



Visual Studies I: Arch 1191

Assignment Number: 7

Computer Program(s): Autocad

Student Learning Objectives:

Upon successful completion of this assignment, the student will:

1. Understand the similarities and differences between two vector based software programs, Adobe Illustrator and Autocad.
2. Know how to create a new file.
3. Know how to create layers.
4. Know how to manage pens.
5. Understand defpoint layer.
6. Understand use of construction lines.
7. Know how to draw 2D objects in model space: line, polyline, spline, circle, polygon, etc.
8. Know how to edit drawings in model space: extend, fillet, trim, rotate, etc.
9. Understand the difference between model space and paper space and know how to toggle between the two.
10. Understand scale: 1:1 in model space, scaled drawings in paper space.
11. Understand what a viewport is and how to set the scale.
12. Know how to set up multiple tabs in paper space.
13. Know how to create and edit text, simple and multi-text.
14. Know how to plot.

Assessment:

To evaluate the student's achievement of the learning objectives, the professor will do the following:

1. Evaluate the student's understanding of the difference between Adobe Illustrator and Autocad by looking at both the .dwg file and the final output and will compare to analog drawings done in Arch 1110.

Project Description:

In this assignment, you will duplicate one of the hand drafting assignments from Arch 1110. Choose from Assignment 2, 4, or 5. You will not use your previous work as underlays but re-create construction lines and draft in the computer. You will draw an additional orthographic view that was not previously done for that assignment, plan oblique, elevation oblique, or isometric.

Process:

1. Create a new file in Autocad.
2. Set the units and extents of the file in model space.
3. Create 5 layers, each equal to a different line weight: heavy, dark, medium, light, and lightest.
4. Create CTB file to correspond with your layers. Output should be black and white not color. Pen line types should be chosen: solid, dashed, etc. Pen thicknesses are in mm.
5. Create construction lines on either the defpoints layer or a new layer called construction lines. Make sure this layer is non-print layer.
6. Draw your orthographic views, 1:1 scale. Make sure lines on the appropriate layer.
7. Move to paper space. Create 11x17 layout with title block.

- a. Create a view port for each drawing. Set the scale so that plans and elevations fit on one sheet.
 - b. Create a title block:
 - i. Choose font and font size.
 - ii. Choose alignment of text.
 - c. Create a new tab for your additional axonometric views (copy first tab or create new):
 - i. Create new view ports.
 - ii. Choose scale.
 - iii. Copy title block from first layout, if not already there.
8. Plot layouts:
- a. Select ctb file.
 - b. Select printer.
 - c. Select paper size and orientation. Note differences between Arch and Ansi paper sizes.
 - d. Select what is to be plotted: layout, window, etc.
 - e. Hit preview: if it is correct save settings.
 - i. If not correct, edit settings until preview looks correct.
 - f. Plot layouts
9. Compare Autocad drawings with previously done hand drawings. What parts are easier by hand and what parts are easier in Autocad?