

# MOS Certification CURRICULUM



**Grade Level(s):** 9-12

**Curriculum Author(s):** Devon Bares & Adam Lengyel

**Course Description:** TestOut Desktop Pro Plus provides an innovative and effective way to practice using Microsoft Office applications and learn the basics of computer technology. Simulated labs help students acquire and retain the basic skills they need to become proficient in Microsoft Word, Excel, PowerPoint, Access, and Outlook. The course is also designed to prepare students for the following Microsoft Office Specialist exams.

- MOS Word 2016
- MOS Excel 2016
- MOS PowerPoint 2016
- MOS Access 2016
- MOS Outlook 2016

**Year At A Glance**

<b>Unit Title</b>	<b>Overarching Essential Question</b>	<b>Overarching Enduring Understanding</b>	<b><u>Vision of A Learner “I Can” Statements</u></b>
<a href="#">Online Essentials</a>	How do the online functions we use everyday actually work?	Online technology is complex, but a basic understanding of how it works will make you more productive and efficient.	TCC4(9-12), TI1(9-12), TI3(9-12), P3(9-12), AA1(9-12), AA2(9-12), AA4(9-12)
<a href="#">Computer Essentials</a>	How are computers designed, installed and set up?	Computer technology is complex, but a basic understanding of how it works will make you more productive and efficient.	TCC4(9-12), TI1(9-12), TI3(9-12), P3(9-12), AA1(9-12), AA2(9-12), AA4(9-12)
<a href="#">Common Office Features</a>	How is Microsoft Office designed?	MOS is an industry leading software package that continues to be used by countless organizations throughout the world.	TCC4(9-12), TI1(9-12), TI3(9-12), P3(9-12), AA1(9-12), AA2(9-12), AA4(9-12)
<a href="#">Microsoft Word</a>	What can Microsoft Word do for you?	Microsoft Word is a word processing program that has been adapted by all types of businesses	TCC4(9-12), TI1(9-12), TI3(9-12), P3(9-12), AA1(9-12), AA2(9-12), AA4(9-12)
<a href="#">Microsoft Excel</a>	What can Microsoft Excel do for you?	Microsoft Excel is a spreadsheet program used to analyze data across a variety of industries and organizations.	TCC4(9-12), TI1(9-12), TI3(9-12), P3(9-12), AA1(9-12), AA2(9-12), AA4(9-12)



## Unit 1 - Online Essentials

### Desired Results - Goals, Transfer, Meaning, Acquisition

#### Established Goals:

##### [CSTA Standards](#)

- 3A-CS-01 Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects
- 3A-NI-04 Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing
- 3A-NI-05 Give examples to illustrate how sensitive data can be affected by malware and other attacks.
- 3A-NI-06 Recommend security measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts
- 3A-NI-07 Compare various security measures, considering tradeoffs between the usability and security of a computing system
- 3A-NI-08 Explain tradeoffs when selecting and implementing cybersecurity recommendations.
- 3B-NI-03 Describe the issues that impact network functionality (e.g., bandwidth, load, delay, topology)

#### Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.

TI3(9-12): I can formulate and investigate probing questions to further my learning.

P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.

AA1(9-12): I can evaluate different approaches and justify the best pathway to success.

AA2(9-12): I can assess my past successes and mistakes to change my approach

AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation

#### Understandings: Students will understand that...

- Computer technology has changed and evolved but there are many similarities that remain consistent
- It is important to follow rules of etiquette when interacting online
- There are different ways to protect yourself from cyber threats
- There are differences between scholarly and consumer level sources

#### Essential Questions:

- How are today's computers similar to the earliest computers and how are they different?
- How should I respond when I am a victim of cyberbullying? How should I respond when I see someone else being bullied?
- What methods of digital communication do you use on a regular basis?
- What can you do to protect yourself against Internet security risks?
- How does content on the Internet attempt to influence the way I think and who stands to benefit from this influence?

