

## 3D Printer Training

### Pre-training learning?

Safety & Health  
Particle & VOC emissions

Layers, Support, & Infill

Strength via Walls vs Infill

### Example Print

AMIL Keychain

### Tour of AMIL 3D Printers

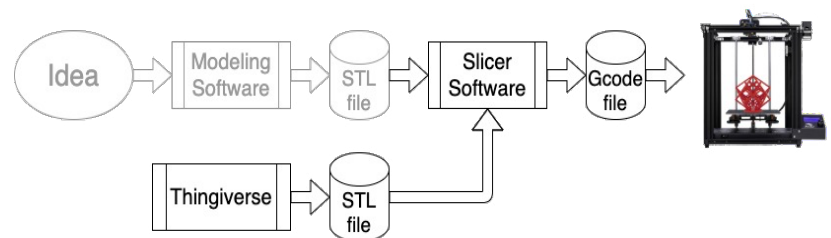
### 3D Printer Operations

Vernacular

Extruder, Hot End, Nozzle, Bowden Tube, Build Plate, Stepper Motors, Frame,  
Part Cooling Fan,

Bed Leveling

Load/Unload Filament



Slicer (Ultimaker Cura)

Filament Type, Layer Height, Infill, Top/Bottom Layers, Walls, Bed Adhesion,  
Supports

Removing Prints

Drying Filament

### Troubleshooting Basics

- Dry filament?
- Poor first layer? → Clean bed, relevel, adjust Z-offset
- No extrusion? → Check nozzle temperature and filament path
- Stringing? → Increase retraction or lower temperature
- Warping? → Improve bed adhesion or add a brim
- <https://www.simplify3d.com/resources/print-quality-troubleshooting/>

### Responsible & Ethical Use

No Weapons or Harmful Items  
Copyright Violations