



Technology for Success

Microsoft® Office 365® & Office 2019

CABLE | CAMPBELL | CIAMPA
FREUND | FRYDENBERG | HOOPER | MONK
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SHELLY CASHMAN SERIES®

CONCEPTS & OFFICE

Technology for Success Microsoft® Office 365® & Office 2019

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Technology for Success

Microsoft® Office 365® & Office 2019

CONCEPTS & OFFICE

Brief Contents

Getting to Know Microsoft Office Versions.....	OFF-1
Using SAM Projects and Textbook Projects.....	SAM-1
Introduction to Technology for Success: Computer Concepts	CC I-1

Computer Concepts

MODULE 1: Impact of Digital Technology.....	CC 1-1
MODULE 2: The Web.....	CC 2-1
MODULE 3: Computer Hardware	CC 3-1
MODULE 4: Operating Systems and File Management.....	CC 4-1
MODULE 5: Software and Apps.....	CC 5-1
MODULE 6: Security and Safety	CC 6-1

Word 2019

MODULE 1: Creating and Modifying a Flyer.....	WD 1-1
MODULE 2: Creating a Research Paper	WD 2-1
MODULE 3: Creating a Business Letter	WD 3-1

PowerPoint 2019

MODULE 1: Creating and Editing Presentations with Pictures.....	PPT 1-1
MODULE 2: Enhancing Presentations with Shapes and SmartArt	PPT 2-1
MODULE 3: Inserting WordArt, Charts, and Tables.....	PPT 3-1

Excel 2019

MODULE 1: Creating a Worksheet and a Chart	EX 1-1
MODULE 2: Formulas, Functions, and Formatting	EX 2-1
MODULE 3: Working with Large Worksheets, Charting, and What-If Analysis	EX 3-1

Access 2019

MODULE 1: Databases and Database Objects: An Introduction.....	AC 1-1
MODULE 2: Querying a Database.....	AC 2-1
MODULE 3: Maintaining a Database	AC 3-1
Index	IND-1

Technology for Success

Microsoft® Office 365® & Office 2019

CONCEPTS & OFFICE

Contents

Getting to Know Microsoft Office Versions
Using SAM Projects and Textbook Projects
Introduction to Technology for Success: Computer Concepts

OFF-1
SAM-1
CC I-1

Technology for Success: Computer Concepts

MODULE ONE

Impact of Digital Technology

Module Objective: Analyze the ways in which technology has revolutionized the last quarter of the century.

Explain Society's Reliance on Technology	CC 1-2
Outline the History of Computers	CC 1-2
Explain the Impact of the Internet of Things and Embedded Computers	CC 1-3
ATMs and Kiosks	CC 1-4
IoT at Home	CC 1-5
IoT in Business	CC 1-5
Discover Uses for Artificial Intelligence	CC 1-6
Explore the Impact of Virtual Reality	CC 1-6
The Digital Divide	CC 1-7
Develop Personal Uses for Technology	CC 1-7
Explore Personal Uses for Technology	CC 1-7
Use Robotics and Virtual Reality	CC 1-8
Utilize Technology in Daily Life	CC 1-9
Use Technology to Assist Users with Disabilities	CC 1-10
Apply Green Computing Concepts to Daily Life	CC 1-11
Enterprise Computing	CC 1-12
Explain the Role of Technology in the Professional World	CC 1-13
List the Ways that Professionals Might Use Technology in the Workplace	CC 1-13
Technology in K-12 Education	CC 1-13
Technology in Higher Education	CC 1-13
Technology in Healthcare	CC 1-13
Technology in the Transportation Industry	CC 1-13
Technology in Manufacturing	CC 1-14
Explore Technology Careers	CC 1-14
Explore How You Might Prepare for a Career in Technology	CC 1-16
Summary	CC 1-18
Review Questions	CC 1-18
Discussion Questions	CC 1-19
Critical Thinking Activities	CC 1-19
Key Terms	CC 1-19

MODULE TWO

The Web

Module Objective: Complete research using information gathered from reliable online sources.

Explain the Role of the Web in Daily Life	CC 2-2
Define Web Browsing Terms	CC 2-2
Explain the Purpose of a Top-Level Domain	CC 2-5
Describe Internet Standards	CC 2-5
Describe Websites and Webpages	CC 2-5
Identify the Types of Websites	CC 2-6
Explain the Pros and Cons of Web Apps	CC 2-8
Identify the Major Components of a Webpage	CC 2-9
Identify Secure and Insecure Websites	CC 2-10
Use E-commerce	CC 2-10
Explain the Role of E-commerce in Daily Life	CC 2-11
Use E-commerce in Business Transactions	CC 2-11
Use E-commerce in Personal Transactions	CC 2-12
Find E-commerce Deals	CC 2-13
Apply Information Literacy Skills to Web Searches	CC 2-13
Define Information Literacy	CC 2-14
Explain How Search Engines Work	CC 2-14
Use Search Tools and Strategies	CC 2-14
Refine Web Searches	CC 2-15
Conduct Online Research	CC 2-17
Use Specialty Search Engines	CC 2-17
Evaluate Online Information	CC 2-18
Gather Content from Online Sources	CC 2-19
Apply Information Literacy Standards	CC 2-21
Summary	CC 2-22
Review Questions	CC 2-23
Discussion Questions	CC 2-24
Critical Thinking Activities	CC 2-24
Key Terms	CC 2-25

MODULE THREE

Computer Hardware

Module Objective: Demonstrate familiarity with using and maintaining computer hardware.

Categorize the Various Types of Computer Hardware	CC 3-2
Define Each Component of Computer Hardware	CC 3-2

Visually Identify Types of Computer Hardware	CC 3-4
Explain How Computers Represent Data	CC 3-5
Explain the Benefits of Internal, External, and Cloud-Based Storage Solutions	CC 3-6
Explain the Pros and Cons of Using Different Types of Computers, Including All-in-Ones, Tablets, Mobile Devices, and Desktop Computers	CC 3-7
Determine Which Hardware Features Are Personally Necessary to Consider When Purchasing a Computer	CC 3-9
Demonstrate Familiarity with Input and Output Devices	CC 3-14
Experiment with Input Devices	CC 3-14
Experiment with Output Devices	CC 3-16
Explain How to Install Computer Hardware	CC 3-17
Maintain Hardware Components	CC 3-18
Measure the Performance of Computer Hardware	CC 3-18
Explain How to Troubleshoot Problems with Hardware and Peripherals	CC 3-18
Explain the Necessary Steps to Maintain Computer Hardware	CC 3-25
Explain How to Restore a Device and Its Associated Hardware and Software	CC 3-26
Summary	CC 3-27
Review Questions	CC 3-27
Discussion Questions	CC 3-28
Critical Thinking Activities	CC 3-28
Key Terms	CC 3-28

MODULE FOUR

Operating Systems and File Management

Module Objective: Keep your chosen operating systems running smoothly, through personalization and maintenance.

