Excel Word Assignment 2018

Due Date

The assignment is due by Thursday Sept. 6 at 9am. This assignment is worth 2% of your final grade in APSC 100 Module 1. Instructions for submission will be provided the week before it is due.

Purpose

The purpose of this assignment is to help prepare you to analyze data and create technical reports using Microsoft Excel and Word. It requires you to use the following:

- Microsoft Excel to create tables, scatter plots, and complete data analysis.
- Microsoft Word to import tables/graphs; create text, equations, captions, sample calculations, and drawings; and use built-in tools for heading styles, citations, cross-referencing, tables of contents, lists of figures, and lists of tables.

The assignment requires you to create a summary Microsoft Word document containing the results and discussion for two exercises you will perform in Microsoft Excel. Completing this assignment will prepare you for the more detailed formatting expected for larger, more complex documents. The report generated in this assignment can be used as a template for reports in APSC 100.

Relevant Resources

Microsoft Excel and Word tutorials, as well as Microsoft Office Learning Resources, are available at http://my.engineering.queensu.ca/Current-Students/First-Year-Studies/excel-word-video-tutorial.html

The tutorials have been specially designed to aid you with the assignment. It is expected that you will read these resources and refer to them when completing the assignment. If you have any additional questions about the assignment, you may contact engineering.first.year@queensu.ca for assistance.

There will be a webinar that you can join on Aug 20 at 4pm EST where you can ask any questions in real time. Sign up here: https://www.queensu.ca/studentexperience/summer-orientation/summer-webinar-series.

Required Software

This assignment can be completed on both PCs and Macs. You will need the following software and plug-ins:

1. Microsoft Excel - Ensure the “Analysis ToolPak” plug-in is installed in your version.
2. Microsoft Word - Ensure you have the option to use the IEEE reference style in the Word citation management tool.

Detailed installation instructions are included in the Microsoft Excel and Word tutorials mentioned previously in ‘Relevant Resources.’
Learning Outcomes
Upon successful completion of this assignment, students will be able to:

1. Input experimental data into Microsoft Excel.
2. Perform calculations in Microsoft Excel using both manually inputting formulas and built-in functions.
3. Generate simple and effective tables and graphs to describe experimental data in Microsoft Excel.
4. Perform basic data analysis in Microsoft Excel. Specifically, students will be able to perform regression and residual analyses as part of a laboratory error analysis.
5. Properly format and organize a formal laboratory report in Microsoft Word.
6. Integrate both graphs and tables created in Microsoft Excel into a laboratory report in Microsoft Word.
7. Generate equations and sample calculations in Microsoft Word.
8. Correctly reference resources used in a formal laboratory report using IEEE format.
9. Critically evaluate experimental results on a basic level.

Instructions
This assignment contains four questions:

   Question 1: Alpha Particles
   Question 2: Forensic Identification
   Question 3: PEO Student Membership Program Registration
   Question 4: Personal Folder set up

The questions are described in detail beginning on page 5. To complete the first two question questions you will need to create multiple tables and graphs in Microsoft Excel, and you will need to import them into a properly formatted Microsoft Word document. Only the Word document will be submitted. The specific formatting requirements are listed on pages 2 to 4.

Formatting Requirements
1. Saving your file
   - The assignment should be saved as a Word file entitled: Student#_LASTNAME_FIRSTNAME_APSC100_Assignment1

2. Text
   - All text should be left justified.
   - Do not use full justification.
   - Paragraphs should not be indented and should, instead, be separated by one blank line.
   - Use size 11 Calibri font.
   - Edit your writing for spelling and grammar.
   - Write as concisely as possible.
3. Title page
   • Include a title page with your name, student number, course number (APSC 100), and submission date.

4. Point of view
   • The report should be written in 3rd person. Do not use “I” or “we.”

5. Headers/page numbers
   • Use Word Header & Footer to insert a header, including your last name and the page number, positioned at the top right side of the page.
   • Your name should be separated from the number using a vertical line, similar to “Smith | 1”.
   • The title page should not have a page number.
   • Use Roman numerals (i, ii, iii, etc.) for the page numbers for the Table of Contents, List of Figures, and List of Tables pages.
   • Arabic numbers (1, 2, 3, etc.) begin on the first page of the assignment and should be used for all subsequent pages (including appendices when applicable).

6. Headings
   • Use Word Styles to consistently format your headings for sections and subsections.
   • At minimum, each question and the references section should have its own heading.

