Using Built-In VBA Functions
VBA function examples
VBA functions that do more than return a value
Discovering VBA functions
Using Worksheet Functions in VBA
- Worksheet function examples
- Entering worksheet functions
- More about using worksheet functions

Using Custom Functions

Unit 10: Controlling Program Flow and Making Decisions
Going with the Flow, Dude
The GoTo Statement
Decisions, Decisions
- The If-Then structure
- The Select Case structure

Knocking Your Code for a Loop
- For-Next loops
- Do-While loop
- Do-Until loop

Using For Each-Next Loops With Collections

Unit 11: Automatic Procedures and Events
Preparing for the Big Event
- Are events useful?
- Programming event-handler procedures

Where Does the VBA Code Go?
Writing an Event-Handler Procedure
Introductory Examples
- The Open event for a workbook
- The BeforeClose event for a workbook
- The BeforeSave event for a workbook

Examples of Activation Events
- Activate and deactivate events in a sheet
- Activate and deactivate events in a workbook
- Workbook activation events

Other Worksheet-Related Events
- The BeforeDoubleClick event
- The BeforeRightClick event
- The Change event

Events Not Associated with Objects
- The OnTime event

Writing Macros with VBA

COURSE TOPICS

Keypress events

Unit 12: Error-Handling Techniques
Types of Errors
An Erroneous Example
- The macro's not quite perfect
- The macro is still not perfect
- Is the macro perfect yet?
- Giving up on perfection

Handling Errors Another Way
- Revisiting the EnterSquareRoot procedure
- About the On Error statement

Handling Errors: The Details
- Resuming after an error
- Error handling in a nutshell
- Knowing when to ignore errors
- Identifying specific errors

An Intentional Error

Unit 13: Bug Extermination Techniques

Species of Bugs
Identifying Bugs
Debugging Techniques
- Examining your code
- Using the MsgBox function
- Inserting Debug.Print statements
- Using the VBA debugger

About the Debugger
- Setting breakpoints in your code
- Using the Watch window
- Using the Locals window

Bug Reduction Tips

Unit 14: VBA Programming Examples
Working with Ranges
- Copying a range
- Copying a variable-sized range
- Selecting to the end of a row or column
- Selecting a row or column
- Moving a range
- Looping through a range efficiently
- Looping through a range efficiently (Part II)
- Prompting for a cell value
- Determining the selection type
- Identifying a multiple selection

Changing Excel Settings
- Changing Boolean settings

- Changing non-Boolean settings

Working with Charts
- AddChart versus AddChart2
- Modifying the chart type
- Looping through the ChartObjects collection
- Modifying chart properties
- Applying chart formatting

VBA Speed Tips
- Turning off screen updating
- Turning off automatic calculation
- Eliminating those pesky alert messages
- Simplifying object references
- Declaring variable types

Using the With-End With structure

Unit 15: Simple Dialog Boxes
UserForm Alternatives
The MsgBox Function
- Displaying a simple message box
- Getting a response from a message box
- Customizing message boxes

The InputBox Function
- InputBox syntax
- An InputBox example
- Another type of InputBox

· The GetOpenFilename Method
- The syntax for the GetOpenFilename method
- A GetOpenFilename example
- The GetSaveAsFilename Method
- Getting a Folder Name
- Displaying Excel's Built-in Dialog Boxes