Compare Operating Systems	CC 4-2
Differentiate Between an Operating System and System Software	CC 4-2
Differentiate Between Operating Systems	CC 4-3
Identify Desktop Components	CC 4-5
Explain How an Operating System Works	CC 4-7
The Purpose of an Operating System	CC 4-7
How an Operating System Manages Memory	CC 4-8
Steps in the Boot Process	CC 4-8
How Operating Systems Manage Input and Output	CC 4-9
Personalize an Operating System to Increase Productivity	CC 4-10
Customize System Software	CC 4-10
Customize Hardware Using System Software	CC 4-11
Manage Desktop Windows	CC 4-12
Use Administrative Tools	CC 4-13
Manage Files and Folders	CC 4-16
Compress and Uncompress Files	CC 4-16
Save Files to Folders and File Systems	CC 4-16
Determine File Properties	CC 4-17
Manage File Names and File Placement	CC 4-18
Manage Folder Names and Folder Placement	CC 4-18
Organize Files Using File Management Tools	CC 4-19
Summary	CC 4-20
Review Questions	CC 4-20
Discussion Questions	CC 4-21
Critical Thinking Activities	CC 4-21
Key Terms	CC 4-21

MODULE FIVE

Software and Apps

Module Objective: Demonstrate familiarity with common apps and productivity software.

Explain How to Use Apps as Part of Your Daily Life	CC 5-2
Define Application Software	CC 5-2
Describe the Purpose of Each Key Type of App	CC 5-3
Describe Types of Apps	CC 5-3
Identify Common Features of Apps	CC 5-4
Use Mobile Apps	CC 5-5
Use Common Features of Productivity and Graphics Apps	CC 5-9
Identify Apps and Productivity Suites Related to Word Processing, Spreadsheet, Presentation, and Database Software	CC 5-10
Use Word Processing Software for Basic Word Processing Functions	CC 5-11
Format Documents Using Word Processing Software	CC 5-13
Use Spreadsheet Software to Manage Basic Workbooks	CC 5-14
Use Presentation Software to Create and Share Presentations	CC 5-19
Use Database Software to Manage Basic Databases	CC 5-24
Use Graphics Software	CC 5-28
Summary	CC 5-32
Review Questions	CC 5-33
Discussion Questions	CC 5-33
Critical Thinking Activities	CC 5-34
Key Terms	CC 5-34

MODULE SIX

Security and Safety

Module Objective: Safeguard against the major health and safety risks associated with regular computer use.

Discuss Computer Safety and Health Risks	CC 6-2
Determine the Risks to Computer Security and Safety	CC 6-3
Understand the Risks to Physical, Behavioral, and Social Health	CC 6-5
Describe Common Cybersecurity Attacks	CC 6-8
Use Protective Measures to Safeguard Computers and Data	CC 6-12
Explain the Steps to Protect Computer Equipment	CC 6-12
Protect Mobile Devices and Your Privacy	CC 6-15
Use Strong Authentication	CC 6-17
Explain the Benefits of Encryption	CC 6-20
Discuss Measures to Prevent Identity Theft and Protect Financial Information	CC 6-21
Protect Yourself While Online	CC 6-23
Summary	CC 6-24
Review Questions	CC 6-25
Discussion Questions	CC 6-26
Critical Thinking Activities	CC 6-26
Key Terms	CC 6-26
References	CC 6-27

Microsoft **Word 2019****MODULE ONE****Creating and Modifying a Flyer**

Objectives	WD 1-1
What Is Word?	WD 1-1
Introduction	WD 1-2
Project: Flyer with a Picture	WD 1-2
Starting and Using Word	WD 1-3
To Start Word and Create a Blank Document	WD 1-3
The Word Window	WD 1-5
To Display a Different Tab on the Ribbon	WD 1-10
To Adjust the Margins	WD 1-11
Entering Text in a Document	WD 1-12
To Type Text	WD 1-12
To Change the Zoom to Page Width	WD 1-13
To Display Formatting Marks	WD 1-14
Wordwrap	WD 1-14
To Wordwrap Text as You Type	WD 1-15
Spelling and Grammar Check	WD 1-15
To Enter More Text with Spelling and Grammar Errors	WD 1-16
To Check Spelling and Grammar as You Work in a Document	WD 1-16
To Insert a Blank Line	WD 1-18
To Enter More Text	WD 1-19
Navigating a Document	WD 1-20
To Save a Document for the First Time	WD 1-21
Formatting Paragraphs and Characters	WD 1-23
Font, Font Sizes, and Themes	WD 1-24
To Change the Document Theme	WD 1-25
To Center a Paragraph	WD 1-27
To Center Another Paragraph	WD 1-28
Formatting Single versus Multiple Paragraphs and Characters	WD 1-28
To Select a Line	WD 1-28
To Change the Font Size of Selected Text	WD 1-29
To Change the Font of Selected Text	WD 1-30
To Change the Case of Selected Text	WD 1-31
To Apply a Preset Text Effect to Selected Text	WD 1-32
To Shade a Paragraph	WD 1-33
To Select a Paragraph	WD 1-34
To Change the Font Color of Selected Text	WD 1-35
To Change the Font Size of Selected Text	WD 1-35
To Change the Zoom Percentage	WD 1-36
To Select Multiple Lines	WD 1-37
To Change the Font Size of Selected Text	WD 1-38
To Number a List of Paragraphs	WD 1-38
To Undo and Redo an Action	WD 1-40
To Bullet a List of Paragraphs	WD 1-40
AutoFormat As You Type	WD 1-42
To Remove a Hyperlink	WD 1-42
To Center Another Paragraph	WD 1-43
To Use the Mini Toolbar to Format Text	WD 1-43
To Select a Group of Words	WD 1-45
To Underline Text	WD 1-45
To Italicize Text	WD 1-46
To Select Nonadjacent Text	WD 1-47
To Bold Text	WD 1-48
Selecting Text	WD 1-48

