

# **COMPUTER APPLICATIONS II**

## Curriculum Content Frameworks

**Please note: All assessment questions will be taken from the knowledge portion of these frameworks.**

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# Curriculum Content Frameworks

## COMPUTER APPLICATIONS II

Grade Levels: 9, 10, 11, 12  
Course Code: 492500

Prerequisite: Keyboarding  
Computer Applications I

Course Description: Computer Applications II is a half-unit course designed to provide students with the intermediate computer skills necessary to do well in high school and virtually all jobs today. Students will learn techniques that will allow them to create fairly complex word processing and spreadsheet documents. They will continue their Internet research, applying it to spreadsheets, charts and graphs, and web pages.

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# Unit 1: Spreadsheet – Formatting and Changing the Appearance of a Worksheet

## Hours: 5

Terminology: AutoFormat, Currency format, Fit to, Percentage format, Styles, Text wrapping

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
1.1 Define terminology	1.1.1 Prepare a list of terms with definitions	Foundation		
1.2 Describe commonly used numeric formats	1.2.1 Apply appropriate numeric formats	Foundation		
1.3 Explain advanced formatting techniques	1.3.1 Center text over a range of columns	Thinking		
	1.3.2 Wrap text on several lines of a cell			
	1.3.3 Change indents within a cell			
	1.3.4 Rotate text within a cell			
	1.3.5 Add line breaks in cells			
1.4 Explain how to adjust column width and row height	1.4.1 Change column width and row height	Thinking		
1.5 Explain the purpose of hiding columns and rows	1.5.1 Hide columns and rows	Thinking		
1.6 Explain common features used to enhance cells within a table	1.6.1 Add borders to cells	Thinking		
	1.6.2 Add gridline borders			
	1.6.3 Add color and shading to cells			
1.7 Explain styles and AutoFormat	1.7.1 Apply styles and AutoFormat to a selection or worksheet	Foundation		
1.8 Explain how to copy the format of a cell to other cells	1.8.1 Copy the format of a cell to a group of selected cells	Foundation		
1.9 Explain how to change page orientation and use the "fit to" option	1.9.1 Using printing options, landscape and fit to one page	Foundation		

## Unit 2: Spreadsheets – Using Functions and Formulas, and Constructing Templates

### Hours: 8

Terminology: Absolute reference, Argument, Average function, Fill, Freeze title, Function, Max function, Min function, Mixed reference, Order of operation (math hierarchy), Relative reference, What if analysis

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
2.1 Define terminology	2.1.1 Prepare a list of terms with definitions	Foundation		
2.2 Explain common functions – Average, Count, Min, Max	2.2.1 Use the average function in a formula	Foundation		
	2.2.2 Use the min function in a formula			
	2.2.3 Use the max function in a formula			
2.3 Explain the difference between absolute and relative cell referencing	2.3.1 Write and calculate formulas that use relative references	Foundation		
	2.3.2 Write and calculate formulas that use absolute references			
	2.3.3 Write and calculate formulas that use mixed references			
2.4 Explain how to display a cell formula	2.4.1 Display and print cell formulas	Foundation		
2.5 Explain the reason for freezing titles and splitting screens	2.5.1 Freeze a title, and split a screen	Foundation		

## Unit 3: Spreadsheet – Creating and Enhancing Charts and Graphs

### Hours: 5

Terminology: Bar graph, Category axis, Chart title, Column chart, Data marker, Data point, Legend, Line graph, Pie chart, Plot area, Value axis

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
<b>Knowledge</b>	<b>Application</b>	<b>Skill Group</b>	<b>Skill</b>	<b>Description</b>
3.1	Define terminology	3.1.1 Prepare a list of terms with definitions	Foundation	
3.2	Identify the following chart types: Column, Bar, Line, Pie, Scatter (XY)	3.2.1 Select and create and appropriate chart type	Foundation	
3.3	Identify and describe the parts of a chart	3.3.1 Create charts with titles, legends, and labels	Foundation	
3.4	Explain enhancements to a chart	3.4.1 Resize or move the chart 3.4.2 Change fonts 3.4.3 Change colors and patterns 3.4.4 Add backgrounds and borders 3.4.5 Add drawing objects such as call outs or shapes 3.4.6 Add clip art, pictures, or graphics	Thinking	

## Unit 4: Word Processing – Advanced Printing and Page Formatting

### Hours: 5

Terminology: Footer, Hard page break, Header, Landscape orientation, Portrait orientation, Section, Section break, Soft page break

