**Microsoft Imagine Academy Syllabus**

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Instructor Materials for Course 40392: Microsoft Excel 2016  
Aligned with Microsoft Office Specialist (MOS) exam 77-727: Microsoft Excel 2016

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General information

About this supplemental content

This curriculum supports students in preparing for Microsoft Office Specialist (MOS) exam **77-727: Microsoft Excel 2016**.

The curriculum extends the learning process to ensure that students have the opportunity to explore all areas of a program pertinent to the corresponding MOS certification objectives, or that have been identified as most important for users to understand, through the completion of individual activities. Through this extended practice, the curriculum provides a significant opportunity for the hands-on program experience that is expected and required of a successful certification candidate or power user.

This curriculum is designed to supplement the content of course **40392: Microsoft Excel 2016**.

Audience profile and prerequisites

This curriculum assumes that students are studying the program by using the associated Microsoft Imagine Academy course or other available curriculum, including but not limited to resources available on the Microsoft Office website, Microsoft Press books or e-books such as the MOS Study Guides, Microsoft Official Curriculum (MOC) courses, Microsoft Official Academic Curriculum (MOAC) courses, and other resources that are appropriate to and available within the student’s specific environment.

Content description

This content is divided into 13 lessons. Each lesson is designed to provide approximately 45 minutes of instruction and discussion. Each teaching lesson includes two or more sub-sections, couple of projects that can be completed in or out of class, and a quiz.

Instructors can organize the lesson instruction and project assignments as necessary to fit class schedules.

The following table indicates the content covered in each lesson.

| Lesson/MOS exam skills covered | Learning, practice, and assessments |
| --- | --- |
| Lesson 1: Overview  Skills:  ·        Starting Excel  ·        Working in the Excel Window  ·        Changing Workbook and Window Views  ·        Working with an Existing Workbook | Lesson elements:  ·        Project: Utilizing the Ribbon  ·        Project: Navigating a List  ·        Quiz |
| Lesson 2: Working with Microsoft Excel 2016  Skills:  ·        Creating Workbooks  ·        Saving Workbooks  ·        Entering and Editing Basic Data in a Worksheet  ·        Using Data Types to Populate a Worksheet  ·        Cutting, Copying, and Pasting Data  ·        Editing a Workbook’s Properties | Lesson elements:  ·        Project: Creating a Workbook  ·        Project: Setting Document Properties and Assigning Keywords  ·        Quiz |
| Lesson 3: Using Office Backstage  Skills:  ·        Printing with Backstage  ·        Changing the Excel Environment  ·        Accessing and Using Excel Templates | Lesson elements:  ·        Project: Searching for and Using a Template  ·        Project: Printing a Specific Area of a Worksheet  ·        Quiz |
| Lesson 4: Using Basic Formulas  Skills:  ·        Understanding and Displaying Formulas  ·        Using Cell References in Formulas  ·        Using External Cell References | Lesson elements:  ·        Project: Working with the Order of Operations  ·        Project: Naming a Range and Using the Range in a Formula  ·        Quiz |
| Lesson 5: Using Functions  Skills:  ·        Summarizing Data with Functions | Lesson elements:  ·        Project: Using Statistical Functions  ·        Project: Completing the Analysis Sheet in the Budget Workbook  ·        Quiz |
| Lesson 6: Formatting Cells and Ranges  Skills:  ·        Inserting and Deleting Cells  ·        Manually Formatting Cell Contents  ·        Copying Cell Formatting with the Format Painter  ·        Understanding Paste Special Options  ·        Formatting Cells with Styles  ·        Working with Hyperlinked Data  ·        Applying Conditional Formatting to Cells | Lesson elements:  ·        Project: Applying Basic Formatting  ·        Project: Applying Cell Styles to a Worksheet  ·        Quiz |
| Lesson 7: Formatting Worksheets  Skills:  ·        Working with Rows and Columns  ·        Using Themes  ·        Inserting Headers and Footers  ·        Preparing a Document for Printing | Lesson elements:  ·        Project: Working with Rows and Columns  ·        Project: Transposing Data and Adjusting Column Widths  ·        Quiz |
| Lesson 8: Managing Worksheets  Skills:  ·        Organizing Worksheets  ·        Using Zoom and Freeze to Change the Onscreen View  ·        Finding and Replacing Data | Lesson elements:  ·        Project: Copying and Modifying a Worksheet  ·        Project: Renaming a Worksheet, Unhiding a Worksheet, and Arranging Windows  ·        Quiz |
| Lesson 9: Working with Data and Macros  Skills:  ·        Importing Data  ·        Sorting Data  ·        Filtering Data  ·        Outlining and Subtotaling Data  ·        Setting Up Data in a Table Format | Lesson elements:  ·        Project: Creating and Filtering a Table  ·        Project: Creating an Outline and Subtotaling Data  ·        Quiz |
| Lesson 10: Using Advanced Formulas  Skills:  ·        Using Formulas to Conditionally Summarize Data  ·        Adding Conditional Logic Functions to Formulas  ·        Using Formulas to Modify Text | Lesson elements:  ·        Project: Separating Text into Columns  ·        Project: Creating SUMIF and SUMIFS Formulas to Conditionally Summarize Data  ·        Quiz |
| Lesson 11: Securing Workbooks  Skills:  ·        Securing Your Work | Lesson elements:  ·        Project: Protecting a File with a Password  ·        Project: Adding Comments to a File  ·        Quiz |
| Lesson 12: Creating Charts  Skills:  ·        Building Charts  ·        Formatting the Parts of a Chart Manually  ·        Modifying a Chart  ·        Using Quick Analysis Tools | Lesson elements:  ·        Project: Creating a Pie Chart  ·        Project: Creating a Column Chart  ·        Quiz |
| Lesson 13: Adding Pictures and Shapes to a Worksheet  Skills:  ·        Inserting Pictures  ·        Adding Shapes, Lines, Text Boxes, and WordArt  ·        Formatting Graphics  ·        Adding Graphic Enhancements Using Picture Tools  ·        Adding Alternative Text to Pictures | Lesson elements:  ·        Project: Adding Text to a Shape  ·        Project: Enhancing a Photo  ·        Quiz |