<p><b>Students will know...</b></p> <ul style="list-style-type: none"> <li>• The uses of computers in today's world.</li> <li>• The ethical considerations related to evolving forms of technology.</li> <li>• The importance of technologies that use the Internet, including the Web, email, instant messaging, VoIP, and the Internet of Things.</li> <li>• How to evaluate email messages to determine if they represent a possible social engineering attack.</li> <li>• How to scrutinize a source for potential bias or false information.</li> </ul>	<p><b>Students will be able to...</b></p> <ul style="list-style-type: none"> <li>• Recall significant developments in the history of modern computing.</li> <li>• Define bits and bytes.</li> <li>• Select the best format for digital images.</li> <li>• Compare common image file types.</li> <li>• Describe the essential components of the Web, including websites, URLs, hyperlinks, web browsers, and search engines.</li> <li>• Define and describe the uses of cloud computing.</li> <li>• Make basic changes to browser settings.</li> <li>• Identify and describe various forms of electronic communication, including email, instant messaging, forums, text messaging, video chat, and social networking.</li> <li>• Identify popular mobile operating systems.</li> <li>• Explain why it's important to back up data.</li> <li>• Describe the basics of data encryption.</li> <li>• Clear a browser's cache.</li> <li>• Use advanced search to find information on the Internet.</li> </ul>
<p><b>Key Vocabulary:</b> Computer Tower, Monitor, Keyboard, Mouse, Software, Bit, Byte, ISP, IP Address, URL, HTML, Intranet, WiFi, Internet of Things, Copyright, Intellectual Property, Piracy, Fair Use, Public Domain, Proprietary Software, Open-source Software</p>	
<p><b>Assessment Evidence</b></p>	
<p><b>Performance Tasks:</b>  <b>Summative(s):</b>  Skills Lab: Web Browsing with Internet Explorer  Skills Lab: Microsoft Outlook Email  Skills Lab: Practice Online Safety and Security</p>	<p><b>Other Evidence:</b>  <b>Interim(s):</b>  Applied Lab: Configure Windows Firewall  Applied Lab: Configure Privacy Settings in IE  Applied Lab: Clear the Browser Cache  Applied Lab: Respond to Social Engineering  Applied Lab: Configure the IE Popup Blocker</p>
<p><b>Learning Plan</b></p>	
<ul style="list-style-type: none"> <li>• Students will work on a self paced <a href="#">Learning Plan</a> as outlined by the certification requirements. TI1(9-12)</li> </ul>	



- Analyze and relate in class learning with other classwork and daily life activities. TCC4(9-12)
- Complete individual simulations and labs that require a minimum score to proceed P3(9-12)
- Navigate the best individualized path to certification. Students will determine which path will be best for them. AA1(9-12)
- Repeat modules and learning activities as much as desired to be sure students can learn from mistakes and be prepared for the necessary certification exam.AA2(9-12)
- Students will have the opportunity to decide how many modules and certifications they would like to complete and attain. AA4(9-12)

**Teacher Resources:**

[TestOut Learning Platform - LabSim](#)

[Certiport Testing Portal](#)



## Unit 2 - Computer Essentials

### Desired Results - Goals, Transfer, Meaning, Acquisition

#### Established Goals:

3A-CS-02 Compare levels of abstraction and interactions between application software, system software, and hardware layers.  
3A-CS-03 Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and fix errors.  
3A-DA-09 Translate between different bit representations of real-world phenomena, such as characters, numbers, and images  
3B-NI-03 Describe the issues that impact network functionality (e.g., bandwidth, load, delay, topology)

#### Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.  
TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.  
TI3(9-12): I can formulate and investigate probing questions to further my learning.  
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.  
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.  
AA2(9-12): I can assess my past successes and mistakes to change my approach  
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation  
3A-IC-24 Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

#### Understandings: Students will understand that...

- Technology, people, and procedures must work together in an information system.
- Different types of computer devices must be appropriate for different types of users.
- Cloud storage is different from local file storage.
- It is important that computers on a network use the same protocols.
- Important questions can be answered by analyzing Big Data.
- Computer programs must be precise in giving instructions to the computer.
- Software applications can assist you in collaborating with other people.