7. Tables and graphs
   • Use consistent formatting for tables and graphs.
   • Consider the following guidelines for effective graphics in a laboratory report:

5.1. Tables
   1. Maximize white space.
      a. Eliminate vertical lines between cells.
      b. Where possible, minimize the number of horizontal lines between cells.
   2. Centre text in cells.
   3. Limit the use of colour where possible.

5.2. Graphs
   1. Do not include chart titles. Your figure caption should sufficiently introduce the contents of your graph.
   2. Do include axis titles (with units).
   3. Eliminate/Reduce horizontal and vertical gridlines when appropriate. Horizontal and vertical gridlines should only be included if they highlight key data points or are critical for making your graph more legible.
   4. Limit the use of colour where possible.
   5. When inserting graphs into a report, make sure they are an appropriate size. Graphs/Figures should be as small as possible, while still remaining clear and legible to the naked eye (without zoom). It is appropriate to conserve space and place figures side-by-side if they are clear, legible, and their content is related.
8. Captions
   - Include captions below figures and above tables using the Word Captions tool.
   - Refer to each figure and table in the body of your report using cross-referencing, also found under the Word Captions tool. Use the “Only Label and Number” option when inserting cross-references such that the references appear as “Table 1” or “Figure 1” in the body of the report.

9. List of Figures/List of Tables
   - Use Word Captions to insert a List of Figures and List of Tables immediately after the Table of Contents, generated from the captions used for your figures.
   - The Table of Contents, List of Figures, and List of Tables should not be included in the Table of Contents.

10. Table of Contents
    - Use Word Table of Contents to generate a Table of Contents page from the headings. Note that Word will do this automatically provided that you have used styles for your section headings.

11. References
    - Use Word Citations & Bibliography to insert in text citations and add a references section to the end of your document.
    - Reference all documents used.
    - Citations must be in IEEE style.
    - It is not mandatory that you use the Microsoft Word citation management tool. You are free to use other citations management tools (e.g. Zotero).
    - No citation management tools are perfect. It is always expected that you manually check that your citations are generated in proper IEEE format and that you make all necessary adjustments.

12. Significant figures
    - If not instructed otherwise, for the purposes of this assignment, report all numerical values to 4 significant figures.

13. Numbering equations
    - Number all equations included in the body of the report.
    - Any equations included should be referenced at least once by number in the explanatory text.
    - It is not expected that students use Word Captions to generate equation captions, cross-references, or a List of Equations.

14. Sample calculations
    Consider the following structure for effective sample calculations:
    1. Include the generic form of the equation. Ensure the equation is numbered.
    2. Define all variables.
    3. Report the final answer with units.

15. Units
    - When reporting units, ensure there is a space between the numerical value and the unit. However, a space should not be left between the numerical value and the unit for percentages or degrees.
**Question 1: Alpha Particles**

One model of smoke detector works by using a small sample of radioactive americium-241. You are involved in the design of one such smoke detector. Americium emits alpha particles as it decays into neptunium. An alpha particle is equivalent to a helium nucleus and contains two protons and two neutrons. Alpha particles are the weakest type of radiation and are unable to penetrate through a piece of paper or the outer layer of human skin. [1]

Inside this model of smoke detector, a small distance away from the americium is a sensor that uses induced currents to detect alpha particles. This sensor is shown in blue in Figure 1 and Figure 2. In open air, the alpha particles travel far enough to cause a current to flow in the sensor, as seen in Figure 1. However, smoke limits the distance that alpha particles can travel. Therefore, as seen in Figure 2, the alpha particles do not reach the sensor and the current stops flowing causing the alarm to go off [2].

![Figure 1: Ionization chamber of a smoke detector with no smoke present][3]

![Figure 2: Ionization chamber of a smoke detector with smoke present][3]

You have been tasked with determining what the distance, as seen in Figure 1 and Figure 2, between the sensor and the americium should be. To do this, you must conduct a separate experiment to find out how far alpha particles can travel through air and through smoke. In this experiment you will measure radiation levels, which indicate the presence of alpha particles.

A sample of americium was placed in a sealed testing chamber. You use a device known as a Geiger Counter to measure radiation levels inside the chamber. The Geiger Counter was set to measure radiation in counts per minute (cpm). Before conducting the experiment, you took a measurement of the background radiation in the lab, as shown below.