To Save an Existing Document with a Different File Name	WD 1-49
Inserting and Formatting a Picture in a Word Document	WD 1-50
To Center a Paragraph	WD 1-51
To Insert a Picture from a File	WD 1-51
To Change the Zoom to One Page	WD 1-53
To Resize an Object Proportionally	WD 1-53
To Apply a Picture Style	WD 1-55
To Apply a Picture Effect	WD 1-56
Enhancing the Page	WD 1-57
To Change Theme Colors	WD 1-58
To Add a Page Border	WD 1-59
To Change Spacing before and after Paragraphs	WD 1-60
To Change the Document Properties	WD 1-61
To Save an Existing Document with the Same File Name	WD 1-62
To Close a Document	WD 1-63
Correcting Errors and Revising a Document	WD 1-64
Types of Changes Made to Documents	WD 1-64
To Open a Document	WD 1-64
To Change the Zoom to Page Width	WD 1-65
To Insert Text in an Existing Document	WD 1-65
Cutting, Copying, and Pasting	WD 1-66
To Delete or Cut Text	WD 1-66
To Copy and Paste	WD 1-67
To Display the Paste Options Menu	WD 1-68
To Move Text	WD 1-69
To Switch to Read Mode	WD 1-70
To Switch to Print Layout View	WD 1-71
To Save a Document with the Same File Name	WD 1-71
To Print a Document	WD 1-71
Using Word Help	WD 1-72
To Use the Tell Me Box	WD 1-73
To Use the Help Pane	WD 1-74
Obtaining Help while Working in Word	WD 1-75
To Sign Out of a Microsoft Account	WD 1-75
To Exit Word	WD 1-76
Summary	WD 1-77
Apply Your Knowledge	WD 1-78
Extend Your Knowledge	WD 1-80
Expand Your World	WD 1-82
In the Lab	WD 1-84

MODULE TWO**Creating a Research Paper**

Objectives	WD 2-1
Introduction	WD 2-1
Project: Research Paper	WD 2-1
MLA Documentation Style	WD 2-2
Changing Document Settings	WD 2-4
To Start Word and Specify Settings Styles	WD 2-4
To Modify a Style	WD 2-5
Adjusting Line and Paragraph Spacing	WD 2-6
To Change Line Spacing	WD 2-6
To Remove Space after a Paragraph	WD 2-7
To Update a Style to Match a Selection	WD 2-8
Creating a Header	WD 2-8
To Insert a Header	WD 2-9
To Right-Align a Paragraph	WD 2-10

To Enter Text in a Header	WD 2-10	To Insert Another Comment	WD 2-58
To Insert Page Numbers	WD 2-10	To Go To a Comment	WD 2-59
To Close the Header	WD 2-12	To Edit a Comment in a Comment Balloon	WD 2-60
Typing the Research Paper Text	WD 2-12	To Go to a Comment	WD 2-60
To Enter Name and Course Information	WD 2-13	To Reply to a Comment	WD 2-60
To Click and Type	WD 2-14	To Hide and Show Comments	WD 2-61
Keyboard Shortcuts for Formatting Text	WD 2-15	To Delete a Comment	WD 2-61
To Format Text Using a Keyboard Shortcut	WD 2-15	To Delete All Comments	WD 2-62
To Display the Rulers	WD 2-16	To Exit Word	WD 2-63
To First-Line Indent Paragraphs	WD 2-16	Summary	WD 2-63
To AutoCorrect as You Type	WD 2-18	Apply Your Knowledge	WD 2-64
To Use the AutoCorrect Options Button	WD 2-18	Extend Your Knowledge	WD 2-65
To Create an AutoCorrect Entry	WD 2-19	Expand Your World	WD 2-68
The AutoCorrect Dialog Box	WD 2-20	In the Lab	WD 2-69
To Enter More Text	WD 2-21		
Citations	WD 2-22	MODULE THREE	
To Change the Bibliography Style	WD 2-22	Creating a Business Letter	
To Insert a Citation for a New Source	WD 2-23	Objectives	WD 3-1
To Enter More Text	WD 2-25	Introduction	WD 3-1
Footnotes	WD 2-25	Project: Business Letter	WD 3-1
To Insert a Footnote	WD 2-26	To Start Word and Change Word Settings	WD 3-3
To Insert a Citation Placeholder	WD 2-27	Creating a Letterhead	WD 3-4
Footnote Text Style	WD 2-28	To Insert a Shape	WD 3-5
To Modify a Style Using a Shortcut Menu	WD 2-28	Floating versus Inline Objects	WD 3-6
To Edit a Source	WD 2-30	To Change an Object's Position	WD 3-7
To Edit a Citation	WD 2-32	To Change an Object's Text Wrapping	WD 3-8
Working with Footnotes and Endnotes	WD 2-33	To Apply a Shape Style	WD 3-8
To Enter More Text	WD 2-34	To Change the Shape Outline	WD 3-9
To Count Words	WD 2-34	To Apply a Shape Effect	WD 3-10
Automatic Page Breaks	WD 2-35	To Add Text to a Shape	WD 3-10
To Enter More Text and Insert a Citation Placeholder	WD 2-35	To Use the 'Increase Font Size' Button	WD 3-11
To Hide and Show White Space	WD 2-35	To Bold Selected Text and Save the Letterhead Document	WD 3-12
To Edit a Source	WD 2-37	To Insert an Online Picture	WD 3-12
To Enter More Text	WD 2-38	To Resize a Picture to a Percent of the Original Size	WD 3-14
Creating an Alphabetical Works Cited Page	WD 2-38	To Change the Color of a Picture	WD 3-15
To Insert a Page Break	WD 2-39	To Adjust the Brightness and Contrast of a Picture	WD 3-16
To Apply a Style	WD 2-39	To Add a Picture Border	WD 3-16
To Center Text	WD 2-40	To Change an Object's Text Wrapping	WD 3-17
To Create a Bibliographical Reference List	WD 2-40	To Move an Object	WD 3-18
Proofreading and Revising the Research Paper	WD 2-42	To Copy an Object	WD 3-18
To Edit a Source Using the Source Manager Dialog Box	WD 2-43	To Use Paste Options to Paste an Object	WD 3-18
To Update a Field (the Bibliography)	WD 2-43	To Move an Object	WD 3-19
To Open the Navigation Pane	WD 2-45	To Flip an Object	WD 3-19
To Go to a Page	WD 2-45	To Format and Enter Text	WD 3-20
To Insert a Citation Using an Existing Source	WD 2-46	To Insert a Symbol from the Symbol Gallery	WD 3-20
To Move a Citation	WD 2-47	To Enter Text	WD 3-21
To Find Text	WD 2-47	To Add a Paragraph Border	WD 3-21
To Replace Text	WD 2-48	To Clear Formatting	WD 3-22
Find and Replace Dialog Box	WD 2-49	Creating a Business Letter	WD 3-23
To Use the Thesaurus	WD 2-49	To Save a Document with a New File Name	WD 3-24
To Check Spelling and Grammar at Once	WD 2-50	To Apply a Style	WD 3-24
The Main and Custom Dictionaries	WD 2-52	Using Tab Stops to Align Text	WD 3-25
To Save and Print the Document	WD 2-53	To Display the Ruler	WD 3-26
To Use Smart Lookup	WD 2-54	To Set Custom Tab Stops	WD 3-26
To Use Researcher	WD 2-54	To Insert the Current Date in a Document	WD 3-27
To Change the Zoom to Multiple Pages	WD 2-55	To Enter the Inside Address and Salutation	WD 3-28
To Change Read Mode Color	WD 2-56	Tables	WD 3-29
Working with Comments in a Document	WD 2-57		
To Insert a Comment	WD 2-57		