Microsoft Office Specialist exam objective mapping

This curriculum supports students in preparing for MOS exam **77-727: Microsoft Excel 2016**. The following table indicates the exam objective(s) addressed in each lesson.

| **Lesson** | **Objective** | Description |
| --- | --- | --- |
| 1 | 1.1 | Create Worksheets and Workbooks |
|  | 1.2 | Navigate in Worksheets and Workbooks |
|  | 1.4 | Customize Options and Views for Worksheets and Workbooks |
| 2 | 1.1 | Create Worksheets and Workbooks |
|  | 1.3 | Format Worksheets and Workbooks |
|  | 1.4 | Customize Options and Views for Worksheets and Workbooks |
|  | 1.5 | Configure Worksheets and Workbooks for Distribution |
|  | 2.1 | Insert Data in Cells and Ranges |
|  | 2.2 | Format Cells and Ranges |
| 3 | 1.1 | Create Worksheets and Workbooks |
|  | 1.3 | Format Worksheets and Workbooks |
|  | 1.4 | Customize Options and Views for Worksheets and Workbooks |
|  | 1.5 | Configure Worksheets and Workbooks for Distribution |
| 4 | 1.4 | Customize Options and Views for Worksheets and Workbooks |
|  | 4.1 | Summarize Data by Using Functions |
| 5 | 4.1 | Summarize Data by Using Functions |
| 6 | 1.2 | Navigate in Worksheets and Workbooks |
|  | 2.1 | Insert Data in Cells and Ranges |
|  | 2.2 | Format Cells and Ranges |
|  | 2.3 | Summarize and Organize Data |
| 7 | 1.3 | Format Worksheets and Workbooks |
|  | 1.4 | Customize Options and Views for Worksheets and Workbooks |
|  | 1.5 | Configure Worksheets and Workbooks for Distribution |
|  | 2.1 | Insert Data in Cells and Ranges |
| 8 | 1.1 | Create Worksheets and Workbooks |
|  | 1.2 | Navigate in Worksheets and Workbooks |
|  | 1.3 | Format Worksheets and Workbooks |
|  | 1.4 | Customize Options and Views for Worksheets and Workbooks |
|  | 2.1 | Insert Data in Cells and Ranges |
| 9 | 1.1 | Create Worksheets and Workbooks |
|  | 2.3 | Summarize and Organize Data |
|  | 3.1 | Create and Manage Tables |
|  | 3.2 | Manage Table Styles and Options |
|  | 3.3 | Filter and Sort a Table |
| 10 | 4.2 | Perform Conditional Operations by Using Functions |
|  | 4.3 | Format and Modify Text by Using Functions |
| 11 | 1.5 | Configure Worksheets and Workbooks for Distribution |
| 12 | 2.3 | Summarize and Organize Data |
|  | 5.1 | Create Charts |
|  | 5.2 | Format Charts |
| 13 | 1.5 | Configure Worksheets and Workbooks for Distribution |
|  | 5.3 | Insert and Format Objects |