#### Essential Questions:

- What hardware components are generally required for a desktop computing system?
- What is the difference between hardware, system software, and application software?
- How can the Windows operating system be configured through the Settings app?
- What is the difference between a local and a network printer?
- What are the advantages and disadvantages of different file storage options?
- What are the safest methods of installing applications?
- What hardware components are needed for a wired network? A wireless network?
- What are some principles for effective systems analysis and design?

<p><b>Students will know...</b></p> <ul style="list-style-type: none"> <li>• The common peripheral devices and ports and connectors by sight.</li> <li>• The different types of system software and common operating systems.</li> <li>• The different components of the Windows 10 operating system.</li> <li>• The differences between developing computer programs and using software packages.</li> <li>• What computer programming is, why it is useful, and the names of several programming languages.</li> <li>• The purpose of an operating system.</li> </ul>	<p><b>Students will be able to...</b></p> <ul style="list-style-type: none"> <li>• Connect cables and peripherals to a computer system.</li> <li>• Identify and state the purpose of common hardware components.</li> <li>• Change display settings in Windows.</li> <li>• Configure Windows Update settings.</li> <li>• Analyze and understand pseudocode.</li> <li>• Describe several careers in computer science.</li> <li>• Identify and understand the purposes of HTML, CSS, and JavaScript in a web browser.</li> <li>• Create folders in the Windows file system and copy, rename, and delete files in Windows.</li> <li>• Describe the advantages and disadvantages of different software installation methods.</li> <li>• Define and state some advantages of computer networking.</li> <li>• Define the Internet and understand basic Internet protocols.</li> <li>• Explain the role of hosts and servers on a network.</li> <li>• Connect to a public and secure WiFi network.</li> <li>• Conduct online research on a career that interests you in information technology.</li> </ul>
<p><b>Key Vocabulary:</b> Desktops, Notebooks, Mobile Devices, Keyboard, Mouse, Monitor, Printer, Connectors, Cables, Storage devices, Processor, Chip, Power Supply, Field, Record, Primary key, Foreign key, One-to-many relationship, Discussion boards, Screen sharing, Calendaring, Resource management, Webinars, Collaborative editing, Hard Disk Drive, Optical Drive, Flash Storage, Network Interface, Network Cabling, Wall Jack, Mail Server, Web Server, Database Server, Table, Query, Form, Report, Data Extraction, Data Mining, Big Data Analytics, Programming Language, Encapsulation.</p>	
<p><b>Assessment Evidence</b></p>	
<p><b>Performance Tasks:</b>  <b>Summative(s):</b>  2.1.14 Skills Lab: Connect Computer Devices  2.2.13 Skills Lab: Explore Windows 10 Features  2.3.9 Skills Lab: Manage and Share Files in Windows  2.4.6 Skills Lab: Use Desktop Applications  2.5.10 Skills Lab: Configure Networking and User Accounts</p>	<p><b>Other Evidence:</b>  <b>Interim(s):</b>  2.1.15 Applied Lab: Connect a Monitor  2.1.16 Applied Lab: Set Up a Computer  2.1.17 Applied Lab: Install USB Devices  2.1.18 Applied Lab: Connect a Printer  2.2.14 Applied Lab: Change Display Settings</p>



2.6.8 Skills Lab: Microsoft Access Databases

- 2.2.15 Applied Lab: Connect to a Printer
- 2.2.16 Applied Lab: Share a Printer
- 2.3.10 Applied Lab: Manage Files
- 2.3.11 Applied Lab: Copy Files from a USB Thumb Drive
- 2.3.12 Applied Lab: Use Shared Storage
- 2.3.13 Applied Lab: Use OneDrive Storage
- 2.4.7 Applied Lab: Run Desktop Applications
- 2.4.8 Applied Lab: Open and Print a Document in Word
- 2.5.11 Applied Lab: Create a User
- 2.5.12 Applied Lab: Connect to a Wireless Network