To Insert an Empty Table	WD 3-30	To Enter the Presentation Title	PPT 1-13
To Enter Data in a Table	WD 3-31	Correcting a Mistake When Typing	PPT 1-14
To Enter More Data in a Table	WD 3-32	Paragraphs	PPT 1-14
To Apply a Table Style	WD 3-32	To Enter the Presentation Subtitle Paragraph	PPT 1-14
To Select a Column	WD 3-34	To Zoom a Slide	PPT 1-15
Selecting Table Contents	WD 3-35	Formatting Characters	PPT 1-16
To Insert a Row in a Table	WD 3-35	Fonts and Font Styles	PPT 1-16
Deleting Table Data	WD 3-37	To Select a Paragraph	PPT 1-16
To Add More Text	WD 3-37	To Italicize Text	PPT 1-17
To Bullet a List as You Type	WD 3-38	To Increase Font Size	PPT 1-17
To Enter More Text and then Save the Letter	WD 3-39	To Select a Word	PPT 1-17
Working with SmartArt Graphics	WD 3-39	To Change the Text Color	PPT 1-18
To Insert a Page Break	WD 3-39	To Zoom a Slide	PPT 1-19
To Enter and Format Text	WD 3-40	To Save a Presentation for the First Time	PPT 1-19
To Add and Format a Paragraph Border	WD 3-41	Adding a Slide with a Bulleted List	PPT 1-22
To Clear Formatting	WD 3-43	To Add a New Title and Content Slide	PPT 1-22
To Apply a Style and Enter More Text	WD 3-43	Creating a Multilevel Bulleted List	PPT 1-23
To Change the Underline Style	WD 3-44	To Enter a Slide Title	PPT 1-23
To Use the Format Painter Button	WD 3-45	To Select a Text Placeholder	PPT 1-24
SmartArt Graphics	WD 3-46	To Type a Multilevel Bulleted List	PPT 1-24
To Insert a SmartArt Graphic	WD 3-47	To Type the Remaining Text	PPT 1-26
To Delete Shapes from a SmartArt Graphic	WD 3-49	To Select a Group of Words	PPT 1-26
To Add Text to Shapes in a SmartArt Graphic	WD 3-50	To Bold Text	PPT 1-27
To Add a Shape to a SmartArt Graphic	WD 3-51	To Increase Font Size	PPT 1-27
To Add More Shapes and Text to a SmartArt Graphic	WD 3-52	To Underline Text	PPT 1-27
To Change Colors of a SmartArt Graphic	WD 3-54	Adding Slides, Changing Slide Layouts, and Changing the Theme	PPT 1-28
To Apply a SmartArt Style	WD 3-55	To Add a New Slide and Enter a Slide Title and Headings	PPT 1-28
To Resize the SmartArt Graphic	WD 3-55	To Change the Font	PPT 1-30
To Save and Print the Letter	WD 3-56	To Add a Slide with the Title Only Layout	PPT 1-31
Enhancing a Document's Accessibility	WD 3-56	To Enter a Slide Title	PPT 1-32
Addressing and Printing Envelopes and Mailing Labels	WD 3-57	To Change the Theme	PPT 1-32
To Address and Print an Envelope	WD 3-57	PowerPoint Views	PPT 1-34
Envelopes and Labels	WD 3-58	To Move to Another Slide in Normal View	PPT 1-34
Summary	WD 3-59	Inserting, Resizing, and Moving Pictures	PPT 1-36
Apply Your Knowledge	WD 3-60	To Insert a Picture into a Slide without a Content Placeholder	PPT 1-36
Extend Your Knowledge	WD 3-62	To Insert another Picture into a Slide without a Content Placeholder	PPT 1-38
Expand Your World	WD 3-64	To Insert Another Picture into a Slide without a Content Placeholder	PPT 1-38
In the Lab	WD 3-65	To Insert a Picture into a Content Placeholder	PPT 1-39
		Resizing Photos and Illustrations	PPT 1-39
		To Proportionally Resize Pictures	PPT 1-40
		To Resize the Picture on Slide 2	PPT 1-41
		To Resize the Picture on Slide 4	PPT 1-41
		To Move Pictures	PPT 1-42
		To Insert Another Picture into a Slide without a Content Placeholder	PPT 1-43
		To Rotate a Picture	PPT 1-43
		To Nonproportionally Resize the Picture on Slide 2	PPT 1-44
		To Move a Slide in Normal View	PPT 1-46
		To Save a Presentation with the Same File Name	PPT 1-46
		To Close a File Using Backstage View	PPT 1-47
		To Open a Recent File Using Backstage View	PPT 1-47
		Making Changes to Slide Text Content	PPT 1-48
		Replacing Text in an Existing Slide	PPT 1-49
		Deleting Text	PPT 1-49
		To Delete Text in a Placeholder	PPT 1-49

Microsoft PowerPoint 2019

MODULE ONE

Creating and Editing Presentations with Pictures

Objectives	PPT 1-1
What Is PowerPoint?	PPT 1-1
Project: Presentation with a Bulleted List and Pictures	PPT 1-2
Starting and Using PowerPoint	PPT 1-3
To Start PowerPoint and Create a Blank Presentation	PPT 1-3
The PowerPoint Window	PPT 1-5
To Display a Different Tab on the Ribbon	PPT 1-10
Creating a Title Slide	PPT 1-11
To Choose a Presentation Theme	PPT 1-11