Curriculum standards

This curriculum is designed to support selected Common Core State Standards.

The following table indicates the curriculum standard(s) that are addressed in each lesson. Some standards apply specifically to project leveling and are at the discretion of the instructor.

| **Lesson** | Common Core State Standards |
| --- | --- |
| 1 | CCSS.ELA-Literacy.RI.6.1  CCSS.ELA-Literacy.RI.6.4  CCSS.ELA-Literacy.RST.6-8.4  CCSS.ELA-Literacy.RST.9-10.4 |
| 2 | CCSS.ELA-Literacy.RI.6.1  CCSS.ELA-Literacy.RI.6.4  CCSS.ELA-Literacy.RI.9-10.1  CCSS.ELA-Literacy.RI.9-10.4  CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.6.2b  CCSS.ELA-Literacy.W.6.4  CCSS.ELA-Literacy.W.6.6  CCSS.ELA-Literacy.W.9-10.2a  CCSS.ELA-Literacy.W.9-10.2b  CCSS.ELA-Literacy.RST.6-8.4  CCSS.ELA-Literacy.RST.9-10.4 |
| 3 | CCSS.ELA-Literacy.RI.6.1  CCSS.ELA-Literacy.RI.6.4  CCSS.ELA-Literacy.RI.9-10.1  CCSS.ELA-Literacy.RI.9-10.4  CCSS.ELA-Literacy.W.6.4  CCSS.ELA-Literacy.W.6.6  CCSS.ELA-Literacy.RST.6-8.4  CCSS.ELA-Literacy.RST.9-10.4 |
| 4 | CCSS.ELA-Literacy.RST.6-8.3  CCSS.ELA-Literacy.RST.6-8.4  CCSS.ELA-Literacy.RST.9-10.3  CCSS.ELA-Literacy.RST.9-10.4  CCSS.Math.Content.6.SP.A.2  CCSS.Math.Content.6.SP.A.3  CCSS.Math.Content.6.SP.B.5  CCSS.Math.Content.HSS-ID.A.2  CCSS.Math.Content.HSS-ID.A.4  CCSS.Math.Content.6.EE.A.1  CCSS.Math.Content.6.EE.A.2  CCSS.Math.Content.6.RP.A.3  CCSS.Math.Content.HSN-RN.A.2  CCSS.Math.Content.HSA-CED.A.1  CCSS.Math.Content.HSF-IF.A.1  CCSS.Math.Content.HSF-IF.A.2  CCSS.Math.Content.HSF-BF.A.1 |
| 5 | CCSS.ELA-Literacy.RST.6-8.3  CCSS.ELA-Literacy.RST.9-10.3  CCSS.Math.Content.6.SP.A.2  CCSS.Math.Content.6.SP.A.3  CCSS.Math.Content.6.SP.B.5  CCSS.Math.Content.HSS-ID.A.2  CCSS.Math.Content.HSS-ID.A.4 |
| 6 | CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.6.2b  CCSS.ELA-Literacy.W.6.3  CCSS.ELA-Literacy.W.6.6  CCSS.ELA-Literacy.W.9-10.2a  CCSS.ELA-Literacy.W.9-10.2b  CCSS.ELA-Literacy.W.9-10.6  CCSS.ELA-Literacy.RST.6-8.3  CCSS.ELA-Literacy.RST.9-10.3 |
| 7 | CCSS.ELA-Literacy.RST.6-8.4  CCSS.ELA-Literacy.RST.9-10.4  CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.6.2b  CCSS.ELA-Literacy.W.6.6  CCSS.ELA-Literacy.W.9-10.2a  CCSS.ELA-Literacy.W.9-10.2b  CCSS.ELA-Literacy.W.9-10.6 |