**Background Radiation = 19 cpm.** (Background radiation varies but this is a normal radiation level)

You started by measuring the radiation levels 0.5 cm from the sample and moved away in increments of 0.5 cm. Three identical trials were conducted, and the results are displayed in Table 1. You then filled the chamber with smoke and repeated the experiment; the results are displayed in Table 2. The method of calculating the uncertainty of a Geiger Counter is displayed in Equation 1, where radiation is the radiation level in counts per minute.
Uncertainty (radiation) = $\pm \sqrt{\text{radiation}}$

The **Inverse Square Law** states that radiation is proportional to $\frac{1}{d^2}$ where $d$ is the distance from the radioactive source.

**Disclaimer:** For the purposes of this assignment, the design of a smoke detector and the concept of alpha radiation has been greatly simplified. The data should not be used for any purpose aside for this assignment.

*Table 1 - Radiation in counts per minute (cpm) as measured by a Geiger Counter at varying distances from a sample of americium-241 through open air.*

<table>
<thead>
<tr>
<th>Distance from Sample, d (cm)</th>
<th>Trial 1 (cpm)</th>
<th>Trial 2 (cpm)</th>
<th>Trial 3 (cpm)</th>
<th>Average Radiation (cpm)</th>
<th>Uncertainty (±cpm)</th>
<th>$1/d^2$ (cm$^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>1000</td>
<td>999</td>
<td>997</td>
<td>997</td>
<td>7</td>
<td>0.0025</td>
</tr>
<tr>
<td>1.0</td>
<td>250</td>
<td>253</td>
<td>264</td>
<td>253</td>
<td>1</td>
<td>0.0025</td>
</tr>
<tr>
<td>1.5</td>
<td>140</td>
<td>121</td>
<td>120</td>
<td>121</td>
<td>1</td>
<td>0.0025</td>
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<td>2.0</td>
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<td>70</td>
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<td>71</td>
<td>2</td>
<td>0.0050</td>
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<td>2.5</td>
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<td>48</td>
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<td>48</td>
<td>2</td>
<td>0.0050</td>
</tr>
<tr>
<td>3.0</td>
<td>38</td>
<td>39</td>
<td>37</td>
<td>38.5</td>
<td>3</td>
<td>0.0075</td>
</tr>
<tr>
<td>3.5</td>
<td>31</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>3</td>
<td>0.0075</td>
</tr>
<tr>
<td>4.0</td>
<td>30</td>
<td>28</td>
<td>28</td>
<td>28.7</td>
<td>3</td>
<td>0.0100</td>
</tr>
<tr>
<td>4.5</td>
<td>22</td>
<td>22</td>
<td>23</td>
<td>22.3</td>
<td>3</td>
<td>0.0100</td>
</tr>
<tr>
<td>5.0</td>
<td>19</td>
<td>19</td>
<td>17</td>
<td>19</td>
<td>3</td>
<td>0.0125</td>
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<td>18</td>
<td>19</td>
<td>19</td>
<td>18.7</td>
<td>3</td>
<td>0.0125</td>
</tr>
<tr>
<td>6.0</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>3</td>
<td>0.0150</td>
</tr>
</tbody>
</table>

*Table 2 - Radiation in counts per minute (cpm) as measured by a Geiger Counter at varying distances from a sample of americium-241 through smoke.*

<table>
<thead>
<tr>
<th>Distance from Sample, d (cm)</th>
<th>Trial 1 (cpm)</th>
<th>Trial 2 (cpm)</th>
<th>Trial 3 (cpm)</th>
<th>Average Radiation (cpm)</th>
<th>Uncertainty (±cpm)</th>
<th>$1/d^2$ (cm$^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>779</td>
<td>694</td>
<td>806</td>
<td>806</td>
<td>7</td>
<td>0.0025</td>
</tr>
<tr>
<td>1.0</td>
<td>156</td>
<td>178</td>
<td>161</td>
<td>161</td>
<td>5</td>
<td>0.0025</td>
</tr>
<tr>
<td>1.5</td>
<td>61</td>
<td>54</td>
<td>55</td>
<td>55</td>
<td>5</td>
<td>0.0030</td>
</tr>
<tr>
<td>2.0</td>
<td>33</td>
<td>36</td>
<td>43</td>
<td>36</td>
<td>7</td>
<td>0.0050</td>
</tr>
<tr>
<td>2.5</td>
<td>24</td>
<td>23</td>
<td>28</td>
<td>23.7</td>
<td>5</td>
<td>0.0075</td>
</tr>
<tr>
<td>3.0</td>
<td>20</td>
<td>22</td>
<td>22</td>
<td>21.7</td>
<td>5</td>
<td>0.0100</td>
</tr>
<tr>
<td>3.5</td>
<td>19</td>
<td>20</td>
<td>19</td>
<td>19</td>
<td>5</td>
<td>0.0100</td>
</tr>
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<td>4.0</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>5</td>
<td>0.0125</td>
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<tr>
<td>4.5</td>
<td>19</td>
<td>19</td>
<td>18</td>
<td>19</td>
<td>5</td>
<td>0.0125</td>
</tr>
<tr>
<td>5.0</td>
<td>19</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>5</td>
<td>0.0150</td>
</tr>
<tr>
<td>5.5</td>
<td>17</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>5</td>
<td>0.0150</td>
</tr>
<tr>
<td>6.0</td>
<td>19</td>
<td>17</td>
<td>18</td>
<td>18</td>
<td>5</td>
<td>0.0175</td>
</tr>
</tbody>
</table>
Steps to Follow:

