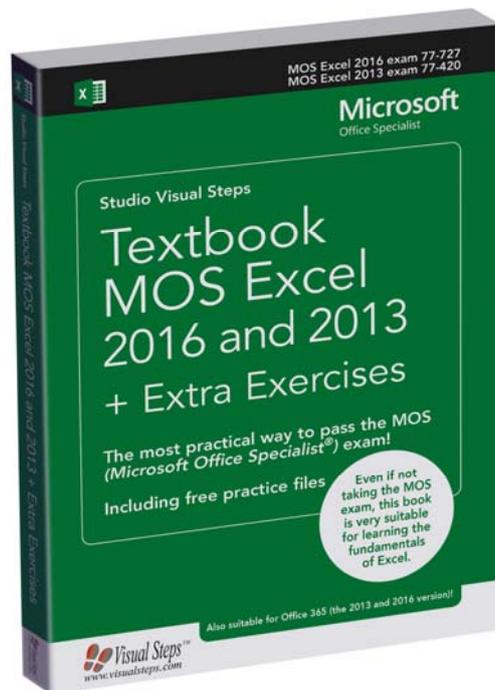


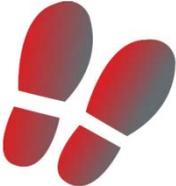
Teachers' Manual

for

Textbook MOS Excel 2016 and 2013 + Extra Exercises



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 *Visual Steps*TM
www.visualsteps.com

1. Introduction

This course manual assumes a lesson structure consisting of nine points. These points have been divided into three groups. Each class period will generally have the following structure:

- A Introduction**
1. Make sure the students are ready for class to begin.
 2. Explain the lesson's objectives.
 3. Review any necessary background knowledge.
- B Instruction**
1. Present the subject matter.
 2. Help the students learn the material.
 3. Have the students demonstrate the requested techniques.
 4. Give feedback on the demonstrations.
- C Conclusion**
1. Assess the final results of the learning process (testing).
 2. Recap and demonstrate uses for what's been learned.

This lesson structure should be followed step-by-step from start to finish. Steps B1 through B4 will be frequently repeated, as the subject matter will be offered in small chunks (B1).

This means there will be many points at which the student may need some help (B2). This also means that during a class, students will learn multiple techniques they can demonstrate (B3), to which the instructor should respond with approval or corrective comments as needed (B4).

On the next page you will see the **lesson structure** again, this time expanded with extra information to clarify the content of the 'how' and "why" behind each step. This structure will also be followed in explaining the details for separate class meetings later in this manual. You can split the lessons which cover a longer chapter if needed. You may wish to handle the material in these chapters in separate sessions.

Plan to use the available class time as follows:

- Introduction 10-15%
- Instruction 60-70%
- Conclusion 20-25%

Lesson Structure

A Introduction **1. Make sure the students are ready for class to begin.**

The instructor can ask for silence, close the door, write an announcement on the board, or in some other way draw attention to the coming lesson.

2. Explain the lesson's objectives.

It is important for both student and instructor to know exactly what a lesson's desired results are. The student's work attitude, for example, depends upon whether he needs to recognize, commit to memory, or apply the material being presented.

Simply listing the subjects that will be covered is not enough. The instructor must explain them in recognizable terms.

3. Review any necessary background knowledge.

At the start of each lesson, the instructor should make sure the new information will connect to and build upon previously acquired concepts and skills. In order to do so, the instructor must first help the students recall (activate) the relevant knowledge.

B Instruction **1. Present the subject matter.**

The heart of the learning process is the offering of information by the instructor or by the textbook.

2. Help the students learn the material.

The instructor doesn't stand at the front of the class during the learning process, but rather moves around, observing the students' activities and offering support where necessary. The didactic approach being applied can be characterized as guided experiential learning.

3. Have the students demonstrate the requested techniques.

The point here is not to check whether students have done their homework, but rather to provide an opportunity for practicing the desired (final) techniques. Specific questions will give the students the opportunity to demonstrate to themselves and to the instructor that they understand or can apply the information.

4. Give feedback on the demonstrations.

It's instructive and reinforcing to provide students with feedback on their demonstrations of what they've learned.

Feedback on a student's ability to perform certain actions often occurs naturally: it either works or it doesn't. In any case, feedback should provide information about the correct way to perform these actions and it should be visible during the learning process.

C Conclusion 1. Assess the final results of the learning process.

The point of this step is to determine whether the student has accomplished the educational objectives, and whether he can perform the desired actions with confidence. There are various forms of testing available for this: completing an exercise, for example, or answering questions. They don't all have to be given at the same time. Naturally, the tests should be tailored to the stated educational objective.

