work in progress

3D-Printing Area

Mentors	fantawams & metalgamer

Material in the 3D-Printing Area

- Ultimaker 2
- PLA
- ABS
- PETG

Let's talk about 3D-Printers. 3D-Printers are amazing machines, which you can use to create parts, pieces and everything you can imagine. The only issue here is, is it printable and do you have the right material for it.

Before starting to print, we should take a look at the printer itself.

The 3D Printer

If you strip down the 3D-printer to the most basic parts, it consist only of

- the nozzle
- the printbed
- filament holder

1. Before printing you should always clean the printbed.
2. Make sure the printbed is well levelled.
3. Every 40 print hours, oil the axes of the printbead.
4. Every 100 print hours, clean the filament holder.
5. Every 120 print hours, oil the printbed axe.

3D-printing has a huge dependency on the room temperature. So if your room has around 30°C, simply postpone it. You have a 70/30 percent chance, that the print will simply ends in failure or that he refuses to print.

The same goes of course for a room, which is to cold. Let's say around 10°C. You would need to change your material settings to get a somewhat good print and the adjusting will take at least 1 hour.

The ideal room temperature is around 20°C. A printer cover, which leads to a more stable print room temperature, can help a great deal in improving. In case the printer posses a print cover, you need to adjust the material settings too.

Filament

The filament is very important as it is your print material. It's quality should be conserved as far as possible. We have boxes to stock all the material which is not used. If you change the material, be sure to put them into one of these boxes.

Depending for which purpose you will print your part, you have to consider the material attributes. **Example:** PLA is very easy to print, when it has cooled down. it will become very though. on the other side it is not very resistant to water. ABS on the other hand is resistant to water, but difficult to print. Also it is not very heat resistant.

Most suppliers, like colorfabb have detailed information, which print settings you should use for printing and of course the attributes of the material.