Laser Cutting

Cost $45/hour plus $10 filter fee

Materials (up to 1/4" or 6mm)

- Wood, Plywood, pressboard, Acrylic, cardboard, corrugated plastic, silicon gasket (< 1mm)
- Other material may be cut , please ask.
- As of now, NO PVC or plastics with chlorine base, Lexan, unknown plastics, metals, latex,

Files

- Cutting
  - Max size is 23.95” or 608mm by 11.95 “ or 303mm, Top right corner being 0,0
  - Need to be in vector format with line thickness of 0.01mm
  - colour of line is cutting order
    - Red (255,0,0)
    - Blue (0,0,255)
    - Navy (51,102,153)
    - Cyan (0,255,255)
    - Green (0,255,0)
    - Ivy Green (0,153,51)
    - Forest Green (0,102,51)
    - Brass (153,153,51)
    - Tan (153,102,51)
    - Brown (102,51,0)
    - Purple (102,0,102)
    - Violet (153,0,204)
    - Magenta (255,0,255)
    - Orange (255,102,0)
    - Yellow (255,255,0)
  - Always cut inner holes first then next outer hole, ending with outside cuts
- Engraving
  - Colour is black and is a raster format

To create a file.

Either start with a vector program Adobe Illustrator or InkScape (https://inkscape.org/en/download/)

Or use SolidWorks

1. If one part then skip to #3
2. Move your multiple parts to an assembly making sure all parts are on the same plane and there is a minimum gap of 0.5mm between parts.
3. Make a drawing from your assembly.

4. Use a custom sheet size, no larger than 608mm x 303mm.
5. Within the drawing file make sure your part is: 1:1 scale, Dimension type – “True”.
6. Save your file then “save as” Adobe Illustrator .ai file type.
7. Open your file in inkscape or Adobe Illustrator.
8. InkScape - In dialog box set “Precision of approximating gradient meshes:” to “very fine”.
9. If you are making different layers (ie different cut layers /colours) then “Layer – Dupicate current layer”
10. Make one more layer then colours you intend, in case you delete something you did wish to.
11. SAVE OFTEN.
12. Lock and hide all layers except first one.
13. Change to “Edit paths by nodes(F2)”
14. Click on lines. Nodes will appear.
15. Delete all nodes not needed on this layer, either drag-select works (if path is clear enough), shift click on node (one at a time) or (pro tip) hover over node (it will turn red then while red, roll middle mouse wheel, this will select nodes along the path but be careful it will sometimes pick other nodes. This is good to select circles or tightly packed nodes), Hit delete,
16. Once this layer is set and with nodes still on, click tab “Stroke paint” in “Fill and Stroke(Shift+Crtl+F).
17. Enter RGB colours you want, see above chart.
18. Click tab “Stroke style”, Change “width:” to 0.01 mm. Your lines should vanish but don’t worry , they are just too small to see unless you zoom in.
19. Lock and hide this layer.
20. Unlock and unhide your next layer and delete everything not wanted on this layer.
21. Repeat until all layers are done.
22. Unlock and unhide all cutting and engraving layers, save files.
23. Email to eporter@eng.uwo.ca. with the message: What this is for, how many layers, Type of material to be cut/engraved, speed code (if warranted), and required date.