TEXAS TECH
COLLEGE OF
ARCHITECTURE

LASER CUTTER MATERIALS - PRICE LIST

Materials that cannot be cut
Any type of Metal
Anything that contains PVC

Material Price ($2.50 for the X660 + material price + $0.10 per minute)

80pt (18x32) Chip Board	$4.75
125pt (18x32) Chip Board	$7.75
20pt (18x32) Chip Board	$1.75
40pt (18x32) Chip Board	$2.75
60pt (18x32) Chip Board	$3.75
1/8” (18x32) MDF	$2.50
1/4” (18x32) MDF	$4.00
2ply (18x32) Museum Board	$4.50
4ply (18x32) Museum Board	$8.50

User Provided Material $2.50 for the X660 laser + 10 cents/minute

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Material Prices ($7.50 for the LS + material price + $0.10 per minute)

1/8” (24x30) BalticBirch	$10.50
1/4” (24x30) Baltic Birch	$12.00
5/32” (30x40) CardBoard	$2.50
80pt (24x36) Chip Board	$6.75
20pt (24x36) Chip Board	$2.25
40pt (24x36) Chip Board	$3.25
60pt (24x36) Chip Board	$4.25
1/8” (35x55) MDF	$5.00
1/4” (35x55) MDF	$9.00
2ply (32x40) Museum Board	$9.00
4ply (32x40) Museum Board	$17.00

User Provided Material $7.50 for the LS laser + 10 cents/minute

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Material Prices ($12.50 for the HP + material price + $0.10 per minute)

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3D PRINTERS - FABRICATION LAB

FILE SUBMISSION

- http://www.arch.ttu.edu/3dprinter/

General Guidelines

1. The use of the 3D Printers is restricted to academic projects only.

2. **3D Printing Lab** is located in room 06 - Courtyard Level.

3. Students may not operate the 3D Printer. Only trained personnel may operate the 3D Printer. Unauthorized use of the 3D Printer will result in immediate suspension of 3D printing privileges.

4. Students may not bring files to the 3D Printer until they have read and agreed to all notices and guidelines.

5. Students are expected to maintain a high level of respect for the 3D Printer operator.

6. When submitting, please save your file in the following format:
   LastnameFirst_FileName.stl or .**3dm**

7. The following are the file formats we are currently able to open: **.dwg, .dxf, .3dm, .3ds, .stl, .igs, .obj**

8. Please specify if units used in the file are millimeters, meters, inches, or feet.

9. Current working 3D Printers are:
   plastic printer Dimension Elite
   plastic printer New Matter
   powder printer ZPrinter 350
   resin printer Form Labs 2

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DIMENSION ELITE

FILE SUBMISSION

- http://www.arch.ttu.edu/3dprinter/

COST

$5.00 setup fee.
$1.00 for each hour of printing, rounded to the minute.
$4.50 per cubic inch of ABS material used.
$4.50 per cubic inch of support material used.

SPECIFICATIONS

ABSplus colors

- Current Colors Available : White
- Possible Colors : ivory, white, black, red, olive green, nectarine, fluorescent yellow, blue or gray.

Support material:

- Soluble Support Technology (SST)

Build Size:

- 203 x 203 x 305 mm (8 x 8 x 12 in.)

Dimension Template

- Please contact Fabrication Shop

Layer thickness:

- 178 mm (.007 in.) or .254 mm (.010 in.) of precisely deposited ABSplus model and support material

FEATURES

The Dimension Elite is ideal for printing intricate 3D product mockups and functional models of parts. Capable of packing multiple models in the printer's build envelope using tough ABSplus™ Thermoplastic.

Using ABSplus™ production-grade thermoplastic, the Elite prints models from the bottom up with precisely deposited layers of modeling and support material. Soluble Support Technology. There's no waiting for models to "cure" — they're hard right out of the printer. A water-based solution removes the support material to complete your detailed design. Then models can be drilled, tapped, sanded and painted.

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NEW MATTER

FILE SUBMISSION
http://www.arch.ttu.edu/3dprinter/

COST

$3.00 setup fee.
$0.05 per gram of material used

SPECIFICATIONS

Printers Available: 4

Build Materials :

- PLA + (Polylactic Acid + enhancers)
  - current colors available: Cool White and Black.
  - Possible Colors : Blue, Brown, Gold, Gray, Green, Light Blue, Magenta, Orange, Peak Green, Pine

- Green, Pink, Purple, Red, Silver, Skin, Warm White, Yellow (Please email for color inquiries).