### Learning Plan

- Students will work on a self paced [Learning Plan](#) as outlined by the certification requirements. TI1(9-12)
- Analyze and relate in class learning with other classwork and daily life activities. TCC4(9-12)
- Complete individual simulations and labs that require a minimum score to proceed P3(9-12)
- Navigate the best individualized path to certification. Students will determine which path will be best for them. AA1(9-12)
- Repeat modules and learning activities as much as desired to be sure students can learn from mistakes and be prepared for the necessary certification exam.AA2(9-12)
- Students will have the opportunity to decide how many modules and certifications they would like to complete and attain. AA4(9-12)

#### Teacher Resources:

- [TestOut Learning Platform - LabSim](#)
- [Certiport Testing Portal](#)





## Unit 3 - Common Office Features

### Desired Results - Goals, Transfer, Meaning, Acquisition

#### Established Goals:

- 3A-AP-23 Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs
- 3A-IC-29 Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.
- 3B-CS-01 Categorize the roles of operating system software.
- 3B-DA-05 Use data analysis tools and techniques to identify patterns in data representing complex systems.

#### Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
- TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
- TI3(9-12): I can formulate and investigate probing questions to further my learning.
- P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
- AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
- AA2(9-12): I can assess my past successes and mistakes to change my approach
- AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation
- 3B-CS-02 Illustrate ways computing systems implement logic, input, and output through hardware components

#### Understandings: Students will understand that...

- Many computer programs have a variety of similarities that can help to make it easier to operate
- Customizing your user interface within a computer program can increase efficiency
- There are many ways to improve a document/presentation and some of the most common include the use of hyperlinks, images, videos and positioning

#### Essential Questions:

- How are Word, Excel, and PowerPoint similar to each other?
- What are the advantages and disadvantages of zooming in? Zooming out?
- When would it be beneficial to split an application window?
- How can customizing the Quick Access Toolbar make it more useful?
- How can printing handouts improve a PowerPoint presentation?
- What print settings are appropriate for what contexts?
- How can Find and Replace be used to save time?
- What can hyperlinks do to improve a document?
- How can learning to work with objects in one application carry over to another one?
- How can objects be used to improve a document, presentation, or workbook?

<p><b>Students will know...</b></p> <ul style="list-style-type: none"> <li>• How to create, save, share, edit and open a variety of files</li> <li>• How to customize their user experience</li> <li>• How to print sections of documents, Excel worksheets and handouts in PowerPoint.</li> <li>• The different ways to add borders, styles, and effects to objects.</li> </ul>	<p><b>Students will be able to...</b></p> <ul style="list-style-type: none"> <li>• Create a new blank file.</li> <li>• Save in alternate file formats.</li> <li>• Open an existing file.</li> <li>• Customize the Quick Access Toolbar.</li> <li>• Split the window.</li> <li>• Configure documents to print.</li> <li>• Search for text within a document.</li> <li>• Insert hyperlinks, textboxes and images</li> <li>• Modify shape backgrounds.</li> <li>• Insert shapes.</li> <li>• Create custom shapes.</li> <li>• Apply styles to objects.</li> <li>• Resize objects.</li> <li>• Display gridlines.</li> </ul>
<p><b>Key Vocabulary:</b> Ribbon, Quick Access Toolbar, Tab, Drop-down Lists, Contextual Tabs, Group, Command Button, Gallery, ScreenTip, Dialog Box Launcher, Desktop, Web, Hyperlink, Bookmark, Font, Clear formatting, Bullets, Show/Hide, Alignments, Borders, Shading</p>	
<p><b>Assessment Evidence</b></p>	
<p><b>Performance Tasks:</b>  <b>Summative(s):</b>  Skills Lab: Print Files  Skills Lab: Navigate Files  Skills Lab: Work with Objects</p>	<p><b>Other Evidence:</b>  <b>Interim(s):</b>  Challenge Lab: Get Started with Office  Challenge Lab: Customize Views and Options  Challenge Lab: Print Files  Challenge Lab: Navigate Files  Challenge Lab: Work with Objects</p>
<p><b>Learning Plan</b></p>	
<ul style="list-style-type: none"> <li>• Students will work on a self paced <a href="#">Learning Plan</a> as outlined by the certification requirements. TI1(9-12)</li> <li>• Analyze and relate in class learning with other classwork and daily life activities. TCC4(9-12)</li> <li>• Complete individual simulations and labs that require a minimum score to proceed P3(9-12)</li> <li>• Navigate the best individualized path to certification. Students will determine which path will be best for them. AA1(9-12)</li> </ul>	