<b>CAREER and TECHNICAL SKILLS</b>		<b>ACADEMIC and WORKPLACE SKILLS</b>		
What the Student Should be Able to Do		What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
4.1 Define terminology	4.1.1 Prepare a list of terms with definitions	Foundation		
4.2 Describe the differences between landscape and portrait orientation	4.2.1 Change a document to use landscape orientation	Thinking		
4.3 Print special documents (envelopes, labels, etc.)	4.3.1 Print an envelope	Foundation		
	4.3.2 Print labels			
4.4 Explain page and section breaks	4.4.1 Create a document with a hard page break	Foundation		
	4.4.2 Insert section breaks in a document			
4.5 Explain the process of creating and editing page numbers	4.5.1 Add, change, and format page numbers	Foundation		
4.6 Describe the information typically given in headers and footers	4.6.1 Add headers and footers with various information, such as the document name, date/time, author, draft or revision number, page numbers, etc.	Foundation		
	4.6.2 Add a header/footer to a document			

# Unit 5: Word Processing – Using Styles, Templates, Mail Merge, and Special Documents

## Hours: 10

Terminology: Data source, Field, Filter, Mail merge, Main document, Merge fields, Paragraph style, Record, Template

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
5.1 Define terminology	5.1.1 Prepare a list of terms with definitions	Foundation		
5.2 Explain the purpose of styles	5.2.1 Apply styles to documents	Thinking		
5.3 Explain types of templates and their features	5.3.1 Use a template to create a new document	Thinking		
	5.3.2 Create/Modify templates			
5.4 Explain the purpose of a mail merge	5.4.1 Create mail-merged letters	Foundation		
	5.4.2 Create mail-merged labels			
5.5 Explain the difference in the main document and data source	5.5.1 Create a main document and a data source	Foundation		
5.6 Print special documents (envelopes, labels, etc.)	5.6.1 Print an envelope			
	5.6.2 Print labels			

## Unit 6: Word Processing – Using Tables and Columns

### Hours: 10

Terminology: Ascending, AutoFormat, Cell, Column, Column break, Crop, Descending, Gridlines, Organizational chart, Sorting, Rotate, Row, Table, Venn diagram, Wrap text

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
6.1 Define terminology	6.1.1 Prepare a list of terms with definitions	Foundation		
6.2 Describe the features of a table	6.2.1 Create a table with multiple rows and columns	Foundation		
6.3 Explain how to edit or add data to a table	6.3.1 Add and edit data in a table	Thinking		
6.4 Explain how a table structure can be edited	6.4.1 Insert cells, rows, columns	Thinking		
	6.4.2 Delete cells, rows, columns			
	6.4.3 Merge and split cells			
	6.4.4 Move and copy cells, rows, and columns			
	6.4.5 Change the table's dimensions			
	6.4.6 Sort contents of a table			
6.5 Identify enhancements used for tables	6.5.1 Apply Auto-formats	Thinking		
	6.5.2 Add gridline borders			
	6.5.3 Add color and shading to cells			
6.6 Explain the uses of multi-column documents	6.6.1 Create documents with multicolumn layouts such as newsletter, flyer or brochure	Foundation		
6.7 Explain the use of stylized text and graphics	6.7.1 Create documents with stylized text such as Word Art	Foundation		
	6.7.2 Create a document with edited graphics such as rotated, flipped, resized			

## Unit 7: Database, Creating Tables, Queries, Forms & Reports

**Hours: 15**

Terminology: database, fields, primary key, queries, forms, records, reports, tables

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
<b>Knowledge</b>	<b>Application</b>	<b>Skill Group</b>	<b>Skill</b>	<b>Description</b>
7.1 Define terminology	7.1.1 Prepare a list of terms with definitions	Foundation		
7.2 Explain database management systems	7.2.1 Create a database	Foundation		
	7.2.2 Design a Table with appropriate data types	Foundation		
	7.2.3 Key data in a table Identify & determine primary key	Foundation		
7.3 Explain uses for a database	7.3.1 Generate a form using a database	Foundation		
	7.3.2 Run Queries using a database	Foundation		
	7.3.3 Design reports using a database	Thinking		

## Glossary

### Unit 1: Spreadsheet – Formatting and Changing the Appearance of a Worksheet

1. AutoFormat – built-in set of formatting instructions that applies fonts, colors, borders, and other formats to a range
2. Currency format – format data using commas and dollar signs
3. Fit to – printing option that allows user to change page scaling
4. Merge – a feature that combines a data document with a main document to mass produce personalized letters or other documents
5. Percentage format – a format that converts a decimal number to a percentage
6. Styles – sets of formatting specifications
7. Text wrapping – an automatic feature moves text to the next line when a line is full and text can no longer fit

