

Computer Technology 2

Exam Information	Description										
Exam number 252 Items 49 Points 79 Prerequisites Computer Technology 1 Recommended course length One semester National Career Cluster Business Management & Administration Information Technology Performance standards Included (Optional) Certificate available Yes	<p>The Computer Technology 2 industry certification exam assesses advanced concepts and principles using word processing, spreadsheets, databases, and electronic presentation software. Learners demonstrate the knowledge, skills, and abilities to productively use Microsoft Office. The exam may provide an opportunity to obtain a Microsoft Office Specialist industry certificate through Microsoft and Certiport per district discretion. This certification is recognized worldwide as the best method for employers to validate computer skill proficiency and enables learners to tap the full features and functionality of the Microsoft Office system, resulting in heightened levels of individual performance, confidence, and differentiation.</p>										
	Exam Blueprint										
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4. Database skills (Optional)											

Standard 1

Students will build on word processing skills to create and edit documents using advanced features.

Objective 1 Create and manage documents.

1. Utilize blank documents and documents using templates, import files, open documents in alternate file formats, and open a PDF for editing.
2. Search for text within documents, insert hyperlinks, create bookmarks, and use document navigation.
3. Modify page setup, change document styles with automatic formatting tools (styles, themes, etc.), and insert simple headers and footers, watermarks, and page numbers.
4. Change document views, use zoom, customize user interface (e.g., ribbons, toolbars, and menus), change window appearance, add values to document properties, show and hide formatting marks, record simple macros, assign shortcut keys, and manage macro security.
5. Configure documents to print, save documents in alternate file formats, print document sections, save files to cloud locations, protect documents with passwords, set print scale, and maintain backward compatibility.

Objective 2 Format text, paragraphs, and sections.

1. Use “find and replace” text function, copy and paste text, insert text with built-in correction tools, remove blank paragraphs, insert built-in fields and special characters.
2. Change font attributes, use “find and replace” to format text, copy font and paragraph formatting (Format Painter, Paint Format, etc.), set paragraph spacing, set line spacing, clear existing format, set indentation, highlight text selections, add styles to text, change text to objects (WordArt), and modify existing style attributes.
3. Prevent paragraph widows and orphans, insert breaks to create sections, create multiple columns within sections, add titles to sections, force page breaks.

Objective 3 Create tables and lists.

1. Convert text to tables, convert tables to text, define table dimensions, set AutoFit options, use quick tables, and establish titles.
2. Apply styles to tables, modify fonts within tables, sort table data, configure cell margins, use formulas, modify table dimensions, and merge cells.
3. Add numbering or bullets, create custom bullets, modify list indentation, modify line space, increase, and decrease list levels, and modify numbering.

Objective 4 Apply references.

1. Apply references.
2. Insert endnotes, manage footnote locations, configure endnote formats, modify footnote numbers, insert citation placeholders, insert citations, insert bibliography, and change citation styles.
3. Add captions, set caption positions, change caption formats, change caption labels, and exclude labels from captions.

Objective 5 Insert and format objects.

1. Insert quick parts, insert textboxes, utilize building blocks organizer, and customize building

blocks.

2. Insert simple shapes, insert graphical illustrations (e.g., SmartArt, graphic organizers), modify graphical illustration properties (color, size, shape), wrap text around shapes, and position shapes.
3. Insert images, apply artistic effects, apply picture effects, modify image properties (color, size, shape), add quick styles to images, wrap text around images, and position images.

Standard 1 Performance Evaluation included below (Optional)

Standard 2

Students will apply advanced spreadsheet skills.

Objective 1 Create worksheets and workbooks.

1. Create new workbooks, create workbooks using templates, import files, open workbooks in alternate file formats, add worksheets to existing workbooks, copy, and move worksheets.
2. Search for data within a workbook, insert hyperlinks, change worksheet order, and use navigation tools.
3. Change worksheet tab color, modify page setup, insert and delete columns and rows, change workbook styles using automatic formatting tools (e.g., styles, themes), adjust row height and column width, insert watermarks, insert headers and footers, and set data validation.
4. Hide worksheets, hide columns and rows, customize user interface (e.g., ribbons, toolbars, menus), manage macro security, change workbook views, record simple macros, add values to workbook properties, use zoom, display formulas, freeze panes, assign shortcut keys, and split the window.
5. Set print area, save workbooks in alternate file formats, print individual worksheets, set print scaling, repeat rows and columns, maintain backward compatibility, configure workbooks to print, and save files to cloud locations.