- Repeat modules and learning activities as much as desired to be sure students can learn from mistakes and be prepared for the necessary certification exam.AA2(9-12)
- Students will have the opportunity to decide how many modules and certifications they would like to complete and attain. AA4(9-12)

**Teacher Resources:**

[TestOut Learning Platform - LabSim](#)

[Certiport Testing Portal](#)



## Unit 4 - Microsoft Word

### Desired Results - Goals, Transfer, Meaning, Acquisition

**Established Goals:**

- 3B-CS-01 Categorize the roles of operating system software.
- 3B-CS-02 Illustrate ways computing systems implement logic, input, and output through hardware components

**Vision of A Learner Attributes:** Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
- T11(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
- T13(9-12): I can formulate and investigate probing questions to further my learning.
- P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
- AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
- AA2(9-12): I can assess my past successes and mistakes to change my approach
- AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation
- 3B-DA-06 Select data collection tools and techniques to generate data sets that support a claim or communicate information.

**Understandings:** Students will understand that...

- File management teaches students how to organize their documents into folders and manage their files effectively.
- They should become familiar with the Word interface, including the Ribbon, Quick Access Toolbar, and Backstage view (File tab).
- These additional concepts and practices will help students develop a well-rounded understanding of Microsoft Word and its capabilities, making them more proficient users of the software.
- These foundational skills will empower students to effectively use Microsoft Word for various academic and professional purposes.
- As they progress, they can explore more advanced features, such as mail merge, creating indexes and tables of contents, and using macros for automation.

**Essential Questions:**

- What is the purpose of Microsoft Word, and how can it be used in academic and professional settings?
- How do you create a new document in Microsoft Word, and what are the different file formats you can save it in?
- What are the primary elements of the Word interface, and how do they assist in document creation and formatting?
- How can you format text in Microsoft Word, including font style, size, color, and alignment?
- What are the benefits of using styles and templates in Word, and how can they be applied to enhance document consistency and efficiency?
- What is the purpose of headers and footers, and how can they be customized to meet specific document requirements?

**Students will know...**

**Students will be able to...**



<ul style="list-style-type: none"> <li>• How to create a new document, open an existing one, and save their work in different formats (e.g., .docx, .pdf) and the importance of saving regularly to prevent data loss.</li> <li>• How to edit and proofread their documents, including features like spell check, grammar check, and the Thesaurus and how to cut, copy, and paste text within a document.</li> <li>• Which text wrap settings are typically the most appropriate for images inserted into a document.</li> <li>• Which practices should be avoided when working with fonts.</li> <li>• When is it appropriate to add comments to a document and the best ways to share a file with collaborators.</li> <li>• When does it make sense to create macros, why is security important, and what are some of their limitations.</li> </ul>	<ul style="list-style-type: none"> <li>• Organize their documents into folders and manage their files effectively, understand the importance of creating a logical file structure to keep documents organized.</li> <li>• Demonstrate how to create and customize bulleted and numbered lists for creating ordered and organized content, such as outlines and lists of items.</li> <li>• Insert hyperlinks into documents to reference external web pages, email addresses, or other documents, and explain the importance of checking links for accuracy.</li> <li>• Introduce the creation of tables of contents and indexes, which are useful for longer documents like research papers and reports.</li> <li>• Use the built-in spelling and grammar checkers and how to add custom words to the dictionary to avoid false positives.</li> <li>• Highlight the importance of creating accessible documents that can be read by assistive technologies and ensuring compatibility with different versions of Microsoft Word.</li> <li>• Track changes made in a document, compare different versions, and accept or reject edits when collaborating with others.</li> </ul>
---	---