1. Transfer Table 1 and Table 2 into an Excel spreadsheet. Calculate the average radiation across the three trials at each distance by using Excel’s AVERAGE() function. Calculate uncertainty of the average radiation using Equation 1. Use the **Inverse Square Law** to populate the last column.

2. Construct a scatter plot with $\frac{1}{d^2}$ on the x-axis and the average radiation on the y-axis. Add both sets of data to this plot as different series. For both series, only include on the graph the average radiation values greater than or equal to the background radiation. Add appropriate axis ranges, axis titles (with units), a legend with appropriate names, and professional formatting.

3. Add trendlines to the data series and display the equations on the graph using the form shown in Equation 2 where $m$ is the slope and $b$ is the y-intercept.

   \[
   \text{Radiation} = \frac{m}{d^2} + b
   \]

4. Add error bars calculated using Equation 1. Do not worry if not all of them are visible, but adjust marker size so that the larger error bars are visible at least.

5. Solve for the distance from the sample that background radiation levels are reached. Do this for both smoke and open air by plugging the background radiation (19 cpm) into Equation 2 and solving for $d$. Use the full values of the numbers, as generated in the Excel equations, in your calculation. Do not round until the end of your calculations to improve accuracy.

6. In your report, show the steps for **one** of the calculations, using the **Equation** option under Word Symbols. In your steps, display the numbers to four significant figures. You only need to include the steps for smoke or open air as the calculations are nearly identical.

To Hand In:

1. Introduction
   i) A short paragraph outlining the two sets of data and describing the tables, graphs, and equations you are including. Be sure to uses Word Captions to add captions and cross-references when referring to the graphs and tables in your report. Also, ensure that equations are numbered and referred to by number in your report.

2. Results and Analysis
   i) The Excel tables of both sets of data. Remember to number each table and include an explanatory caption (generated using Word Captions) above each table to describe it. You should have two tables.
   ii) The Excel graph of the results. Remember to include a figure number and explanatory caption (generated using Word Captions) to describe the figure’s contents.
   iii) The radiation to distance relationship for both samples using Equation 2. You should have two equations.
   iv) The sample calculation from **Steps to Follow 5**. Show your steps.

3. Conclusion
   i) A short paragraph, suggesting where the sensor should be placed relative to the alpha particle source within the smoke detector. State the distance alpha particles can travel through smoke and through air. The difference between them is the range of distances in which the sensor can be placed. State this range. Where within this range would you suggest placing the sensor and why?
   ii) A short analysis on the accuracy of the methods used here. (Why would Equation 2 become inaccurate near $d = 0$ and average radiation = $b$?)
Question 2: Forensic Identification

You are a forensic scientist working for a lab. Bones from the skeletal remains of an unidentified person have been found and brought to your lab. It has already been determined that the bones belong to an adult male. In general, the length of bones in a skeleton corresponds to the actual height of the individual [4]. Therefore, you have been tasked with determining the height of the unidentified person based on the two bones found: the skeleton’s ulna and the femur. A femur is the bone in the human thigh and an ulna is one of the two bones in the human forearm. The length of the femur of the unidentified person was 0.50 m and the length of the ulna was 0.29 m.

Your team has two different databases containing previously measured bone lengths in individuals versus the person’s height measurement. You will use the two databases and the skeleton’s bone measurements to estimate the height of the unidentified person. The first set of data is shown below in Table 3. This data comes from Canada, and shows the length of femurs of various adult males versus their height.

