Abstract Earrings

EQUIPMENT
- Laser cutter
- Craft station

SOFTWARE
- Adobe Illustrator

MATERIALS
- 3mm plywood
- Acrylic paint
- Wire
- 2 x ear wires

BRING YOUR OWN
- Acrylic paint (optional)
- 4 x jump rings (optional)

THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

BUSINESS SCHOOL
CENTRE FOR
INNOVATION AND
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UnleashSpace

Designing your earrings

1. Create a new document in Adobe Illustrator.
Specify the dimensions of your artboard in millimeters. Ensure that your Color Mode is 'RGB Color.'
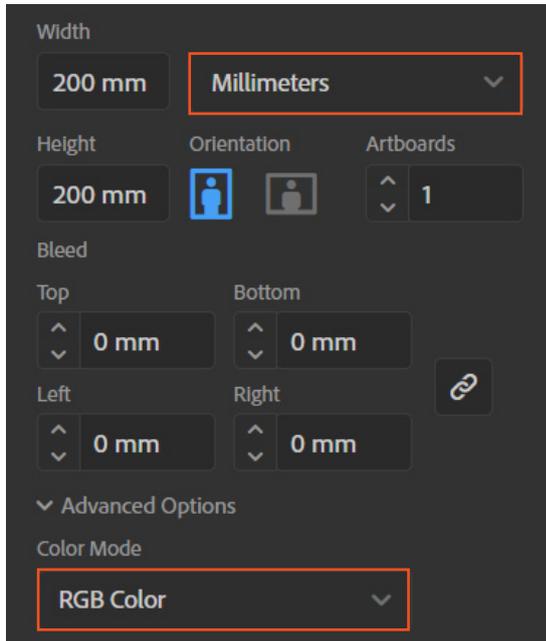

2. Create your design by drawing strokes with the Pen and Curvature tools.
Ensure that all the lines are connected.
If you're unfamiliar with how to use Illustrator, visit our Canvas course for a workshop on Illustrator Basics.
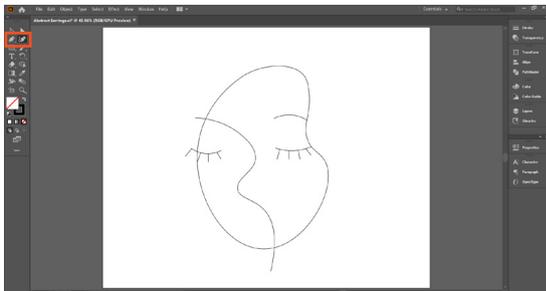

3. Increase the stroke weight using the Stroke panel until your design has reached your desired width. If you'd like rounded lines, select the circular Cap.
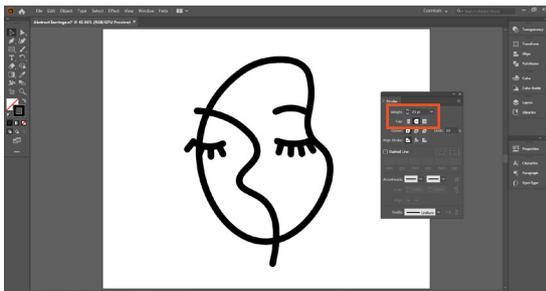

4. Add a loop at the top of the earring using the Ellipse tool.
*Hold Shift as you draw the shape to produce a perfect circle.*
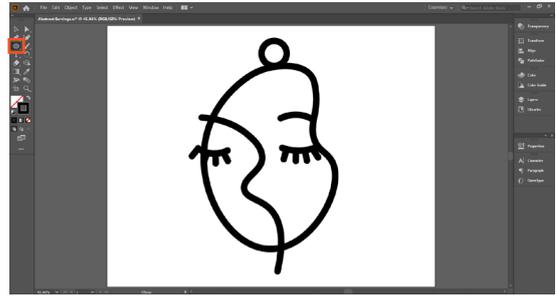
5. Now that you have your final design, we need to convert the black lines from strokes into solid shapes.
*Select the entire design. Click Object>Path>Outline Stroke.*
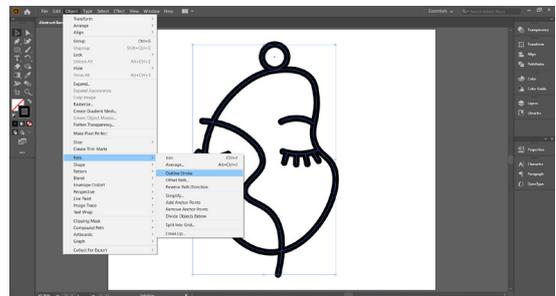
6. Combine your entire design into one big shape.
Select the entire design. In the Pathfinder panel, under Shape Modes, click Unite.
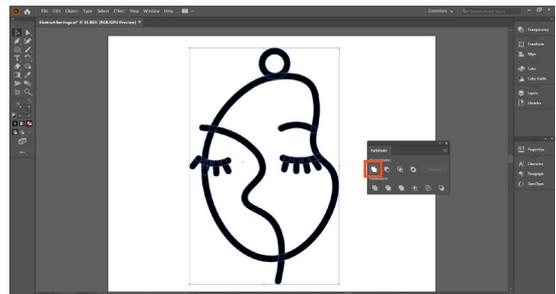
7. <u>Optional step:</u> Sharp corners are stress points, so the loop at the top of the earring is the area most likely to break. You can make the loop stronger by rounding where it attaches to the earring.
Click on the Direct Selection tool, then select the shape.
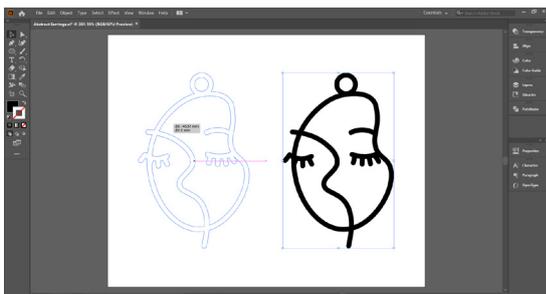*Select the blue dot in the corner that you wish to round.*
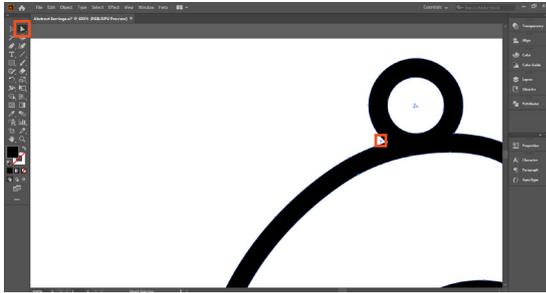

