# ICT for Scientists- Excel in-class test.

# (50% of Module)

## Instructions to Candidates:

1. Please download the excel starter file from Moodle and complete all tasks below in Excel. Save the file as: ***YourName.xlsx*** and upload to Moodle when complete.
2. Remember to save your work continuously throughout the exam.
3. All questions are mandatory.

## Sheet 1- Student Results (50 Marks)

**Complete the following tasks:**

1. **Formatting (8 marks) - for table of data:**

   Make the heading row bold with borders and a light grey background. Format all numeric results to 2 decimal places. (The weightings are already formatted as percentages).

2. **Statistics and Absolute Cell References (18 Marks)**
   a. In **cell G9**, calculate the weighted average of the 4 elements of assessment with percentage weights of 20% (MS Word), 50% (MS Excel), 20% (MS PowerPoint) and 10% (attendance).

   Weighting including percentages - **6 Marks,**
   Use of Absolute cell referencing - **8 Marks**

   b. Use the fill handle to fill down that formula for each student.

   **(2 Marks)**

   c. In **cell K14**, calculate the overall average of the student weighted marks.

   **(2 Marks)**

3. **Conditional Formatting (6 Marks)**

   In **cell *G10***, use conditional formatting on the overall marks so that any marks < 40 are shaded in red and any marks >= 40 are shaded in green.
   Use the fill handle to fill down that formula for each student.

4. **IF Function (6 marks)**

   In ***cell H8,*** use an IF function which references **cells C8 - F8** to determine if the sum (of the weightings) adds to 100% or not.

   **cell H8** should contain

   a. "good" If weightings add to 100%
   b. "Error in weightings" if the weightings are not exactly 100%

**Please return sheet on completion of your test.**

5. **Sorting (4 Marks)**
   Sort this table's data on name (**cells A10-A14**) - in ascending alphabetical order.

6. **Column Chart (8 Marks)**
   - Create a clustered column chart for the names vs weighted average. Your chart should Include appropriate chart title, axes labels and chart legend.

## Sheet 2- Planning (15 Marks)

**Complete the following tasks:**

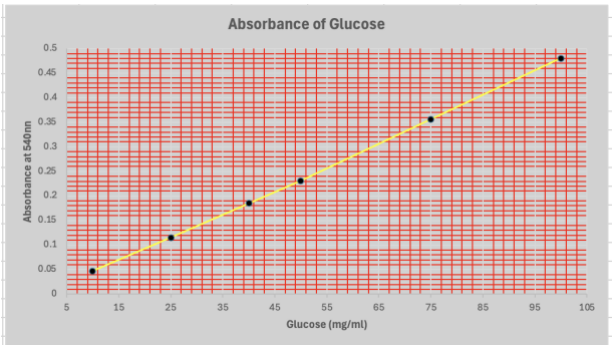
7.

Implement the equation below in the **cells D6:H17.**
Note: The value 1.96 features in cell B4, so use its cell reference.
Repeat the process with the second table with the new value of 1.65.in the equation.
Use absolute cell reference when possible.

$$n = \left(\frac{1.96}{margin/mean}\right)^2 \left(\frac{SD}{mean}\right)^2$$

## Sheet 3- Glucose Absorption (35 Marks)

8. **Given the data in sheet 3, create the graph below.**
   - **a.** Creation of graph **(7 Marks)**
   - b. Change title to "Absorbance of Glucose" (4 Marks)
   - c. Axis labels (3 Marks)
   - d. Addition of gridlines / change colour (5 Marks)
   - e. Changing of ranges on axes (5 Marks)
   - f. Change colour of data line to yellow and markers to black (
   - g. Change colour of background to grey.




**Please return sheet on completion of your test.**