

OUTCOMES BASED LEARNING MATRIX

Course: CTIM103 - Beginning Excel (1 credit, 15 hours)

Department: Computer Technology and Information Management

While completing the table below, remember that the individual outcomes you list in the first column should answer this question: **What must the learner know and be able to do at the end of the course?** Items in the third column should answer the question: **How do we know?** The second column is where teachers can be most creative; it's for pedagogy. Each rectangle in column one should contain just one outcome; the corresponding rectangles in columns two and three, however, may contain more than one item. Using the code at the end of the matrix, indicate the core competencies being strengthened by the outcomes activities and the assessment tools.

Course Description: This course presents the basic features of Microsoft Excel. Students will learn the essentials of spreadsheet creation, including data entry and editing, formatting, printing, saving, enhancing, and retrieving worksheets. The creation of formulas and functions will receive major emphasis. Other topics include preparing charts and maintaining workbooks.

*COURSE OUTCOMES	OUTCOMES ACTIVITIES	ASSESSMENT TOOLS
At the end of this course, the student will be able to produce spreadsheets to analyze and summarize mathematical, statistical, and financial data using the following features of Excel spreadsheet software: 1. create, save, close, open, and navigate an Excel workbook 2. enter and edit data in a worksheet	1. a. Start Excel and name and save a workbook (CCT, b. Navigate a worksheet and a workbook (CCT, c. Select parts of a worksheet (CCT) d. Close and reopen an existing workbook (CCT) 2. a. Enter text, using Auto-Complete, fill a series with Auto Fill, and use Spell	1. Quiz/test on terminology and content. (CCT, WC) 2. Demonstrate to instructor (CCT, 3. Hands-on application assignments completed in-class and out-of-class. (CCT, QL, WC) 4. Hands-on application tests completed in class. (CCT, QL, WC) Referenced above

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<p>3. construct and copy formulas and use the sum function and edit cells</p>	<p>Checker and Undo to Correct typing errors (CCT) b. Align text and adjust the size of columns and rows (CCT) c. Enter numbers (CCT) d. Insert and delete rows and columns and use the insert options button (CCT)</p> <p>3. a. Construct a formula using the sum function and edit numbers in cells (CCT, QL, OC) b. Copy a formula by using the fill handle (CCT)</p>	<p>Referenced above</p>
<p>4. format data, cells, and worksheets</p>	<p>4. a. Format financial numbers, use column AutoFit, and use Format Painter (CCT) b. Format text and use merge center (CCT)</p>	<p>Referenced above</p>
<p>5. chart data</p>	<p>5. a. create line and pie chart (CCT) W)</p>	<p>Referenced above</p>
<p>6. use page layout view and prepare a worksheet for printing</p>	<p>6. a. change views, create a footer, and use print preview (CCT) b. delete unused sheets in a workbook (CCT) c. print a worksheet (CCT) d. display, print, and hide formulas (CCT)</p>	<p>Referenced above</p>
<p>7. Design a worksheet</p>	<p>7. a. set column widths and create row and column titles (CCT)</p>	<p>Referenced above</p>

8. Construct formulas for mathematical operators	<ul style="list-style-type: none"> b. enter data by range (CCT) 8. a. use arithmetic operators (CCT, OC, QL, WC) b. copy formulas containing absolute cell references (CCT) 	Referenced above
10. Format percentages and move formulas	<ul style="list-style-type: none"> 10. a. format cells with the percent style button (CCT) b. insert rows in a worksheet containing formulas and wrap text in cells (CCT) 	Referenced above
11. Use the help system	<ul style="list-style-type: none"> 11. a. use the Excel help feature (CCT, WC) 	Referenced above
12. Manage workbooks	<ul style="list-style-type: none"> 12. a. create and save a workbook from an existing workbook b. navigate among worksheets, rename worksheets, and change the tab color of a worksheet (CCT) c. enter and format dates (CCT) d. clear cell contents and formats (CCT) 	Referenced above
	<ul style="list-style-type: none"> e. copy, paste, and move cell contents (CCT) f. wrap text in a cell in several worksheets at the same time (CCT) g. construct formulas that refer to cells in another 	

<p>13. Design a worksheet for “what-if” analysis</p>	<p>worksheet (summary sheet) (CCT) h. move and format worksheets in a workbook (CCT) c. print all the worksheets in a workbook (CCT) 13. a. use parenthesis in a formula (CCT) b. format while typing (CCT) c. calculate a value after an increase (QL, CCT) d. perform “what-if” analysis and use paste special (QL, CCT) 14. a. use SUM, AVERAGE, MIN, MAX, MEDIAN, IF, COUNTIF, PMT, and NOW functions (CCT, QL) b. Move data, add borders, and rotate text (CCT) c. Apply conditional formatting using custom formats and data bars (CCT) d. Use find and replace (CCT) e. Use goal seek ((CCT) 15.a. Freeze and unfreeze panes (CCT) b. Sort and filter tables (CCT) c. Insert a second table in a worksheet (CCT) d. Convert a table to a range</p>	<p>Referenced above</p>
<p>14. Use functions</p>	<p>b. Move data, add borders, and rotate text (CCT) c. Apply conditional formatting using custom formats and data bars (CCT) d. Use find and replace (CCT) e. Use goal seek ((CCT) 15.a. Freeze and unfreeze panes (CCT) b. Sort and filter tables (CCT) c. Insert a second table in a worksheet (CCT) d. Convert a table to a range</p>	<p>Referenced above</p>

15. Freeze panes and create tables	of data (CCT) e. Design a two-variable data table (CCT) f. Use a data table to calculate options (CCT)	Referenced above
To strengthen Core Competencies** in order to increase success in this and other courses and in the workplace.	Referenced above	Referenced above.

*Try to express an outcome as an infinitive phrase that concludes this sentence: **At the end of the course, the students should be able to . . .** Finding the line between too general and too specific can be difficult. In an English Composition course, for instance, it is probably too general to say, "The student should be able to write effective essays." It is probably too specific to say, "The student should be able to write an introductory paragraph of at least 50 words, containing an attention-getting device, an announcement of the narrowed topic, and an explicit thesis sentence." Just right might read, "The student will write introductions that gather attention and focus the essay."

**Indicate the Core Competencies that apply to the outcomes activities and assessment tools: critical and creative thinking (CCT); oral communications (OC); quantitative literacy (QL); information literacy (IL); written communication (WC); civic engagement (CE); integrative learning (IG); global learning (GL).