<table>
<thead>
<tr>
<th>Femur Length (cm)</th>
<th>Individual’s Height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.97</td>
<td>1.5303</td>
</tr>
<tr>
<td>42.40</td>
<td>1.6127</td>
</tr>
<tr>
<td>43.52</td>
<td>1.6313</td>
</tr>
<tr>
<td>45.73</td>
<td>1.6899</td>
</tr>
<tr>
<td>46.33</td>
<td>1.7123</td>
</tr>
<tr>
<td>46.79</td>
<td>1.7022</td>
</tr>
<tr>
<td>47.06</td>
<td>1.7211</td>
</tr>
<tr>
<td>47.73</td>
<td>1.7122</td>
</tr>
<tr>
<td>48.24</td>
<td>1.7422</td>
</tr>
<tr>
<td>48.84</td>
<td>1.7458</td>
</tr>
<tr>
<td>49.50</td>
<td>1.7663</td>
</tr>
<tr>
<td>50.41</td>
<td>1.7942</td>
</tr>
<tr>
<td>51.32</td>
<td>1.8221</td>
</tr>
<tr>
<td>52.66</td>
<td>1.8462</td>
</tr>
<tr>
<td>53.75</td>
<td>1.8722</td>
</tr>
<tr>
<td>53.22</td>
<td>1.8641</td>
</tr>
<tr>
<td>56.12</td>
<td>1.9264</td>
</tr>
</tbody>
</table>

The second database was from the United States. It contains information on the length of the ulna versus the height of males of various ages. Since it was from the United States, it was recorded in Imperial Units. The data is displayed in Table 4.

<table>
<thead>
<tr>
<th>Ulna Length (in)</th>
<th>Individual’s Height (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.72</td>
<td>1.97</td>
</tr>
<tr>
<td>3.91</td>
<td>2.46</td>
</tr>
<tr>
<td>4.61</td>
<td>2.77</td>
</tr>
<tr>
<td>5.84</td>
<td>3.33</td>
</tr>
<tr>
<td>8.31</td>
<td>4.54</td>
</tr>
<tr>
<td>11.48</td>
<td>6.17</td>
</tr>
<tr>
<td>11.30</td>
<td>6.07</td>
</tr>
<tr>
<td>11.76</td>
<td>6.33</td>
</tr>
</tbody>
</table>
Steps to Follow:

1. Transfer the **femur** data (Table 3) into an Excel spreadsheet. Be sure to include units in the column headers.

2. Construct a scatter plot of the **femur** data. Your graph should have **Femur Length (cm)** on the x-axis and **Height (cm)** on the y-axis (note the units!) Select appropriate axis ranges, and axis titles (with units) and professional formatting.

3. Add a trendline to the data series of the femur data and display the equation on the graph using “height” and “length” as variable names. Note that the Excel trendline is the result of a linear regression, which places a line of best fit to the data.

4. In a separate table in your Excel spreadsheet, enter the **ulna** data from Table 4. Whether you add more columns for unit conversion is up to you.

5. Construct a new scatter plot of the **ulna** data. Your graph should have **Ulna Length (cm)** on the x-axis and **Height (cm)** on the y-axis. Select appropriate axis ranges, add axis titles (with units), and professional formatting. Note to convert units from inches to centimeters multiply by a factor of 2.54 and to convert from feet to centimeters multiply by 30.48. Include the trendline and the trendline equation with appropriate variables.

6. Returning to the **femur data first**, use Excel Analysis to complete a **regression analysis** of the femur data with a 68% confidence level. Produce both residuals and a residual plot for the data series. **Reminder: You cannot access Excel Analysis unless you have enabled the “Analysis Toolpak” plug-in.** Do not worry if you do not understand the meaning of the confidence level. Confidence levels are related to standard error and will be explored in APSC 100 Module 2.

7. For the same data, add the completed Table 5 (below) in your Excel spreadsheet, including the missing values obtained from the regression analysis.

   **Table 5 - The format of the table, which you should create in your Excel spreadsheet to summarize the results of your regression analysis.**

<table>
<thead>
<tr>
<th>Slope</th>
<th>Standard Error</th>
<th>Intercept (cm)</th>
<th>Intercept Standard Error (± cm)</th>
</tr>
</thead>
</table>

8. From the regression output, use Descriptive Statistics (in the Analysis Toolpak) to determine the mean and standard error of the residuals of the regression analyses. Make sure you check the summary statistics box and use a 68% confidence level.