To Preview and Print a Worksheet in Landscape Orientation	EX 1-53	To Change the Background Color and Apply a Box Border to the Worksheet Title and Subtitle	EX 2-26
Viewing Automatic Calculations	EX 1-56	To Apply a Cell Style to the Column Headings and Format the Total Rows	EX 2-27
To Use the AutoCalculate Area to Determine a Maximum	EX 1-56	To Format Dates and Center Data in Cells	EX 2-28
Correcting Errors	EX 1-57	To Apply an Accounting Number Format and Comma Style Format Using the Ribbon	EX 2-29
Correcting Errors while Entering Data into a Cell	EX 1-57	To Apply a Currency Style Format with a Floating Dollar Sign Using the Format Cells Dialog Box	EX 2-30
Correcting Errors after Entering Data into a Cell	EX 1-57	To Apply a Percent Style Format and Use the Increase Decimal Button	EX 2-31
Undoing the Last Cell Entry	EX 1-59	Conditional Formatting	EX 2-31
Clearing a Cell or Range of Cells	EX 1-59	To Apply Conditional Formatting	EX 2-32
Clearing the Entire Worksheet	EX 1-60	Conditional Formatting Operators	EX 2-34
Using Excel Help	EX 1-60	Changing Column Width and Row Height	EX 2-35
To Obtain Help Using the Search Text Box	EX 1-61	To Change Column Width	EX 2-35
Obtaining Help while Working in an Office App	EX 1-63	To Change Row Height	EX 2-38
To Obtain Help Using the Tell Me Box	EX 1-63	Checking Spelling	EX 2-39
To Save a Workbook with a Different File Name	EX 1-64	To Check Spelling on the Worksheet	EX 2-40
To Sign Out of a Microsoft Account	EX 1-64	Additional Spelling Checker Considerations	EX 2-41
Summary	EX 1-65	Printing the Worksheet	EX 2-41
Apply Your Knowledge	EX 1-66	To Change the Worksheet's Margins, Header, and Orientation in Page Layout View	EX 2-42
Extend Your Knowledge	EX 1-68	To Print a Worksheet	EX 2-44
Expand Your World	EX 1-69	To Print a Section of the Worksheet	EX 2-45
In the Lab	EX 1-69	Displaying and Printing the Formulas Version of the Worksheet	EX 2-46
MODULE TWO		To Display the Formulas in the Worksheet and Fit the Printout on One Page	EX 2-47
Formulas, Functions, and Formatting		To Change the Print Scaling Option Back to 100%	EX 2-48
Objectives	EX 2-1	Summary	EX 2-49
Introduction	EX 2-1	Apply Your Knowledge	EX 2-50
Project: Worksheet with Formulas and Functions	EX 2-2	Extend Your Knowledge	EX 2-51
Entering the Titles and Numbers into the Worksheet	EX 2-4	Expand Your World	EX 2-52
To Enter the Worksheet Title and Subtitle	EX 2-4	In the Lab	EX 2-53
To Enter the Column Titles	EX 2-5		
To Enter the Salary Data	EX 2-5	MODULE THREE	
Flash Fill	EX 2-6	Working with Large Worksheets, Charting, and What-If Analysis	
To Use Flash Fill	EX 2-7	Objectives	EX 3-1
To Enter the Row Titles	EX 2-8	Introduction	EX 3-1
To Change the Sheet Tab Name and Color	EX 2-8	Project: Financial Projection Worksheet with What-If Analysis and Chart	EX 3-2
Entering Formulas	EX 2-9	To Enter the Worksheet Titles and Apply a Theme	EX 3-5
To Enter a Formula Using the Keyboard	EX 2-9	Rotating Text and Using the Fill Handle to Create a Series	EX 3-5
Arithmetic Operations	EX 2-10	To Rotate Text in a Cell	EX 3-5
Order of Operations	EX 2-10	To Use the Fill Handle to Create a Series of Month Names	EX 3-7
To Enter Formulas Using Point Mode	EX 2-11	Using the Auto Fill Options Menu	EX 3-8
To Copy Formulas Using the Fill Handle	EX 2-13	To Increase Column Widths	EX 3-9
Option Buttons	EX 2-14	To Enter and Indent Row Titles	EX 3-10
To Determine Totals Using the AutoSum Button	EX 2-14	Copying a Range of Cells to a Nonadjacent Destination Area	EX 3-10
To Determine the Total Tax Percentage	EX 2-15	To Copy a Range of Cells to a Nonadjacent Destination Area	EX 3-11
Using the AVERAGE, MAX, MIN, and other Statistical Functions	EX 2-16	Using the Paste Options Menu	EX 3-12
To Determine the Highest Number in a Range of Numbers Using the Insert Function Dialog Box	EX 2-16	Using Drag and Drop to Move or Copy Cells	EX 3-12
To Determine the Lowest Number in a Range of Numbers Using the Sum Menu	EX 2-18	Using Cut and Paste to Move Cells	EX 3-13
To Determine the Average of a Range of Numbers Using the Keyboard	EX 2-20		
To Copy a Range of Cells across Columns to an Adjacent Range Using the Fill Handle	EX 2-21		
Verifying Formulas Using Range Finder	EX 2-22		
To Verify a Formula Using Range Finder	EX 2-22		
Formatting the Worksheet	EX 2-23		
To Change the Workbook Theme	EX 2-24		
To Format the Worksheet Titles	EX 2-25		