Print Dimensions: 6” x 3.75” x 5”

MAX Z Axis Resolution - 0.100mm (0.004 inches)

Print Tolerance - x and y axis +/- 1% of object dimension or +/-0.2mm(0.008 inches)

Print Speed - Maximum 80mm per second

Dimension Template

- Please contact Fabrication Shop

FEATURES

Print complex, fully functional, colored parts and models from 3D CAD files. The New Matter is a full-function 3D-Printer bringing fast and detailed prototyping to our field of study.

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ZCORP POWDER PRINTER

FILE SUBMISSION

- http://www.arch.ttu.edu/3dprinter/

COST

$3.00 set up fee.
$1.00 per job for print head use.
$2.00 for each hour of printing, rounded to the minute
$2.00 per cubic inch of powder material used.
$0.25 per ml ($3.50 per cubic inch) of binder used.
Curing options
Curing will be performed by user. Instruction can be provided by staff member.
Curing Solutions: Cyanoacrylate (Ultra Thin), Varnish Spray, Paint Coat, etc...

SPECIFICATIONS

- File Formats for Printing (to open on Rhino and/or ZPrint): 3dm, stl, vrml, ply, 3ds, zpr
- Equipment Dimensions: 122 x 79 x 140 cm (48 x 31 x 55 inches)
- Resolution: 300 x 450 dpi
- Minimum Feature Size: 0.15 mm (0.006 inches)
- Vertical Build Speed: 20 mm/hour (0.8 inch/hour)
- Build Size: 203 x 254 x 203 mm (8 x 10 x 8 inches)
- Layer Thickness: 0.089 - 0.102 mm (0.0035 - 0.004 inches)
- Number of Jets: 304
- Automation: Basic (automated setup and self monitoring / automated powder loading / snap-in binder cartridges / intuitive control panel)
- updated Spring 2014

Dimension Template

- Please contact Fabrication Shop

MATERIAL

- High-performance composite material makes strong, high-definition parts
- Color: Monochrome (white)
- Choose from a range of finishing options to meet your needs, from resin for ultra-strong functional prototypes to water for creating concept models quickly, safely, and very affordabe
- ZPrinter parts can be sanded, drilled tapped, painted and electroplated, further expanding the options available for finished part characteristics

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FORM LABS 2 RESIN PRINTER

FILE SUBMISSION

- http://www.arch.ttu.edu/3dprinter/

COST

$5.00 setup fee.
$.30 per ml of resin used.

SPECIFICATIONS

Printers Available: 2

Resin colors
- Current Colors Available : White, Black, Clear

Build Size:
- 145 x 145 x 175 mm (5.7 x 5.7 x 6.9 in.)

Dimension Template
- Please contact Fabrication Shop

Layer thickness:
- .025 mm (.001 in.) to .100 mm (.004 in.) of precisely deposited Resin

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CNC - FABRICATION LAB

FILE SUBMISSION

- http://www.arch.ttu.edu/cnc/

COST

- Machine use: $4 per hour
- Tooling Cost: Based on percentage of wear (EX: 10% of 40$ = Carbide tool on foam) depending on material type.
- Set up Fee: $5
- Material: cost as per type
- see MATERIALS page for a list of available materials

SPECIFICATIONS

- Travels:
  - X Axis - 2540 mm (100 in.)
  - Y Axis - 1321 mm (52 in.)
  - Z Axis - 203 mm (8 in.)
  - Spindle Nose to Table (~ min) 76 mm (3 in.)
  - (~ max) 279 mm (11 in.)

- Table Size:
  - Length - 2438 mm (96 in.)
  - Width - 1219 mm (48 in.)

- Spindle
  - Max Rating: 8.9 hp (6.6 kW)
  - Max Speed: 500 - 24000 rpm
  - Max Torque: 3.85 ft-lb (5.22 Nm)
  - Drive System: Integral Motor
  - Taper: ISO 30

- Feedrates
  - Rapids on X : 50.8 m./min. (2000 in./min.)
  - Rapids on Y : 50.8 m./min. (2000 in./min.)
  - Rapids on Z : 15.0 m./min. (590 in./min.)
  - Max Cutting : 25.4 m./min. (1000 in./min.)

- Tool Changer (opt)
  - Type: Carousel
  - Capacity: 10