2. Recap and demonstrate what has been learned.

This last step is focused on helping the material sink in for the long term. As a result, this information should bridge multiple lessons and focus on making connections among different topics.

2. Previous Knowledge

Some previous knowledge is assumed for the entire course. Students without this knowledge should plan to spend some time acquiring it before the first course meeting.

The following skills comprise the previous knowledge assumed for this course:

- able to click, double-click, and drag with the mouse
- able to start and stop programs
- able to type and edit text
- able to start up and shut down Windows

3. General

Technical matters such as proper installation of *Windows 10, 8.1 or 7* and *Microsoft Office Excel 2016 or 2013* are essential for this course. Installing *Microsoft Office Excel* falls outside the scope of this course. The website that comes with the book contains practice files that will be used in the exercises. A working Internet connection is needed in order to be able to download the practice files from the website. Downloading the practice files also falls outside the scope of this course.

For some exercises a printer is required. If you do not have a printer, you can just read the through that particular section.

4. Lesson Plan

The lesson plan of this teachers' manual covers the Chapters 1 through 6 of the *Textbook* part of the book, and Chapters 1 through 9 of the *Workbook* part of *Textbook MOS Excel 2016 and 2013 + Extra Exercises*

Depending on the available hours, you can adjust the lesson plan to suit your current situation. You can exclude parts of the *MOS Excel 2016 and 2013* package, for example, or assign them as homework.

Chapter 1 Setting Up Excel and Basic Functions

Chapter 2 Formulas and Series

Chapter 3 Tables

Chapter 4 Analyzing Data

Chapter 5 Functions

Chapter 6 Viewing and Saving

It is advised to use the order of the chapters for the order of the lessons.

5. Available content

The Visual Steps package of MOS Excel 2016 and 2013 contains the following components:

Textbook MOS Excel 2016 and 2013

Excel is a calculation program, also called a 'spreadsheet program'. Working in *Excel* is actually like working on a large sheet of graph paper. The student can type something in each square (cell). This can be a number, text or date, but also an underlying formula which allows you to perform calculations automatically. Not only can figures be calculated with *Excel*, they can be selected, sorted and arranged in various ways. It is therefore an ideal program to create summaries of calculations or to organize lists with data.

The step by step instructions and examples in the Textbook will help your students learn to use *Excel* in the most efficient manner. The additional exercises at the end of the book help to increase proficiency in the program and reinforce what the student has learned.

After working through the book, the student has the opportunity to take the Microsoft Office Specialist® (MOS) exam. Upon successful completion of this exam, an official certificate is awarded. This is a document that can be important in the workplace and a plus on a resume.

This textbook has been written using the Visual Steps™ method. The method is simple: just place the book next to the computer and perform each task step by step directly on the computer. With the clear instructions and the multitude of screenshots, the student will always know exactly what to do next. By performing the tasks directly, the student quickly learns how to work with *Excel 2016* or *Excel 2013*.

In this Visual Steps™ book various icons are used. This is what they mean:

Actions

These icons indicate an action to be carried out:



The mouse icon means you need to do something with the mouse.



The keyboard icon means something needs to be entered or typed using the keyboard.



The hand icon means something needs to be done, for example, turn on the computer or carry out a task previously learned.

In addition to these icons, in some areas of this book extra assistance is provided to help the student work successfully through each chapter.

Help

These icons indicate that extra help is available:



The arrow icon indicates an alert or warning about something.



The bandage icon indicates an extra help or tip in case something went wrong.



The hand icon is also used in the exercises. The exercises help to reinforce what is learned.



Has the student forgotten how to do something? The number next to the footsteps can be used to look up the information in the appendix *How Do I Do That Again?*

In separate boxes the student will find tips or additional background information about *Excel 2016* and *Excel 2013*.

Extra information

Information boxes are denoted by the following icons:



The book icon points to extra background information that can be read at the student's convenience. This extra information is not necessary for working through the book and is also not important for the examination.



The light bulb icon indicates an extra tip on how to use *Excel*. The tips in the last section of each chapter are not important for the examination.

Practice files

The practice files used in this book can be downloaded from www.visualstepsmosbooks.com/excel2016-practicefiles.php. The practice files are saved in a ZIP-file. If the practice files are not yet on the student's computer, they will first need to be copied to the *(My) Documents* folder. A PDF file on the website describes how to do this. Carefully follow the instructions given in the PDF file. If the student does not do this, the practice files may end up in the wrong folder.

The practice files can be used while performing the step-by-step instructions. Be careful not to save the files with the same name in the same folder. Multiple students can therefore use the same practice files.

