

Microsoft Excel, 2016

Assignment #2

Using Excel you will take a set of courses, credits and grades and calculate the GPA for your friend who has just earned an AAS in Computer Gaming and Simulation. Part of the degree requires taking courses in the major, taking general education courses, and taking electives. You will calculate her GPS in each of these categories. She has already entered the data, but needs your help with the calculations and formatting.

Set-up

- 1) Open the spreadsheet "GPA_Calculator_start" and save it as "GPA_Calculator_LastName_FirstName" replacing the words LastName and FirstName with your name.

Enter Text and Numbers

- 2) In cell "A1" replace FirstName and LastName with "Monica Myers" (your friend's name).
- 3) Select Cells "A1" through "J1" and "Merge & Center" the cells, then apply a "Title" style.
- 4) Select cells "A2" through "J2" and "Merge & Center" the cells, then apply the "Heading 1" style.

Add Quality Points and Calculate GPA

- 5) Insert a new blank column between "F" and "G" – the new column will become a new blank column "G."
- 6) Add a similar blank column between "I" and "J" and between "L" and "M."
- 7) Label "G4", "J4" and "M4" as "Q.P." for quality points earned
- 8) For every class in the major multiply the "Credits" times the "Grade" and put the answer in the quality points column (for example cell "G12" is " $=E12 * F12$ " and "G13" is " $=E13 * F13$ ").
- 9) Calculate quality points for courses that are "General Education" and "Electives" (columns "J" and "M").
- 10) In cell "E9" enter the function " $=sum(E5:E8)$ " and copy the formula across to cell "M9"
- 11) Since summing grades does not help delete the function in cells "F9", "I9" and "L9"
- 12) Calculate the GPA for courses in the major by inserting into cell "F10" the formula " $=G9/E9$ ". Repeat the process by inserting into cell "I10" the formula " $=J9/H9$ " and in cell "L10" the formula " $=M9/K9$ "
- 13) Repeat the process for calculating totals and GPA for the other three semesters on the worksheet (rows 16-17, 24-25, and 31-32).
- 14) Replace the "#DIV/0!" (division by zero error) with the value 0 in cells "F10" and "L17" since no classes in those areas equals no GPA (not an error message).
- 15) To calculate overall GPA for classes in the major (cell "F34") type the formula " $=(G9+G16+G24+G31)/(E9+E16+E24+E31)$ ".
- 16) Copy and update the formula to cells "I34" and "L34" to calculate the overall GPA for "General Education" courses and "Electives."

Format the worksheet

- 17) "Merge and Center" cells "E3" – "G3", "H3" – "J3", and "K3" – "M3" then apply the style "Heading 2" to the merged cells.
- 18) Select cells "A4" – "M4" and apply the "Heading 3" style, then right-align the cells from "E4" – "M4".
- 19) Select the cells "E5" through "M34" and format the numbers in the "Comma" number format with one decimal.
- 20) Set the background of cells "E3" – "G10", "E12" – "G17", "E19" – "G25", and "E27" – "G32" to "Orange, Accent 2, Lighter 80%". Set the background of cells "H3" – "J10", "H12" – "J17", "H19" – "J25", and "H27" – "J32" to "Gold, Accent 4, Lighter 80%". Set the background of cells "K3" – "M10", "K12" – "M17", "K19" – "M25", and "K27" – "M32" to "Green, Accent 6, Lighter 80%".
- 21) Select cells "D10" – "M10" bold the text and apply "Outside Borders" to the selection. Repeat the same formatting for cells "D17" – "M17", "D25" – "M25", and "D32" – "M32".
- 22) Select cells "D34" – "M34" and apply the "Total" style and set the font to 14 points.
- 23) Add the following text
 - In "D36" – "Highest Grade"
 - In "D37" – "Lowest Grade"
 - In "D38" – "Number of Classes"
 - In "D39" – "Most Credits"
 - In "D40" – "Least Credits"
 - In "D41" – "Total Credits"
- 24) To calculate the totals for "Major" classes, first create two named ranges. The first named range is "MajorGrade" and should include the cells "F5:F8, F12:F15, F19:F23, F27:F30". The second named range is "MajorCredits" and should include the cells "E5:E8, E12:E15, E19:E23, E27:E30".
- 25) Insert the following formulas to calculate the summary data
 - In "F36" – "=max(MajorGrade)"
 - In "F37" – "=min(MajorGrade)"
 - In "F38" – "=count(MajorGrade)"
 - In "F39" – "=max(MajorCredits)"
 - In "F40" – "=min(MajorCredits)"
 - In "F41" – "=sum(MajorCredits)"
- 26) Format the cells "F36" – "F41" in the "comma" format with one decimal
- 27) Repeat the previous three steps to calculate the summary data for "General Education" and "Electives" classes in columns "I" and "L". Excel requires that each range name be different, so use names that make sense (like "GenEdGrade" or "GenEdCredits") and are unique for each set of data.

Finish the worksheet

- 28) Left Justify cell "A43" and insert the following text: *Grades are converted as follows; "A" = 4.0, "B" = 3.0, "C" = 2.0, "D" = 1.0, and "F" = 0.0*
- 29) Format cell A43 as italic and set the font color to "Black, Text 1, Lighter 50%"
- 30) Save the worksheet and add a comment in the document properties with your name and today's date.
- 31) Submit the worksheet following the instructions given to you by your instructor.