



# Programming in VBA

## Using Microsoft Excel 2010



Order Code: ms803-ver4.11-sg

2 Days

### ❖ General Description

#### General Description

The skills and knowledge acquired in this course are sufficient to be able to create real life working VBA applications within Excel. The learner will be able to work with VBA within the Excel environment to program and automate worksheet operations

### ❖ Learning Outcomes

Learning Outcomes At the completion of this course the learner should be able to:

- create recorded macros in Excel
- use the macro recorder to create a variety of macros
- understand the Excel object model and VBA concepts
- work effectively with the main features of the VBA Editor window
- create procedures in VBA
- create and use variables
- create and work with user-defined functions in VBA
- write code to manipulate Excel objects
- use a range of common programming techniques
- create a custom form complete with an assortment of controls
- create code to drive a user form
- create procedures that start automatically
- write a variety of error handling routines

### ❖ Target Audience

This course is designed for users who wish to learn how to use the inbuilt VBA programming language in Excel to enhance their worksheets and automate processes.

### ❖ Prerequisites

This publication assumes the learner has a good knowledge of working with Excel. The learner should at least be able to create and edit workbooks, enter formulas, copy, paste, and format data. The learner must also have a general understanding of personal computers and the Windows operating system environment and be able to use Windows Explorer to locate and copy files.

### ❖ Pages/Duration

156 pages, based around a 2-day training program consisting of approximately 14 – 16 hours

### ❖ Student Files

Many of the topics in this courseware require you to open an existing file with data in it. These files will be emailed to you free of charge upon receipt of your order.

*\* Duration relates to study time only and does not include assessment time. Duration should be used as a guide only. Actual duration will vary depending upon the skills, knowledge, and aptitude of the participants. This information sheet was produced on Friday, June 03, 2011 and was accurate at the time of printing. Sideris Courseware reserves its right to alter the content of the above courseware without notice.*

## Product Information

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## Contents

### ➤ Recorded Macros

- Understanding Excel Macros
- Setting Macro Security
- Saving A Document As Macro Enabled
- Recording A Simple Macro
- Running A Recorded Macro
- Relative Cell References
- Running A Macro With Relative References
- Viewing A Macro
- Editing A Macro
- Assigning A Macro To The Toolbar
- Running A Macro From The Toolbar
- Assigning A Macro To The Ribbon
- Assigning A Keyboard Shortcut To A Macro
- Deleting A Macro
- Copying A Macro

### ➤ Recorder Workshop

- Preparing Data For An Application
- Recording A Summation Macro
- Recording Consolidations
- Recording Divisional Macros
- Testing Macros
- Creating Objects To Run Macros
- Assigning A Macro To An Object

### ➤ Understanding Excel VBA

- Programming In Microsoft Excel
- VBA Terminology
- Understanding Objects
- Viewing The Excel 2010 Object Model
- Using The Immediate Window
- Working With Object Collections
- Setting Property Values
- Working With Worksheets
- Using The Object Browser
- Programming With The Object Browser
- The Best VBA Help Available

### ➤ The VBA Editor

- The VBA Editor Screen
- Opening And Closing The Editor
- Using The Project Explorer
- Working With The Properties Window
- Using The Work Area
- Viewing Other Panes
- Working With Toolbars
- Working With A Code Module
- Running Code From The Editor
- Setting Breakpoints In Code
- Stepping Through Code

### ➤ Procedures

- Understanding Procedures
- Where Procedures Live
- Creating A New Sub Routine

- Making Sense Of IntelliSense
- Using The Edit Toolbar
- Commenting Statements
- Indenting Code
- Bookmarking In Procedures

### ➤ Using Variables

- Understanding Variables
- Creating And Using Variables
- Explicit Declarations
- The Scope Of Variables
- Procedure Level Scoping
- Module Level Scoping
- Passing Variables
- Passing Variables By Reference
- Passing Variables By Value
- Data Types For Variables
- Declaring Data Types
- Using Arrays

### ➤ Functions In VBA

- Understanding Functions
- Creating VBA Functions
- Using A VBA Function In A Worksheet
- Setting Function Data Types
- Using Multiple Arguments
- Modifying A VBA Function
- Creating A Function Library



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- Referencing A Function Library
- Importing A VBA Module
- Using A Function In VBA Code

### ➤ Using Excel Objects

- The Application Object
- The Workbook Objects
- Program Testing With The Editor
- Using Workbook Objects
- The Worksheets Object
- Using The Worksheets Object
- The Range Object
- Using Range Objects
- Using Objects In A Procedure

### ➤ Programming Techniques

- The MsgBox Function
- Using MsgBox
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- Using The InputBox Function
- Using The InputBox Method
- The IF Statement
- Using IF For Single Conditions
- Using IF For Multiple Conditions
- The Select Case Statement
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- For Loops
- Looping With Specified Iterations
- The Do...Loop Statement
- Looping With Unknown Iterations

### ➤ Creating Custom Forms

- Understanding VBA Forms
- Creating A Custom Form
- Adding Text Boxes To A Form
- Changing Text Box Control Properties
- Adding Label Controls To A Form
- Adding A Combo Box Control
- Adding Option Buttons
- Adding Command Buttons
- Running A Custom Form

### ➤ Programming UserForms

- Handling Form Events
- Initialising A Form
- Closing A Form
- Transferring Data From A Form
- Running Form Procedures
- Creating Error Checking Procedures
- Running A Form From A Procedure
- Running A Form From The Toolbar

### ➤ Automatic Startup

- Programming Automatic Procedures
- Running Automatic Procedures
- Automatically Starting A Workbook

### ➤ Error Handling

- Understanding Error Types
- The On Error Statement

- Simple Error Trapping
- Using The Resume Statement
- Using Decision Structures In Error Handlers
- Working With Err Object
- Error Handling In Forms
- Coding Error Handling In Forms
- Defining Custom Errors

### ➤ Concluding Remarks