Objective 2 Create cells and ranges.

1. Append data to worksheets, find and replace data, copy and paste data, and insert and delete cells.
2. Merge cells, modify cell alignment and indentation, change font and font styles, copy font and cell formatting (e.g., format painter, paint format), wrap text within cells, format numbers, highlight cells, apply cell styles, and changing text to graphic.
3. Use conditional formatting, insert miniature charts within cells, transpose columns, and rows, create named ranges, create outline, collapse groups of data in outlines, and insert subtotals.

Objective 3 Create tables.

1. Move between tables and ranges, add and remove cells within tables, and define titles.
2. Apply styles to tables, band rows and columns, insert total rows, and remove styles from tables.
3. Filter records, sort data on multiple columns, change sort order, and remove duplicates.

Objective 4 Apply formulas and functions.

1. Use references (relative, mixed, absolute), define order of operations, reference cell ranges in formulas.
2. Use the following functions: SUM, MIN, MAX, COUNT, AVERAGE, SUMIF, AVERAGEIF, COUNTIF, RIGHT, LEFT, MID, TRIM, UPPER, LOWER, and CONCATENATE.

Objective 5 Create charts and objects.

1. Create charts and graphs, add additional data series, and switch between rows and columns in source data.
2. Add legends, resize charts and graphs, modify chart and graph parameters, apply chart layouts and styles, and position charts and graphs.
3. Insert text boxes, insert graphic illustrations (e.g., SmartArt, graphic organizer), insert images, add borders to objects, add styles and effects to objects, change object colors, modify object properties, and position objects.

Standard 2 Performance Evaluation included below (Optional)**Standard 3**

Students will build on electronic presentation skills to create and edit slideshows.

Objective 1 Create and manage presentations.

1. Create blank presentations; create presentations using templates, import text files, and document outlines.
2. Format presentations using slide master, layout modification, background images, page numbers, headers and footers, and presentation theme application.
3. Customize presentation options and views using page setup options, color/grayscale view, slide sorter, and presentation properties.
4. Configure presentations to print or save using print options (print selections from presentations, package presentations for CD, save presentations as web pages, print presentations in grayscale, print speaker notes, and maintain backward compatibility).
5. Configure and present slideshows (custom slideshows, slideshow options, timing rehearsal, slideshow resolution configurations, slideshow navigation, and slideshow annotation).

Objective 2 Insert and format shapes and slides.

1. Add slide layouts, duplicate existing slides, hide slides, delete slides, modify slide backgrounds, and apply styles to slides.
2. Modify shape backgrounds, apply borders to shapes, insert and resize shapes, create custom shapes, and apply styles to shapes.
3. Insert section headers, modify slide order, align and group shapes, and display gridlines.

Objective 3 Create slide content.

1. Insert and format text—transform text to objects, create multiple columns in a single shape, insert hyperlinks, text styles, and formatting, create bulleted and numbered lists, and

customize bullets.

2. Create and modify tables and styles, and import tables from external sources.
3. Modify chart styles, types, legends, and parameters.
4. Manipulate graphical illustrations.
5. Manipulate images by cropping and applying effects and styles.
6. Insert and format media: Adjust window size, trim timing, set start/stop times, set media options, and link to external media.

Objective 4 Apply transitions and animations.

1. Insert transitions between slides, manage multiple transitions, and modify transition effect options.
2. Apply animations to shapes and text strings, add paths to animations, and modify animation options.
3. Modify duration of effects, configure start and finish options, and reorder animations.

Objective 5 Manage multiple presentations.

1. Merge multiple presentations, reuse slides from other presentations, and view multiple presentations.
2. Collaborate on slideshow content and comments among multiple users.
3. Use presentation encryption, protection, and finalization tools (e.g., passwords, proofing tools, “mark as final” function), compress media, embed fonts, restrict permissions, remove presentation metadata, and check for accessibility issues and compatibility issues.