**Key Vocabulary:** Word Processor, Ribbon, Quick Access Toolbar, Backstage View, Formatting, Font, Styles, Page Layout, Tables, Headers and Footers, Bullets and Numbering, Hyperlink, Spelling and Grammar Check, Templates, Styles and Templates, Mail Merge, Track Changes, Collaboration, File Management, Accessibility, Document Properties, Export

**Assessment Evidence**

<p><b>Performance Tasks:</b>  <b>Summative(s):</b>  4.2.7 Skills Lab: Create Documents  4.3.4 Skills Lab: Modify Fonts  4.4.6 Skills Lab: Format Paragraphs  4.5.5 Skills Lab: Format Pages  4.6.5 Skills Lab: Edit Documents  4.7.5 Skills Lab: Insert Illustrations  4.8.5 Skills Lab: Create and Format Tables  4.9.5 Skills Lab: Use Themes, Styles, and Templates  4.10.6 Skills Lab: Manage References</p>	<p><b>Other Evidence:</b>  <b>Interim(s):</b>  4.2.8 Challenge Lab: Create Documents  4.2.10 Applied Lab: Prepare a Business Memo  4.2.11 Applied Lab: Reorganize Class Notes  4.3.5 Challenge Lab: Modify Fonts  4.3.7 Applied Lab: Prepare a Resume  4.3.8 Applied Lab: Format a Math Worksheet  4.4.7 Challenge Lab: Format Paragraphs  4.4.9 Applied Lab: Format Research Paper Paragraphs  4.4.10 Applied Lab: Format Lists</p>
--	--



4.11.6 Skills Lab: Manage Headers, Footers, and Sections  
4.12.5 Skills Lab: Use Collaboration Features  
MOS Word 2016 Exam

4.5.6 Challenge Lab: Format Pages  
4.5.8 Applied Lab: Format a Report Draft  
4.5.9 Applied Lab: Format a Music Program  
4.6.6 Challenge Lab: Edit Documents  
4.6.8 Applied Lab: Edit an Essay  
4.6.9 Applied Lab: Edit a Newspaper Article  
4.7.6 Challenge Lab: Insert Illustrations  
4.7.8 Applied Lab: Insert Images for a Poster  
4.7.9 Applied Lab: Insert Images for a Flyer  
4.8.6 Challenge Lab: Create and Format Tables  
4.8.8 Applied Lab: Format a Calendar  
4.8.9 Applied Lab: Format Tables for a Sales Report  
4.9.6 Challenge Lab: Use Themes, Styles, and Templates  
4.9.8 Applied Lab: Create a Certificate Using a Template  
4.9.9 Applied Lab: Format a Newsletter  
4.10.7 Challenge Lab: Manage References  
4.10.9 Applied Lab: Manage Essay References  
4.10.10 Applied Lab: Add References to Research Report  
4.11.7 Challenge Lab: Manage Headers, Footers, and Sections  
4.11.9 Applied Lab: Format a Research Paper with Sections  
4.11.10 Applied Lab: Format a Survey Report  
4.12.6 Challenge Lab: Use Collaboration Features  
4.12.8 Applied Lab: Prepare a Business Memo for Distribution  
4.12.9 Applied Lab: Prepare an Online Resume