Apply Your Knowledge	AC 1-41	Crosstab Queries	AC 2-52
Extend Your Knowledge	AC 1-42	To Create a Crosstab Query	AC 2-53
Expand Your World	AC 1-43	Customizing the Navigation Pane	AC 2-56
In the Lab	AC 1-44	To Customize the Navigation Pane	AC 2-56
 		Summary	AC 2-57
MODULE TWO		Apply Your Knowledge	AC 2-59
Querying a Database		Extend Your Knowledge	AC 2-60
Objectives	AC 2-1	Expand Your World	AC 2-61
Introduction	AC 2-1	In the Lab	AC 2-62
Project — Querying a Database	AC 2-1		
Creating Queries	AC 2-3	 	
To Create a Query in Design View	AC 2-3	MODULE THREE	
To Add Records to the Database	AC 2-5	Maintaining a Database	
To Add Fields to the Design Grid	AC 2-6	Objectives	AC 3-1
Determining Criteria	AC 2-7	Introduction	AC 3-1
Running the Query	AC 2-7	Project — Maintaining a Database	AC 3-1
To Use Text Data in a Criterion	AC 2-7	Updating Records	AC 3-2
Using Saved Queries	AC 2-9	To Create a Split Form	AC 3-3
Wildcards	AC 2-9	To Use a Form to Add Records	AC 3-5
To Use a Wildcard	AC 2-10	To Search for a Record	AC 3-5
To Use Criteria for a Field Not Included in the Results	AC 2-12	To Update the Contents of a Record	AC 3-7
Creating a Parameter Query	AC 2-13	To Delete a Record	AC 3-7
To Create and View a Parameter Query	AC 2-14	Filtering Records	AC 3-8
To Use a Parameter Query	AC 2-15	To Use Filter By Selection	AC 3-9
To Use a Number in a Criterion	AC 2-16	To Toggle a Filter	AC 3-10
Comparison Operators	AC 2-17	To Clear a Filter	AC 3-10
To Use a Comparison Operator in a Criterion	AC 2-17	To Use a Common Filter	AC 3-11
Using Compound Criteria	AC 2-19	To Use Filter By Form	AC 3-12
To Use a Compound Criterion Involving AND	AC 2-19	To Use Advanced Filter/Sort	AC 3-13
To Use a Compound Criterion Involving OR	AC 2-20	Filters and Queries	AC 3-14
Special Criteria	AC 2-21	Changing the Database Structure	AC 3-15
Sorting	AC 2-22	To Change a Number Field Size in Design View	AC 3-17
To Clear the Design Grid	AC 2-22	To Add a New Field	AC 3-19
To Import a Table	AC 2-23	To Create a Lookup Field	AC 3-20
To Sort Data in a Query	AC 2-23	To Add a Multivalued Field	AC 3-22
To Omit Duplicates	AC 2-24	To Add a Calculated Field	AC 3-23
To Sort on Multiple Keys	AC 2-26	To Save the Changes and Close the Table	AC 3-25
To Create a Top-Values Query	AC 2-28	Mass Changes	AC 3-25
Joining Tables	AC 2-29	To Use an Update Query	AC 3-26
To Join Tables	AC 2-30	Validation Rules	AC 3-28
To Change Join Properties	AC 2-32	To Change a Field Size	AC 3-28
To Create a Report from a Query	AC 2-34	To Specify a Required Field	AC 3-29
To Print a Report	AC 2-35	To Specify a Range	AC 3-29
Creating a Form for a Query	AC 2-36	To Specify a Default Value	AC 3-30
To Create a Form for a Query	AC 2-36	To Specify a Collection of Legal Values	AC 3-30
Using a Form	AC 2-37	To Save the Validation Rules, Default Values, and Formats	AC 3-31
Exporting Data from Access to Other Applications	AC 2-37	Updating a Table That Contains Validation Rules	AC 3-32
To Export Data to Excel	AC 2-38	Making Additional Changes to the Database	AC 3-34
Text Files	AC 2-40	To Change the Contents of a Field	AC 3-34
Adding Criteria to a Join Query	AC 2-41	To Use a Lookup Field	AC 3-34
To Restrict the Records in a Join	AC 2-42	To Use a Multivalued Lookup Field	AC 3-35
Calculations	AC 2-43	Changing the Appearance of a Datasheet	AC 3-37
To Use a Calculated Field in a Query	AC 2-43	To Include Totals in a Datasheet	AC 3-37
To Change a Caption	AC 2-46	To Remove Totals from a Datasheet	AC 3-38
To Calculate Statistics	AC 2-47	To Change Gridlines in a Datasheet	AC 3-39
To Use Criteria in Calculating Statistics	AC 2-49	To Change the Colors and Font in a Datasheet	AC 3-40
To Use Grouping	AC 2-51	Using the Datasheet Formatting Dialog Box	AC 3-41
		To Close the Datasheet without Saving the Format Changes	AC 3-41

Multivalued Fields in Queries	AC 3-42	Ordering Records	AC 3-51
To Include Multiple Values on One Row of a Query	AC 3-42	To Use the Ascending Button to Order Records	AC 3-52
To Include Multiple Values on Multiple Rows of a Query	AC 3-43	Summary	AC 3-53
To Test an Existing Query with a Multivalued Field	AC 3-44	Apply Your Knowledge	AC 3-54
Referential Integrity	AC 3-44	Extend Your Knowledge	AC 3-55
To Specify Referential Integrity	AC 3-45	Expand Your World	AC 3-56
Effect of Referential Integrity	AC 3-48	In the Labs	AC 3-56
To Use a Subdatasheet	AC 3-49	Index	IND-1
Handling Data Inconsistency	AC 3-51		



Technology for Success

Microsoft® Office 365® & Office 2019

CONCEPTS & OFFICE

Getting to Know Microsoft Office Versions

Cengage is proud to bring you the next edition of Microsoft Office. This edition was designed to provide a robust learning experience that is not dependent upon a specific version of Office.

Microsoft supports several versions of Office:

- **Office 365:** A cloud-based subscription service that delivers Microsoft’s most up-to-date, feature-rich, modern productivity tools direct to your device. There are variations of Office 365 for business, educational, and personal use. Office 365 offers extra online storage and cloud-connected features, as well as updates with the latest features, fixes, and security updates.
- **Office 2019:** Microsoft’s “on-premises” version of the Office apps, available for both PCs and Macs, offered as a static, one-time purchase and outside of the subscription model.
- **Office Online:** A free, simplified version of Office web applications (Word, Excel, PowerPoint, and OneNote) that facilitates creating and editing files collaboratively.

Office 365 (the subscription model) and Office 2019 (the one-time purchase model) had only slight differences between them at the time this content was developed. Over time, Office 365’s cloud interface will continuously update, offering new application features and functions, while Office 2019 will remain static. Therefore, your onscreen experience may differ from what you see in this product. For example, the more advanced features and functionalities covered in this product may not be available in Office Online or may have updated from what you see in Office 2019.

For more information on the differences between Office 365, Office 2019, and Office Online, please visit the Microsoft Support site.

Cengage is committed to providing high-quality learning solutions for you to gain the knowledge and skills that will empower you throughout your educational and professional careers.

Thank you for using our product, and we look forward to exploring the future of Microsoft Office with you!

Using SAM Projects and Textbook Projects

SAM and *MindTap* are interactive online platforms designed to transform students into Microsoft Office and Computer Concepts masters. Practice with simulated SAM Trainings and MindTap activities and actively apply the skills you learned live in Microsoft Word, Excel, PowerPoint, or Access. Become a more productive student and use these skills throughout your career.

If your instructor assigns SAM Projects:

1. Launch your SAM Project assignment from SAM or MindTap.
2. Click the links to download your **Instructions file**, **Start file**, and **Support files** (when available).
3. Open the Instructions file and follow the step-by-step instructions.
4. When you complete the project, upload your file to SAM or MindTap for immediate feedback.

To use SAM Textbook Projects:

1. Launch your SAM Project assignment from SAM or MindTap.
2. Click the links to download your **Start file** and **Support files** (when available).
3. Locate the module indicated in your book or eBook.
4. Read the module and complete the project.



Open the Start file you downloaded.



Save, close, and upload your completed project to receive immediate feedback.

