ENGG1960: Introduction to Biomedical Engineering
Engineering Drawings
Tutorial Week 11
Parts 1 to 3 are to be completed prior to or during the Tutorial session.

PART 1:

You will require a medium to soft pencil (H, HB or B) sharpener and a clean eraser.
You will be supplied with some A4 tracing paper for practice.

After having reread the lecture slides, practice sketching objects some simple objects that you may have “at hand”. The object you choose should have some straight edges, circles and arcs. Avoid flexible objects such as clothing.

Suitable examples could include but are not limited to;
   - Pen and or pen cap
   - Disposable coffee cup
   - Water bottle
   - Lunch box
   - Mobile phone
   - Etc.

Before attempting your sketch some pointers:

0. Wash your hands. (This removes oils and grime which will be transferred to your paper)
1. Ensure you have a clean eraser.
2. Note the proportions of the piece you are drawing before you start drawing.
3. Leave the ellipses until you have correctly established all the edges, vertices and proportions.
4. Do not draw your lines by “chiseling” i.e. use continuous lines not small joined dashes.
5. Do not use shading.
6. Your first attempt will not be your best you will need to have at least two or three attempts.
7. You may wish to seek advice from one of the Tutors or the lecturer in regards to an opinion on your work.

Example of Freehand Sketching – David Lovegrove

http://www.davelovegrove.co.uk/Sketching.html (Accessed 13/05/2014)
Example of Freehand Sketching – His Chen

http://cargocollective.com/hsichen/FREEHAND-DRAWING (Accessed 13/05/2014)

Example of Freehand Sketching – Artist Unknown

www.sketching-drw.com (Accessed 13/05/2014)

Example of Freehand Sketching – Anderson Inge

www.expeditionworkspace.org (Accessed 13/05/2014)
PART 2:
Practice your understanding of Third Angle Projection by drawing the missing left hand side, right hand side and top view where noted on the spaces provided on the left hand side of the sheet below. Once you have completed this draw the isometric view of each of the four objects shown.
PART 3: SolidWorks

During your time in the PCLAB during Week 11, you should focus on learning how to use SolidWorks the School’s main CAD package. Once you have logged in to a PC using your Unikey and password (first time users should use their SID) please follow the steps below;

1. Digitise the SolidWorks icon. If it is not on your desktop please digitize Start > All Programs > SolidWorks 2013 > SolidWorks 2013 x64 Edition.

2. Digitise the “Help“ tab.

3. Digitise the “SolidWorks Tutorials” tab.

4. Digitise the “Getting Started” tab.

5. Digitise the “Lesson 1: Parts” tab.

6. Continue through the tutorial until your Part is completed.

7. Continue on and complete “Lesson 2” and “Lesson 3” during your allocated and additional time in the PCLAB.

8. If you would like to obtain a copy of SolidWorks for installation at home, digitise the “Uglabprint” icon on your desktop then digitise the “Student Software” icon. Inside you will find copies of SolidWorks 2013-2014 32 Bit and 64 Bit with Activation instructions to enable you to install the software at home. Select the copy that is appropriate for your computer. At this stage there is no MAC version of SolidWorks. It may operate under emulation but this is at your risk. The version of SolidWorks that has been made available to you will run until December 31st 2014.

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