EGN 1110C: Engineering Drawing: Dr. K. Kengskool

Important Note: Please use your AutoCAD text book as references for the details of each command and how the AutoCAD works. Hand-on experience is the must for you to learn how to use this tool effectively in engineering drawing. Below are some short-cut keys and useful functions in AutoCAD. Please keep it handy while you are using AutoCAD.

- F1 = help
- F2 = show text window to trace history of your work
- F3 = Osnap on/off
- F4 = Tablet on/off
- F5 = Rotate Isoplane
- F6 = Co-ordinate on/off
- F7 = Grid on/off
- F8 = Ortho on/off (force to draw line only vertically or horizontally
- F9 = Snap on/off
- F10 = polar on/off
- F11 = Object Snap tracking on/off
- <esc> = use to cancel any command in progress
- Hit <space bar> or <enter> twice = get the same previous command without retyping
- Zoom ➔ All = display Maximum drawing area (Grid should be on to see the effective drawing space)
- Double click at the mouse-wheel = Zoom All
- Click Right Button of the mouse = <enter> key
- Use option “Extend” when print to get Max. image when print
- “C” is a sub command for Line and Pline to perfectly close the last with the first point of drawing
- Use Snap ➔ Style ➔ Isometric to get into Isoplain for Isometric drawing
- Use Ellipse ➔ Iso to draw circle in Isometric drawing. Do not forget to use F5= Rotate Isoplane
- <ctrl><9> ➔ to display the command lines (located at the lower left corner of the screen), It is highly recommended that you type in the AutoCAD commands at the command lines to quickly learn how each of the AutoCAD command works and observe its available sub-commands.
Before start any new drawing, the following details should be considered and /or set up:

1.) Click the AutoCAD icon on the top left corner> New > Drawing. It will pop up the window to select template of the drawing but you just click on the arrow next to Open button and select “Open with no Template – Imperial” in order to set all the input of the entire drawing into the unit of inch.

2.) Set the limits or drawing space by typing “LIMITS” in the command line and set the value of drawing limits as 0, 0 and 12, 9.

3.) Set the grid display by typing “GRID” in the command line <ENTER> then type “LIMITS” <ENTER> then type “NO” <ENTER>. This is to display the grid not beyond the drawing limits. The grid should be turned on (pressing <F7> to turn on/off) to see drawing space or the original limits.

4.) Once the new limits (or drawing space) is defined or set, type “ZOOM”<ENTER> then “ALL” <ENTER> in the command line to see the new maximum drawing space.

5.) Unit of your drawing, use UNITS command to change to desirable unit. The default is the decimal unit.

6.) Snap should be turned on the help with more accurate movement of your cursor. This can be turned on/off easily using <F9>. Sometime, snap may bother you when you need a free movement of your cursor! Object Snap should be turned off, unless you need it since it will prevent you from draw freely as well! (Read text to see the difference and how it is helpful)

7.) Redefine your grid and snap (use “GRID”, and “SNAP” command) accordingly to fit what you need.

8.) Complete your drawing in the drawing limits you have set.

Note: How to print your drawing on letter paper

1.) After you finished your drawing, type “PLOT” in the command line, it will show up the plot window

2.) Set up the print options as the following:
   - Paper size: Letter
   - Plot area: Limits
   - Plot offset: Select “Center the plot”
   - Plot Scale: Select “Fit to paper”
   - Drawing Orientation: Select “Landscape” (Depends on how you set the drawing limits)

3.) You can preview before you print your drawing by clicking on “Preview…” button

4.) Click “OK” to print your drawing

Tips: Plot area options

   Display : print the drawing that currently displays on your workspace
   Extents : print the entire drawing including the drawing beyond the drawing limits
   Limits : print the drawing within the drawing limits you set
   Window : print the drawing only in the area you select