IMPORTANT: To receive full credit for your Textbook Project, you must complete the activity using the Start file you downloaded from SAM or MindTap.

Introduction to Technology for Success: Computer Concepts

You probably use technology dozens of times a day on your phone, computer, and other digital devices to keep in touch with friends and family, research and complete school assignments, shop, and entertain yourself. Even though you use technology every day, understanding how that technology works and how it can work for you will give you the edge you want as you pursue your education and career.

Technology for Success: Computer Concepts will explain the What, Why, and How of technology as it relates to your life, so you can unlock the door to success in the workplace, at home, and at school. It also provides increased skills and safety with the digital devices you use. *Technology for Success: Computer Concepts* will help you master the computer concepts you need to impress at your dream job interview in this age of digital transformation.

Key Features

Based on extensive research and feedback from students today, it has been found that students absorb information more easily if the topics are broken down into smaller lessons that are clearly related to their lives. With this in mind, and to ensure a deeper understanding of technology in the real world, *Technology for Success: Computer Concepts* uses the following approach to helping you understand and apply its contents:

- **Headings** distill key takeaways to help learners understand the big picture and serve as the building blocks of the module designed to help you achieve mastery.
- **Review Questions** help you test your understanding of each topic.
- **Discussion Questions** and **Critical Thinking Activities** help you apply your understanding of the module to the real world.
- **Key Terms** list highlights terms you should know to master the module content.

Digital Learning Experience

The online learning experience includes hands-on trainings, videos that cover the more difficult concepts, and critical thinking challenges that encourage you to problem-solve in a real-world scenario. *Technology for Success: Computer Concepts* is designed to help you build foundational knowledge and integrate it into your daily life with interactive experiences in the MindTap and SAM platforms.

- **Readings** cover focused, concrete content designed to reinforce learning objectives.
- **Videos** complement the reading to reinforce the most difficult concepts.
- **Critical Thinking Challenges** place you in real-world scenarios to practice your problem-solving and decision-making skills.
- **SAM Trainings** are comprised of brief, skills-based videos which are each followed by an assessment. SAM trainings are designed to give you concrete experience with specific technology skills.
- **Module Exams** assess your understanding of how the learning objectives connect and build on one another.
- **In The News RSS Feeds** share the latest technology news to help you understand its impact on our daily lives, the economy, and society. RSS Feeds are currently only available to MindTap users.

Impact of Digital Technology

MODULE

1



Fatima looks her best for her profile picture.

By submitting her resume online Fatima is practicing green computing.

Fatima has connected her professional social media account to both her laptop and smartphone.

KimSongsak/Shutterstock.com

Fatima Aktar is finishing her degree in social media marketing. During her time at school she has learned about how to use technology for productivity, and specifically how to use technology in social media marketing. Fatima recently visited her school’s career counseling center and received a list of tips to use technology to find an entry-level job in her field. She will use the technology with which she is familiar to search for openings, research the companies, schedule and keep track of interviews, and create a professional online presence.

In This Module

- Explain the evolution of society’s reliance on technology
- Explain the role of technology in the professional world
- Develop personal uses for technology to help with productivity, learning, and future growth

● **IN THE COURSE** of a day you might use technology to complete assignments, watch a streaming video, flip through news headlines, search for directions, make a dinner reservation, or buy something online. At school, at home, and at work, technology plays a vital role in your activities.

In this module, you will learn how technology has developed over time, explore the ways technology impacts our daily home and work lives, and discover how to choose and prepare for a career in technology.

Explain Society's Reliance on Technology

Over the last quarter century, technology has revolutionized our lives. Because of advances in technology you can more quickly and effectively than ever before access, search for, and share information. You can manage your finances, calendars, and tasks. You can play games and watch videos on your phone or computer for entertainment and relaxation. **Digital literacy** (also called **computer literacy**) involves having a current knowledge and understanding of computers, mobile devices, the web, and related technologies. Being digitally literate is essential for acquiring a job, using and contributing to global communications, and participating effectively in the international community.

A **computer** is an electronic device, operating under the control of instructions stored in its own memory, that can accept data, process the data to produce information, and store the information for future use. **Data** is raw facts, such as text or numbers. A computer includes hardware and software. **Hardware** is the device itself and its components, such as wires, cases, switches, and electronic circuits. **Software** consists of the programs and apps that instruct the computer to perform tasks. Software processes data into meaningful **information**.

Outline the History of Computers

People have relied on tools and machines to count and manipulate numbers for thousands of years. These tools and technologies have evolved from the abacus in ancient times, to the first computing machines in the nineteenth century, to today's powerful handheld devices such as smartphones and tablets.

The first generation of computers used **vacuum tubes** (**Figure 1-1**), cylindrical glass tubes that controlled the flow of electrons. The ENIAC and UNIVAC are examples of these expensive machines. Their use and availability were limited due to their large size, the amount of power they consumed, the heat they generated, and how quickly they wore out.

The next generation of computers replaced vacuum tubes with **transistors**, which were smaller, cheaper, and more reliable. These computers contained many components still in use today, including tape and disk storage, memory, operating systems, and stored programs.

In the 1960s, computer engineers developed **integrated circuits**, which packed the equivalent of thousands of vacuum tubes or transistors into a silicon chip about the size of your thumb. In 1971, Ted Hoff and a team of engineers at Intel and IBM introduced the microprocessor. A **microprocessor** is the “brains” of a computer, a chip that contains a central processing unit. Microprocessors were even faster, smaller, and less expensive than integrated circuits. Today, microprocessors are often called processors for short.

Figure 1-1: Electronic digital computer with vacuum tubes



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In the 1970s and 1980s, computers meant for personal use started to gain popularity. In 1978, Steve Jobs and Steve Wozniak of Apple Computer Corporation introduced the Apple II (Figure 1-2), a preassembled computer with color graphics and popular spreadsheet software called VisiCalc.

IBM followed Apple's lead in 1981, introducing its **personal computer (PC)**. Other manufacturers also started making similar machines, and the market grew. Since 1981, the number of PCs in use has grown to the billions. However, many people today use tablets and smartphones in addition to or instead of PCs.

Today's computers have evolved into connected devices that can share data using the Internet or wireless networks. They are smaller, faster, and have far greater capabilities than previous computers. In fact, your smartphone probably has more computing power than the computer that guided the Apollo mission to the moon in 1969!

Figure 1-2: Apple II computer



Explain the Impact of the Internet of Things and Embedded Computers

The **Internet of Things (IoT)** is an environment where processors are embedded in every product imaginable (things), and these things communicate with one another via the Internet or wireless networks. Alarm clocks, coffeemakers, thermostats, streetlights, navigation systems, and much more are enhanced by the growth of IoT. IoT-enabled devices often are referred to as **smart devices** (Figure 1-3) because of their ability to communicate, locate, and predict. Smart devices often have associated apps to control and interact with them.