### Learning Plan

- Students will work on a self paced [Learning Plan](#) as outlined by the certification requirements. T11(9-12)
- Analyze and relate in class learning with other classwork and daily life activities. TCC4(9-12)
- Complete individual simulations and labs that require a minimum score to proceed P3(9-12)
- Navigate the best individualized path to certification. Students will determine which path will be best for them. AA1(9-12)
- Repeat modules and learning activities as much as desired to be sure students can learn from mistakes and be prepared for the necessary certification exam.AA2(9-12)
- Students will have the opportunity to decide how many modules and certifications they would like to complete and attain. AA4(9-12)

#### Teacher Resources:

[TestOut Learning Platform - LabSim](#)





## Unit 5 - Microsoft Excel

### Desired Results - Goals, Transfer, Meaning, Acquisition

**Established Goals:**

**3B-CS-01 Categorize the roles of operating system software.**

**3A-AP-14 Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.**

3A-AP-17 Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.

3A-AP-18 Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs

3B-CS-02 Illustrate ways computing systems implement logic, input, and output through hardware components

3B-DA-05 Use data analysis tools and techniques to identify patterns in data representing complex systems.

3B-DA-06 Select data collection tools and techniques to generate data sets that support a claim or communicate information.

3B-AP-12 Compare and contrast fundamental data structures and their uses.

**Vision of A Learner Attributes:** Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.

TI3(9-12): I can formulate and investigate probing questions to further my learning.

P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.

AA1(9-12): I can evaluate different approaches and justify the best pathway to success.

AA2(9-12): I can assess my past successes and mistakes to change my approach

AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation

**Understandings:** Students will understand that...

- You can use Excel for personal projects, such as data or financial analysis
- Formulas can save time and increase accuracy of data being presented
- Excel can be helpful in organizing information and creating professional presentations in a variety of subject areas
- Charts are an extension of data and can help present data in layman’s terms

**Essential Questions:**

- How can you use Excel to keep your data organized?
- What is the relationship between rows and columns in your workbook?
- How does making your worksheet look better increase its utility?
- How can formulas increase the power of your spreadsheet?
- How can Excel make use of the same logic you use in everyday life?
- Why is it important to visualize your data?
- What problems could be caused by using the wrong chart type?
- What are some real-world benefits of using tables?

**Students will know...**

**Students will be able to...**





- How to create,manage and enter data into worksheets and workbooks.
- How to enter simple formulas, use advanced functions, create charts and graphs and analyze data in tables.
- How to navigate a worksheet including naming, editing, coloring and importing data.
- The various editable functions within a worksheet
- How to navigate the variety of printing functions within a worksheet and how they can be used to make an well presented document
- The various uses and applications of pivottables

- Protect worksheets, print worksheets and format cells.
- Save a workbook in Excel format, in a character-separated values format (both tabs and commas), and as a PDF file.
- Create, rename and edit worksheets.
- Reorder, move, copy and color worksheet tabs.  
Import data from a comma-separated text file and various applications into Excel.
- Enter worksheet, column and row titles.
- Manage a worksheet that contains a large data set.
- Insert new data between rows or columns.
- Divide data sets appropriately between worksheets.
- Protect worksheets and workbooks from changes.
- Preview and print and set the print area for a worksheet..
- Create/edit a worksheet header and footer.
- Demonstrate the various editable actions within a worksheet including: apply font style, size, and color changes to cells, merge and center a range of cells.
- Apply number formatting and percent style to cells.
- Resolve the ##### error message.
- Adjust row height, align cell content, rotate cell content.
- Clear cell formatting.
- Apply borders and border colors.
- Enter multiple lines of text (apply word wrap setting).
- Format cells as column or row totals.
- Use Format Painter.
- Adjust columns to display both numeric and textual data properly.
- Format a range of cells as a worksheet title.
- Enter a function using the Insert Function box.
- Display and hide formulas.
- Enter a formula using absolute, relative and mixed references.
- Use the IF, COUNTIF, SUMIF, and AVERAGEIF functions
- Use functions with multiple arguments.
- Copy a formula with absolute, relative, or mixed references.
- Correct or ignore error messages, as appropriate.
- Select appropriate functions to perform conditional operations.
- Determine when to use an absolute reference in a formula.