If you prefer, you can download the files to the computers at your school in advance of the course.

Extra Exercises (workbook)

The workbook is essential in preparing for the Microsoft Office Specialist® exam (MOS).

Once the student has worked through the first chapters of this book, they will know how to perform the basic, rudimentary tasks in *Excel*. However, this does not mean that all tasks have been mastered. The extra exercises in this book allow the student to practice even further with various types of assignments or tasks.

This book contains exercises that will prepare the student for the MOS *Excel* exam. The exercises are subdivided into footsteps exercises, do-it-yourself exercises and MOS exam exercises.

Footsteps Exercise

In this type of exercise all actions are marked by a footstep icon ¹. This means the actions have already been handled earlier in the textbook. If the student does not know how to perform an action, he can learn how to do so by looking for the corresponding number written next to the footstep icon in the appendix *How Do I Do That Again?* at the end of the book.

At the end of each exercise, reference is made to a file to compare the result with the program window. The student can quickly see if the exercise has been done correctly. The final result files can be found in the practice files folder.

Do-It-Yourself Exercise

In this type of exercise, the required actions are not accompanied by the footstep icons. It is now expected that the student can perform the necessary actions without the need of the footsteps. At the end of each exercise, reference is made to a file to compare the result with the program window. The student can check if the exercise has been done correctly.

MOS Exam Exercise

This exercise trains the student through a simulation that is set on the PC. In this way, the student becomes familiar with the MOS exam format and is prepared for the test environment. At the end of the exercise, reference is made again to a file to compare the result with the program window. The student can quickly see if the exercise has been done correctly. On page 262 of the textbook instruction is given on how to do these exercises step by step.

Practice files workbook

The practice files used in this book can be downloaded from **www.visualstepsmosbooks.com/excel2016-practicefiles.php**. The practice files are saved in a ZIP-file. If the practice files are not yet on the student's computer, they will first need to be copied to the *(My) Documents* folder. A PDF file on the website describes how to do this. Carefully follow the instructions given in the PDF file! If the student does not do this, the practice files may end up in the wrong folder.

The practice files can be used while performing the step-by-step instructions. Be careful not to save the files with the same name in the same folder. Multiple students can therefore use the same practice files.

If you prefer, you can download the files to the computers at your school in advance of the course.

Results

The exercises in this books are accompanied by result files. The student can use these files to check if the exercises have been done correctly. The result files are located in the practice files folder which can be downloaded from the web page listed above.

6. Notes and advice for various chapters

Some chapters require additional materials or there are things that you may want to take into beforehand. Here you will find an overview.

Chapter 1

- Students should have the practice files available before the lesson begins. You can read how to obtain these files in the previous section of this manual.
- It is also suggested that the student read the explanations given in the *Foreword* section (page 9) of this book, as well as the sections *How to Use This Book*, *The Screenshots* and *The Website and Supplementary Materials* on pages 9 through 13. These sections explain how to work with the book and how to use the practice files. Classical discussion is also an option.
- The students do not necessarily need to perform the actions in the *Background Information* and *Tips* sections at the end of a chapter. They can choose to read this information only. The *Background Information* and *Tips* sections provide extra information about *Excel*, but is not required for the exam.
- If a student wants to work through the extra exercises, it is advisable to read the sections *How to Use This Book* and *The Website and Supplementary Materials* on pages 261 through 262. Before doing the *MOS Exam Exercises* be sure to have the student read the section *The MOS Exam Exercises* on pages 262 through 267. Classical discussion is also an option.
- In the section 1.15 *Save As*, the steps are given to save the file in the (*My Documents*) folder. You can also let the students save the file to another location, for example, a specific folder on the school computer (or school server).

Chapter 2

- If the exercise files for the book are stored in a location other than (*My Documents*), the steps in section 2.1 *Copying a Worksheet* will need to be done differently. You can explain to the student how to do this with an additional instruction.

Chapter 4

- When reducing or enlarging images, the student can make an image bigger or smaller than shown in the book. That is basically no problem, but keep in mind that the screen images in the book may differ slightly. The same applies to other components in this chapter, such as *SmartArt* images.

Chapter 6

- In section 6.18, *Creating a PDF or XPS File*, the steps are given to save the file in the (*My Documents*) folder. You can also let the students save the file to another location, for example, a specific folder on the school computer (or school server).
- In 6.19 *Files on OneDrive* a *Microsoft* account is used. This is an email address that ends on hotmail.com, live.com or outlook.com and a password. Students may have received such an email address through the school or institution, if they are using an Office 365 package. If they do not have this type of email address, they can create one free of charge at <https://signup.live.com>.