

Fab Print Room Orientation

This document outlines the necessary steps for those who are to be trained on 3D printers in the TSD FAB PRINT ROOM. This training plan must be completed prior to gaining authorization to operate and maintain our various TSD 3D printers. This orientation plan does not implicitly grant authorization to members who satisfactorily complete it. It only allows said team members to be designated as authorized operators of specific printers as seen fit by our leadership.

Day 1

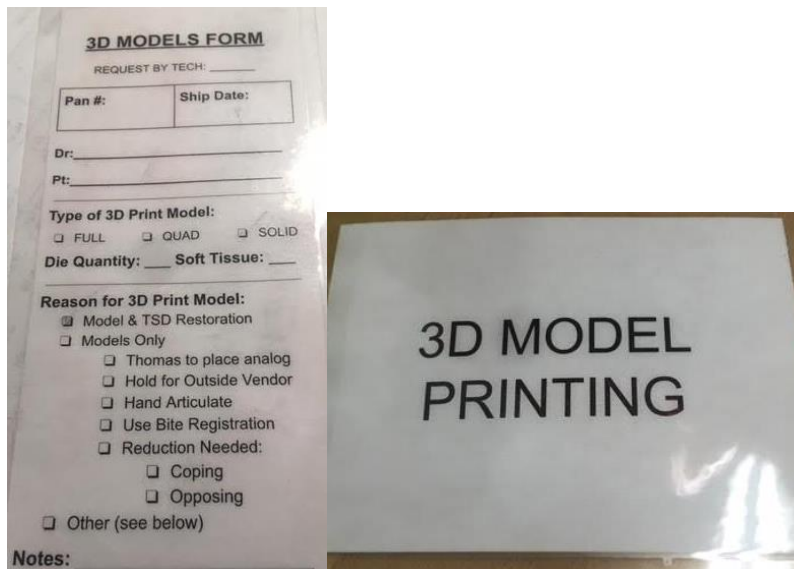
Background and Basics

[MIT 3D Print Video](#)

Physical Orientation in TSD FAB 3D Print Room

General talking points –

Basic flow of print jobs in and out of our room



The image shows a '3D MODELS FORM' on the left and a sign on the right. The sign is white with black text that reads '3D MODEL PRINTING'. The form is titled '3D MODELS FORM' and contains several sections for data entry, including 'REQUEST BY TECH:', 'Pan #:', 'Ship Date:', 'Dr:', 'Pt:', 'Type of 3D Print Model:' (with checkboxes for FULL, QUAD, and SOLID), 'Die Quantity:', 'Soft Tissue:', 'Reason for 3D Print Model:' (with checkboxes for Model & TSD Restoration, Models Only, and Reduction Needed), and 'Notes:'. The form is partially obscured by a bright light source, creating a glare.

Kinds of prints –

Models

Wax Rims

Custom Trays

Frames

Surgical guides

Introduction to each printer type and make in our room

FFF - Creality CR10

SLA - Formlabs Form2

SLA - Kulzer Cara Print 4.0

SLA - envisionOne cdlm

Material Jetting - Stratasys Objet

SLA - Carbon M2 – coming soon

Overview of processes of each printer

Creality CR10 – Design, nest/convert, print

Formlabs Form2 – Nest, print, post process / cure

Kulzer Cara Print 4.0 – Nest, print, post process / cure

envisionOne cdlm – Nest, print, post process / cure

Stratasys Objet – Nest, print, post process

Carbon M2 – coming soon

Basic terminology

Supports and associated dimensions / variables

Base / raft and associated dimensions / variables

Materials and associated characteristics

Quiz

Day 2

Detailed Training on simple post processing / curing

Clean as you go process fundamentals

Formlabs Form2

Kulzer Cara Print 4.0

Stratasys Objet

envisionOne cdlm

Quiz

Day 3

Basic daily maintenance / upkeep on printers / machines

Utilizing maintenance and equipment board basics

Formlabs Form2

Kulzer Cara Print 4.0

Stratasys Objet

envisionOne cdlm

Clean as you go process review

Weekly maintenance / upkeep on printers / machines

Formlabs Form2

Kulzer Cara Print 4.0

Stratasys Objet

envisionOne cdlm

Quiz

Day 4

Basic setup, nesting, and misc.

Formlabs Form2

Kulzer Cara Print 4.0

Stratasys Objet

envisionOne cdlm

Creality CR10

Clean as you go process review

Common defects and mitigation

Proper documentation of defects and troubleshooting efforts

Quiz

Day 5

Live run and final test.

Envisiontec cdlm and/ or Objet certification tests upon management request.