MAKER STUDIO

Orientation Points to Remember
# TABLE OF CONTENTS

Access and sign the Acknowledgment of Risk form ............................................................. 2
Copyright policy ......................................................................................................................... 2
Trotec Speedy 400 Laser Cutter ................................................................................................. 3
   How to prepare for using this tool: ......................................................................................... 3
Cameo 3 Silhouette cutting machine ........................................................................................... 4
   How to Prepare for using this Tool: ...................................................................................... 4
Carvey by Instructables ............................................................................................................... 5
   How to Prepare for using this Tool: ...................................................................................... 5
Form 2 3D Printer (SLA) ........................................................................................................... 6
   How to prepare for using this tool: ....................................................................................... 6
3D printing with the MakerBot Replicator Z18 ......................................................................... 7
   How to prepare for using this tool: ....................................................................................... 7
Prusa 3D Printer ......................................................................................................................... 8
   How to prepare for using this tool: ....................................................................................... 8
Industrial Sewing Machine ........................................................................................................ 9
   How to prepare for using this tool: ....................................................................................... 9
Brother Embroidery Machines ................................................................................................. 10
   How to Prepare for using this Tool: .................................................................................... 10
Access and sign the Acknowledgment of Risk form

Some materials are excluded from the Maker Studio and all materials must be accompanied by a MSDS sheet. Make sure you are familiar with procedures for the Maker Studio. We do not store materials in the Maker Studio.

Copyright policy

Files used in the Maker Studio must abide by all applicable Mount Royal University Policies and Federal, Provincial, and Municipal laws. This includes compliance with intellectual property laws, including those set out under the Canadian Copyright Act. It is the user's responsibility to obtain all necessary legal rights and permission regarding files being used. For more information, please see the Library's copyright guide at http://library.mtroyal.ca/copyright. The Mount Royal University Library reserves the right to refuse service request for any reason.
TROTEC SPEEDY 400 LASER CUTTER

Materials: wood, acrylic, fabric, leather, cardboard, ceramic, metal, glass
Software: Illustrator/ Photoshop
File types: .ai, .psd
Machine details: Maximum area 24 x 39 inches
Production time: Depends on the file type, 1-200 minutes.

How to prepare for using this tool:

1. Create your design in Adobe Illustrator.
2. The laser cutter only accepts RGB colours from your files.

   Red = cutting - stroke .001
   Blue = engraving - stroke .025
   Black = etching

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
CAMEO 3 SILHOUETTE CUTTING MACHINE

Materials: paper, vinyl, fabric, veneer
Software: Silhouette Studio
File types: DXF and other graphic drawing exchange file types.
Machine details: Maximum area 12” x 24”.
Production time: depending on the file type, 1-10 minutes.

How to Prepare for using this Tool:

Download Silhouette Studio software
Have your design prepared in one of these ways:

1. Create your design in the Silhouette Studio Software
2. Have your line work/outlines saved as a DXF file
3. Have your JPEG imported into Silhouette and trace it using the tools in the software

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
CARVEY BY INSTRUCTABLES

Materials: wood, plastic, metal
Software: Easel online: http://easel.inventables.com/
File types: SVG or g code
Machine details: Maximum area of 11.6” x 8” x 2.50”. Material height + depth of cut cannot exceed 2.50”.
Production time: depending on the file type, 1-40 minutes.

How to Prepare for using this Tool:

Make an account with Inventables to access the Easel Software
Have your design prepared in one of these ways:
   1. Create your design in the Easel Software
   2. Have your design exported into an SVG file
   3. Create your own G code
Upload the file to easel and follow the prompts in the software.

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
FORM 2 3D PRINTER (SLA)

Materials: various resins—black, grey, white, clear
Software: Preform
File types: STL
Machine details: Maximum build area 5.7 × 5.7 × 6.9 inches (145 × 145 × 175 mm)
Production time: Depends on the file type, 10 minutes - days.

How to prepare for using this tool:

Create or download your 3D model. Save it as a STL and upload it through the Maker Studio page on the Library website
Verify your file before submission:
   1. The file is the correct dimensions that you require
   2. The dimensions fit within the dimensions of the machine
   3. The file is a solid and does not have holes or open surfaces
   4. You have chosen the appropriate material and colour for your print

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
3D PRINTING WITH THE MAKERBOT REPLICATOR Z18

Materials: MakerBot proprietary PLA filament, many colours
Software: MakerBot Print
File types: STL
Machine details: 2,592 CUBIC INCHES, 30.0 L X 30.5 W X 45.7 H CM,
11.8 L x 12.0 W x 18.0 H IN
Production time: depending on the file type, 10 minutes - days

How to prepare for using this tool:
Create or download your 3D model. Save it as a STL and upload it through the Maker Studio page on the Library website
Verify your file before submission:
  1. The file is the correct dimensions that you require
  2. The dimensions fit within the dimensions of the machine
  3. The file is a solid and does not have holes or open surfaces
  4. You have chosen the appropriate material and colour for your print

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
PRUSA 3D PRINTER

Materials: PLA or PETG filament, many colours
Software: Ultimaker Cura
File types: STL
Machine details: 10500 cm³ (25 x 21 x 20 cm or 9,84 x 8,3 x 8 in)
Production time: depending on the file type, 10 minutes - days

How to prepare for using this tool:

Create or download your 3D model. Save it as a STL and upload it through the Maker Studio web page.
Verify your file before submission:
   1. The file is the correct dimensions that you require
   2. The dimensions fit within the dimensions of the machine
   3. The file is a solid and does not have holes or open surfaces
   4. You have chosen the appropriate material and colour for your print

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
INDUSTRIAL SEWING MACHINE

Materials: Fabric and leather - light, medium, and heavy weights
Software: None
File types: N/A
Machine details: As large as desired
Production time: Depends on the project scale

How to prepare for using this tool:

Create a pattern and have your materials ready including fabric, notions and thread choices. You can cut the fabric at home or in the Maker Studio.

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.
BROTHER EMBROIDERY MACHINES

Materials:
- Fabric - light and medium weights
- Stabilizer

Software: Embroidery software (PE Design for use in the Maker Studio only)
File types: PES files on a USB
Machine details: As large as desired. For embroidery hoop:
- 5” x 6.5”
- 6” x 8.5”
- 6” x 13.5”

Production time: Depends on the project scale

How to Prepare for using this Tool:

Create a pattern and have your materials ready including fabric, notions and thread choices. You can cut the fabric at home or in the Maker Studio. For the embroidery machine, have your file created in your own embroidery software or be prepared to create the file in the Maker Studio using the PE Design embroidery software installed on the computer.

If you have questions about this, please discuss your project with Maker Studio staff before using the tool.

All other tools, technologies and equipment require your own materials and training in the Maker Studio. All health and safety standards for the Maker Studio must be observed.