Figure 1-3: Smart devices use IoT to control home functions, such as a thermostat



The basic premise of IoT is that objects can be tagged, tracked, and monitored through a local network or across the Internet. Communication technologies such as Bluetooth, RFID tags, near-field communications (NFC), and sensors have become readily available, more powerful, and less expensive. Sensors and tags can transmit data to a server on the Internet over a wireless network at frequent intervals for analysis and storage.

Developments in Big Data have made it possible to efficiently access, store, and process the mountain of data reported by sensors. Mobile service providers offer connectivity to a variety of devices so that transmitting and receiving data can take place quickly.

An **embedded computer** is a computer that functions as one component in a larger product, and which has a specific purpose. Embedded computers usually are small and have limited hardware on their own but enhance the capabilities of everyday devices. Embedded computers perform a specific function based on the requirements of the product in which they reside. For example, an embedded computer in a printer monitors the ink levels, detects paper jams, and determines if the printer is out of paper.

Embedded computers are everywhere. This technology enables computers and devices to connect with one another over the Internet using IoT. You encounter examples of embedded computers multiple times a day, perhaps without being aware of it.

Today's vehicles have many embedded computers. These enable you to use a camera to guide you when backing up, warn you if a vehicle or object is in your blind spot, or alert you to unsafe road conditions. Recently, all new cars were required to include backup cameras and electronic stability control, which can assist with steering the car in case of skidding. All of this technology is intended to make driving safer (**Figure 1-4**).

Figure 1-4: Some of the embedded computers designed to improve safety, security, and performance in today's vehicles

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Critics of in-vehicle technology claim that it can provide drivers with a false sense of security. If you rely on a sensor while backing up, parking, or changing lanes, you may miss other obstructions that can cause a crash. Reliance on electronic stability control may cause you to drive faster than conditions allow, or to pay less attention to the distance between your vehicle and others.

ATMs and Kiosks

Automated teller machines (ATMs) are one of the more familiar uses of IoT. You can use your ATM card to withdraw cash, deposit checks, and interact with your bank accounts. Recent innovations are improving card security, such as **chip-and-pin technology** that stores data on an embedded chip instead of a magnetic stripe.

ATMs are a type of kiosk. A **kiosk** is a freestanding booth usually placed in a public area that can contain a display device used to show information to the public or event attendees.

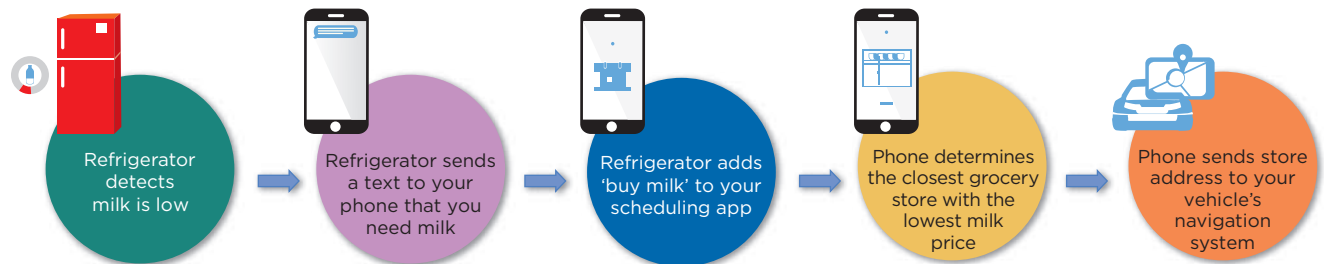
Kiosks enable self-service transactions in hotels and airports, for example, to enable users to check in for a flight or room. Healthcare providers also use kiosks for patients to check in and enter information, such as their insurance card number.

IoT at Home

IoT enables you to manage devices remotely in your home, such as to start the washing machine at a certain time, view potential intruders via a webcam, or adjust the room temperature. Personal IoT uses include wearable fitness trackers that record and send data to your smartphone or computer about your exercise activity, the number of steps you take in a day, and your heart rate.

Figure 1-5 shows an example of how IoT can help manage your daily tasks.

Figure 1-5: IoT-enabled devices can help you with daily tasks such as grocery shopping



IoT continues to advance its capabilities, and can help you maintain a secure, energy-efficient, connected, voice-activated, remotely accessible home.

IoT in Business

All businesses and areas of business can take advantage of IoT. Manufacturing can use sensors to monitor processes and increase quality of finished goods (**Figure 1-6**). Retail can use sensors to track inventory or send coupons to customers' phones while they shop. Shipping companies can track mileage and location of their trucks and monitor driving times to ensure the safety of their drivers.

Figure 1-6: Manufacturers can use a tablet to control a robotic arm



A healthcare provider can use IoT to:

- Connect to a patient's wearable blood pressure or glucose monitor
- Send prescription updates and changes to a pharmacy, and alert the patient of the prescription
- Track and store data provided by wearable monitors to determine necessary follow-up care
- Send the patient reminders about upcoming appointments or tests

The uses of IoT are expanding rapidly, and connected devices continue to impact and enhance business practices at all levels.

Discover Uses for Artificial Intelligence

Artificial intelligence (AI) is the technological use of logic and prior experience to simulate human intelligence. AI has a variety of capabilities, such as speech recognition, virtual reality, logical reasoning, and creative responses. Computers with AI can collect information to make decisions, reach conclusions, and combine information in new ways, which is a form of learning.

Computers with AI use machine intelligence rather than human intelligence to make decisions. The goal in creating AI devices is to minimize the gap between what a machine can do and what a human can do. Programmers train the computer to act when presented with certain scenarios by instructing the computer that “if X happens, then do Y.”

Explore the Impact of Virtual Reality

Virtual reality (VR) is the use of computers to simulate a real or imagined environment that appears as a three-dimensional (3-D) space. These simulations use 3-D images that enable users to explore and have a sensory experience through visual and sound effects. You use VR in gaming to interact with a virtual environment and digital beings. **Augmented reality (AR)** is a type of VR that uses an image of an actual place or thing and adds digital information to it. A photo of a location overlaid with information about places of interest (Figure 1-7) or a football broadcast that shows a first-down marker are examples of AR.

Figure 1-7: Augmented reality combines real images with digital information



Although VR developers work mostly with digital graphics and animation, they also use AI when creating virtual creatures that make decisions and change their behavior based on interactions with others. A VR developer can create an entire 3-D environment that contains infinite space and depth.