9. Complete Table 6 in your Excel spreadsheet with appropriate values obtained from the summary statistics.

   **Table 6 – The format of the table, which you should create in your Excel spreadsheet to summarize the results of your residual analysis.**

<table>
<thead>
<tr>
<th>Residual Mean</th>
<th>Residual Standard Error</th>
</tr>
</thead>
</table>
10. Repeat steps 6 through 9 for the ulna data.

11. Using the two trendline equations generated in each graph calculate the possible heights of the unidentified individual. Show your calculations using the Equation option under Word Symbols. In your steps, display the numbers to four significant figures.

To Hand In:
1. Introduction
   i) A short paragraph outlining the two sets of data and describing the tables, graphs, and equations you are including. Be sure to uses Word Captions to add captions and cross-references when referring to the graphs and tables in your report. Also, ensure that equations are numbered and referred to by number in your report.

2. Results and Analysis
   i) The Excel tables of both the femur and ulna data. Remember to number each table and include explanatory captions (generated using Word Captions) above each table to describe it. You should have two tables.
   ii) The two excel graphs of the results. Remember to include a figure number and explanatory captions (generated using Word Captions) to describe the figures’ contents.
   iii) The sample calculation from Steps to Follow 11.
   iv) The results of the residual analysis of the femur data and the ulna data. There should be four charts, a summary of the regression analysis for both data sets (Table 5) and a summary of the residual analysis for both data sets (Table 6).
   v) The plots generated by the regression analysis of the femur and ulna data. Add appropriate axis ranges and axis titles.

3. Conclusion
   i) Write a short analysis of what you noticed about the residual plot. Is the equation for the femur a good fit for the data? Is the equation for the ulna a good fit for the data?
   ii) What were the two estimated heights of the unidentified person? Do the two heights agree? If not, which of the two calculations do you think is more accurate and why? State your estimate for the height of the unidentified person in centimeters.
   iii) Discuss other factors that could cause inaccuracies in either of the equations.
   iv) How does either your femur-length-to-height or ulna-length-to-height relationship compare to other published formulae? Cite at least one source and include the source in your References section.
Question 3: PEO Student Membership Program Registration

The Professional Engineers Ontario’s Student Membership Program is a free program open to all undergraduate engineering students. The program allows students to connect with Professional Engineers Ontario (PEO) and the engineering community. Some benefits include access to PEO’s official journal, Engineering Dimensions, opportunities to ask questions about licensing and engineering, and invitations to local events/presentations offered by local PEO chapters. By registering for the Student Membership Program (SMP), you are getting a head start in establishing a connection to the professional engineering community.

Steps to Follow:
1. Go to http://www.engineeringstudents.peo.on.ca/
2. Explore the website and learn about the SMP and PEO.
3. Click the ‘LOG IN/SIGN UP’ option from the menu to be redirected to the Login page.
4. Choose the third option from the list: ‘Sign up for SMP account’.
5. Accept the Terms and Conditions and Terms of Membership agreements.
6. Enter the required personal information.
   - When prompted for your email address, register using your[NetID]@queensu.ca email.
   - When prompted for your degree, select ‘Bachelor’s Degree Other’ (most students) or ‘Bachelor’s Degree Computer’ or ‘Electrical’ (ECEi students).
7. A confirmation email from PEO will be sent to your student email account.

To Hand In:
Take a screen shot of the email and copy the image into your assignment as your answer to Question #3. An example of what the email should look like is shown below:
Question 4: Personal Folder Set up

As a first year engineering student you will have up to 7 or 8 unique courses per term. You will be using the Queen’s Learning Management system – called OnQ – for many of your courses.

In APSC100 Module 2, you will be downloading a lot of material from OnQ for weekly labs and tasks. Students tend to leave everything in their “Downloads” folder but this can be problematic since you can end up with hundreds of downloads by the end of the term.

Good computer maintenance practices involve creating an effective filing system and organizing your downloaded files into appropriate sub-folders. For APSC100 Module 2, you are expected to set up such a system of folders and subfolders.

Steps to Follow:
Your assignment is to create a system of subfolders for APSC100 Module 2 (as shown below). Create this collection of directories on your computer.

To Hand In:
Take a screen shot of your local directories, and copy the image into your assignment as the answer to Question #4. The screen shot:

- must include your name (e.g. you could include it in the APSC100 Module 2 folder name) and
- must show ALL the subfolders listed below.

Desired directory structure/sample screen shot:
References