Standard 3 Performance Evaluation included below (Optional)

Standard 4 (Optional)

Students will acquire database skills to manage data.

Objective 1 Create and manage a database.

1. Create new databases using templates, in older formats, and using wizards.
2. Edit references between tables, create and modify relationships, set primary key fields, enforce referential integrity, set foreign keys and viewing relationships.
3. Navigate to specific records, set a form as the startup option, use navigation forms, set navigation options, and change views.
4. Compact databases, repair databases, back up databases, split databases, encrypt databases with a password, merge databases, and recover data from backups.
5. Print reports and records, maintain backward compatibility, save databases as templates to external locations, and export to alternate formats.

Objective 2 Build and create tables.

1. Create new tables, import external data into tables, create linked tables from external sources, import tables from others database, and create tables from templates and application parts.
2. Hide fields in tables, change data formats, add total rows, add table descriptions, and rename tables.

3. Update records, add new records, delete records, add records from external data, find and replace data, sort records, filter records, and group records.
4. Add fields to tables, add validation rules to fields, change field captions, change field sizes, field data types, configure fields to auto-increment, set default values, use input masks, and delete fields.

Objective 3 Create and run queries.

1. Run queries, create crosstab queries, create parameter queries, create action queries, create multi-table queries, and save and delete queries.
2. Rename queries; add, remove, and hide fields; sort data within queries, and format fields within queries.
3. Add calculated fields, add conditional logic, group and summarize data, use comparison operators, and use basic operators.

Objective 4 Create forms.

1. Create new forms, create forms with application parts, and save and delete forms.
2. Move form controls, add form controls, modify data sources, remove form controls, set form control properties, and manage labels.
3. Modify tab order in forms, format print layouts, sort records, apply themes, change margins, insert backgrounds, auto-ordering forms, insert headers and footers, insert images, and modify existing forms.

Objective 5 Create reports.

1. Create new reports, create reports with application parts, and delete reports.
2. Group data by fields, sort data, add sub-forms, modify data sources, add report controls, and manage labels.
3. Format reports into multiple columns, add calculated fields, set margins, add backgrounds, change report orientation, change sort order, insert headers and footers, insert images, insert page numbers, apply themes, and modify existing reports.

Standard 4 Performance Evaluation included below (Optional)

Computer Technology 2

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated standards and exam. To pass the performance standard the student must attain a performance standard average of 8 or higher on the rating scale. Students may be encouraged to repeat the objectives until they average 8 or higher.

Student's Name: _____

Class: _____

Performance standards rating scale

0	Limited skills	2	→	4	Moderate skills	6	→	8	High skills	10
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Standard 1 – Document Editing¹

Score:

- Use the following features in at least two software applications:
 - Graphic objects
 - Headers and footers
- Use word processing software to create:
 - Mail merged letter with envelopes or labels
 - Reports that include:
 - Page numbers
 - Header/footer
 - Section/page breaks
 - In-text citations
 - Footnotes/endnotes
 - Works cited/bibliography
 - Tables (may be included in reports, letters, etc.) with:
 - Merged/split cells
 - Sorted data
 - Borders and shading

Standard 2 – Spreadsheet Skills

Score:

- Use spreadsheet software to create:
 - Workbooks (2+ worksheets) that include:
 - References to other worksheet cells in the workbook
 - Formulas with absolute and relative cell references
 - Functions including IF, PMT, VLOOKUP, and HLOOKUP
 - Print options including formulas, gridlines, row/column headings, scaling
 - Charts
 - Pie
 - Bar
 - Column
 - Line
 - Formatted
 - Worksheet with database features
 - Sort multiple fields
 - Filter
 - Subtotals

Standard 3 – Electronic Presentation Skills

Score:

- Use presentation software to create:
 - Speaker notes
 - Slideshows, demonstrating professional quality design following generally accepted presentation guidelines that include:
 - Custom animations
 - Objects:
 - Sound
 - Diagrams
 - Movie

- Charts/tables

Standard 4 – Database Skills**Score:**

- Complete a project that combines the use of word processing, spreadsheet, and electronic presentation software.

Performance standard average score:

Evaluator Name: _____

Evaluator Title: _____

Evaluator Signature: _____

Date: _____