## Unit 2: Spreadsheets – Using Functions and Formulas, and Constructing Templates

1. Absolute reference – cell address that does not change when copied in a formula
2. Argument – values or cell references (included between parentheses) that a function needs to complete its calculation
3. Average function – built-in mathematical function that determines the average of a block of cells
4. Fill - a feature that allows the user to copy of fill data in cells adjacent to the original cell
5. Freeze title – a method of keeping certain rows of columns visible at all times (such as headings or certain labels)
6. Function – built-in mathematical formula
7. Max function – function that returns the highest number in a range of cells
8. Min function – returns the lowest number in a range
9. Mixed reference – cell address that adjusts either the row or the column when the formula is copied
10. Order of operation (math hierarchy) – alternative term for order of precedence
11. Relative reference – cell address that adjusts to the row or column where a copied formula is located
12. What-if analysis – projecting with a spreadsheet by changing the data

## Unit 3: Spreadsheet – Creating and Enhancing Charts and Graphs

1. Bar graph – data is represented by horizontal bars
2. Category axis – what is shown in a chart, created from row or column headings
3. Chart title – optional title or name for a chart
4. Column chart – a chart in which data is represented by vertical bars
5. Data marker – object that explains the colors, patterns, or symbols used in a chart
6. Data point – one value from a data series
7. Legend – chart object that explains the colors, patterns, or symbols used in a chart
8. Line graph – chart in which data is represented by lines
9. Pie chart – data is arranged in the shape of a pie with data represented by various percentages of the pie
10. Plot area – rectangular area bound by the category and value axes
11. Value axis – horizontal or vertical grouping of values from the worksheet

## **Unit 4: Word Processing – Advanced Printing and Page Formatting**

1. Footer – text that appears in the bottom margin of a page throughout a section or document
2. Hard page break – page break inserted manually at a specific point in a document; used to end the current page
3. Header – text that appears in the top margin of a page throughout a section or document
4. Landscape orientation – a page layout in which documents are printed across the length of a page, making the page wider than it is tall
5. Portrait orientation – a page layout in which documents are printed across the width of a page, making the page taller than it is wide
6. Section – portion of a document that has its own unique formatting
7. Section break – markers to indicate the beginning and end of a section
8. Soft page break – page break that is inserted automatically when a page is filled; these breaks adjust as changes are made to the document

## Unit 5: Word Processing – Using Styles, Templates, Mail Merge, and Special Documents

1. Data source – contains variable information that is inserted into the main document during mail-merging process
2. Field – one piece of information – i.e, a name or a street address
3. Filter – allows user to merge or group pieces of information in the data source to match certain criteria
4. Mail merge – feature used to mass produce form letters and other types of documents by combining the information in two documents, a main document and a data source
5. Main document – contains both standard text and formatting that appears in the merged document, contains merge fields representing where variable information will be placed
6. Merge fields – codes placed in mail-merge documents to input pieces of information from data sources
7. Paragraph style – formatting instructions applied to a paragraph; may include alignment, line spacing, paragraph spacing, indents, and character formatting
9. Record – the collection of fields organized into a related group for mail merging
10. Template- Design and formatted document on which new documents are based.

## Unit 6: Word Processing – Using Tables and Columns

1. Ascending – sort order arranging text or numbers from A to Z, from smallest to largest, or from earliest to latest
2. Autoformat- preset formatting including shading that can be applied to a table
3. Cell – portion of a table that is formed by the intersection of a row and column
4. Column – vertical group of cells in a table
5. Column break – a break that can happen automatically when a column is full and items automatically flow to the next column; a column break can be inserted into a document when you wish to end a column
6. Crop – to trim a picture so only a portion of the original image shows
7. Descending – sort order arranging text or numbers from Z to A, largest to smallest, or latest to earliest
8. Gridlines – lines that mark the boundaries of cells in a table
9. Sort - to arrange a list alphabetically (text) or numerically (numbers), in ascending or descending order
10. Row – horizontal line of cells in a table
11. Table – a grid of rows and columns that intersect to form cells
12. Wrap text – a feature that allows text to be included with pictures, shapes, or tables without covering or hiding under the image, giving the user control over how the text is position

## Unit 7: Database: Creating Tables, Queries, Forms & Reports

1. Database - collection of data organized in a manner that allows access, retrieval, and use of data
2. Field- a single characteristic of data that appears in a table as a column
3. Primary Key- a field that uniquely identifies a record in a table
4. Query - a question presented in a way that allows the database to process and generate specific data from one or more tables
5. Form - a database view that allows the user to see all fields for one record and enter them one at a time
6. Records - a collection of fields that appear as a row in a database or table
7. Report - a document that uses data from tables and/or queries; the user controls which items in the database will appear in the report and how it is filtered or sorted.
8. Table - a database view of information arranged in a grid of rows and columns