Click and drag the blue dot outwards.
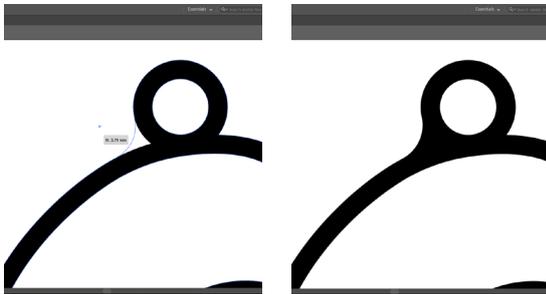
8. Check the dimensions of your design using the Transform panel.
If you wish to re-size, hold Shift to maintain the aspect ratio.
The inside of the loop should be atleast 2mm in diameter.
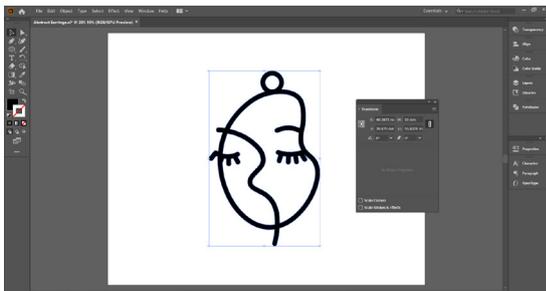
9. Duplicate the earring.
Hold Alt (Windows) or Option (Mac) and drag the object.

10. <u>Optional step:</u> Flip one of the earrings if you would like the pair to be symmetrical.
Select one of the earrings. Right click>Transform>Reflect.
Under Axis, select Vertical>OK
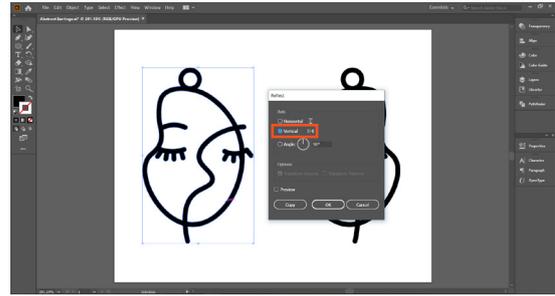
11. Prepare your design for laser cutting.
For both earrings, change the stroke colour to red (RGB 255,0,0) and the stroke weight to 0.001.
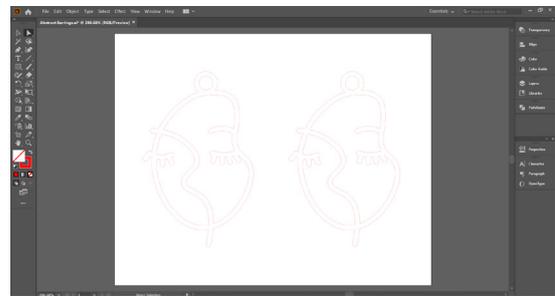
You are now ready for laser cutting!

Cutting and Assembly

1. Laser cut your design on 3mm plywood.
   If you have not been trained on the laser cutter, visit our Canvas course to begin laser cutter training.

2. Paint the earrings.
   The maker space has a selection of paints in different colours. You can also bring your own.
   If the earrings are small, it may help to hold them with a pair of tweezers.

3. If you do not have jumprings, make some by bending lengths of wire into circles.
   You will need 4 in total. In this example, we have used 2 x 4mm and 2 x 10mm rings.

4. Connect each earring to two jump rings and an ear wire.
   Pliers are helpful for opening and closing rings.
   Using two jump rings per earring will help the earring face fowards when you're wearing them.

Congratulations - you have now finished making your own abstract earrings!

Ways to experiment

Asymmetry vs. symmetry

Size and thickness

Inversion and negative space

Painting different colours and patterns

Asymmetrical, complimentary designs

Using other materials e.g. acrylic, fabric

Joining multiple pieces