| 8 | CCSS.ELA-Literacy.RI.6.1  CCSS.ELA-Literacy.RI.6.4  CCSS.ELA-Literacy.RI.9-10.1  CCSS.ELA-Literacy.RI.9-10.4  CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.6.2b  CCSS.ELA-Literacy.W.6.4  CCSS.ELA-Literacy.W.6.6  CCSS.ELA-Literacy.W.9-10.2a  CCSS.ELA-Literacy.W.9-10.2b  CCSS.ELA-Literacy.W.9-10.4  CCSS.ELA-Literacy.W.9-10.6  CCSS.ELA-Literacy.RST.6-8.4  CCSS.ELA-Literacy.RST.9-10.4 |
| 9 | CCSS.ELA-Literacy.RI.6.1  CCSS.ELA-Literacy.RI.6.4  CCSS.ELA-Literacy.RI.9-10.1  CCSS.ELA-Literacy.RI.9-10.4  CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.9-10.2a  CCSS.ELA-Literacy.RST.6-8.3  CCSS.ELA-Literacy.RST.9-10.3 |
| 10 | CCSS.ELA-Literacy.RST.6-8.3  CCSS.ELA-Literacy.RST.9-10.3  CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.9-10.2a  CCSS.Math.Content.6.SP.A.2  CCSS.Math.Content.6.SP.A.3  CCSS.Math.Content.6.SP.B.5  CCSS.Math.Content.HSS-ID.A.2  CCSS.Math.Content.HSS-ID.A.4 |
| 11 | CCSS.ELA-Literacy.W.6.4  CCSS.ELA-Literacy.W.6.6 |
| 12 | CCSS.ELA-Literacy.RST.6-8.3  CCSS.ELA-Literacy.RST.9-10.3  CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.9-10.2a  CCSS.Math.Content.6.RP.A.3  CCSS.Math.Content.6.RP.A.3a  CCSS.Math.Content.6.EE.C.9  CCSS.Math.Content.6.SP.B.4  CCSS.Math.Content.HSA-APR.B.3  CCSS.Math.Content.HSA-CED.A.2  CCSS.Math.Content.HSA-REI.D.10  CCSS.Math.Content.HSA-REI.D.11  CCSS.Math.Content.HSA-REI.D.12  CCSS.Math.Content.HSF-LE.A.3  CCSS.Math.Content.HSS-ID.A.1  CCSS.Math.Content.HSS-ID.B.6  CCSS.Math.Content.HSS-ID.B.6b  CCSS.Math.Content.HSS-ID.B.6c  CCSS.Math.Content.HSS-MD.A.1  CCSS.Math.Content.6.SP.A.3  CCSS.Math.Content.6.SP.B.4  CCSS.Math.Content.6.SP.B.5  CCSS.Math.Content.HSS-ID.B.6  CCSS.Math.Content.HSS-ID.C.8  CCSS.ELA-Literacy.RST.9-10.7  CCSS.ELA-Literacy.RST.6-8.7  CCSS.Math.Content.HSS-ID.A.4  CCSS.Math.Content.HSS-ID.B.5 |
| 13 | CCSS.ELA-Literacy.W.6.2a  CCSS.ELA-Literacy.W.6.4  CCSS.ELA-Literacy.W.6.6  CCSS.ELA-Literacy.W.9-10.2a  CCSS.ELA-Literacy.W.9-10.4  CCSS.ELA-Literacy.W.9-10.6 |

Additional information and resources  
Certification resources  
·        Learn more about Microsoft Office certifications: <http://www.microsoft.com/learning/en/us/office-certification.aspx>Curriculum standard resources  
·        Learn more about Common Core State Standards: [http://www.corestandards.org](http://www.corestandards.org/)