- Verify that the desired values have been properly referenced within a formula
- Select a data source for a chart and create, resize and modify a pie chart.
- Modify chart layouts to better visualize data.
- Create a table and apply table styles.
- Edit and sort tables
- Use the VLOOKUP function and create PivotTables.

**Key Vocabulary:** Spreadsheet, Workbook, Worksheet, Cell, Formula, Function, AutoFill, Range, Row, Column, Cell Reference, Chart, Sorting, Filtering, Data Validation, PivotTable, Conditional Formatting, Data Analysis, Charting, Workbook Protection

**Assessment Evidence**

**Performance Tasks:**

**Summative(s):**

- 5.2.6 Skills Lab: Create and Manage Workbooks
- 5.3.5 Skills Lab: Organize and Enter Data
- 5.4.5 Skills Lab: Change Properties and Print Worksheets
- 5.5.6 Skills Lab: Format Cells
- 5.6.6 Skills Lab: Enter Simple Formulas
- 5.7.7 Skills Lab: Use Advanced Functions
- 5.8.4 Skills Lab: Display Data in Charts
- 5.9.5 Skills Lab: Organize Data in Tables
- 5.10.6 Skills Lab: Summarize Complex Data
- MOS Excel 2016 Exam

**Other Evidence:**

**Interim(s):**

- 5.2.7 Challenge Lab: Create and Manage Workbooks
- 5.2.9 Applied Lab: Organize Budget Worksheets
- 5.2.10 Applied Lab: Import & Organize Research Data
- 5.3.6 Challenge Lab: Organize and Enter Data
- 5.3.8 Applied Lab: Enter Survey Results Data
- 5.3.9 Applied Lab: Organize Sales Data
- 5.4.6 Challenge Lab: Change Properties and Print Worksheets
- 5.4.8 Applied Lab: Prepare and Print Sales Data
- 5.4.9 Applied Lab: Protect a Budget Worksheet
- 5.5.7 Challenge Lab: Format Cells
- 5.5.9 Applied Lab: Camping Equipment Store
- 5.5.10 Applied Lab: Format a Directory
- 5.6.7 Challenge Lab: Enter Simple Formulas
- 5.6.9 Applied Lab: Cheese Shop
- 5.6.10 Applied Lab: Gradebook
- 5.7.8 Challenge Lab: Use Advanced Functions
- 5.7.10 Applied Lab: County Fair
- 5.7.11 Applied Lab: Toy Company
- 5.8.5 Challenge Lab: Display Data in Charts
- 5.8.7 Applied Lab: Stock Portfolio
- 5.8.8 Applied Lab: Election Results
- 5.9.6 Challenge Lab: Organize Data in Tables



	<p>5.9.8 Applied Lab: Pizza Chain  5.9.9 Applied Lab: Baseball Statistics  5.10.7 Challenge Lab: Summarize Complex Data  5.10.9 Applied Lab: Muffin Café  5.10.10 Applied Lab: Hardware Store</p>
<b>Learning Plan</b>	
<ul style="list-style-type: none"> <li>● Students will work on a self paced <a href="#">Learning Plan</a> as outlined by the certification requirements. TI1(9-12)</li> <li>● Analyze and relate in class learning with other classwork and daily life activities. TCC4(9-12)</li> <li>● Complete individual simulations and labs that require a minimum score to proceed P3(9-12)</li> <li>● Navigate the best individualized path to certification. Students will determine which path will be best for them. AA1(9-12)</li> <li>● Repeat modules and learning activities as much as desired to be sure students can learn from mistakes and be prepared for the necessary certification exam.AA2(9-12)</li> <li>● Students will have the opportunity to decide how many modules and certifications they would like to complete and attain. AA4(9-12)</li> </ul>	
<p><b>Teacher Resources:</b>  <a href="#">TestOut Learning Platform - LabSim</a>  <a href="#">Certiport Testing Portal</a></p>	

