

WELCOME TO THE SPOT !



Sébastien Martinerie

3D Printing Coach

Monday, Wednesday, Thursday
9am – 5pm

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GENERAL RULES

SAFETY

- > General safety rules of the building
- > Specific to 3d printing :

- HOT surfaces !

Don't touch the printers while running or before proper cooling (hotend + printbed)

- Tie your hair

GENERAL RULES

RESPECT THE TOOLS AND OTHER USERS

- > No food, no drink
- > Keep the place clean
- > NO DUST !
- > Tell us if something is broken or missing

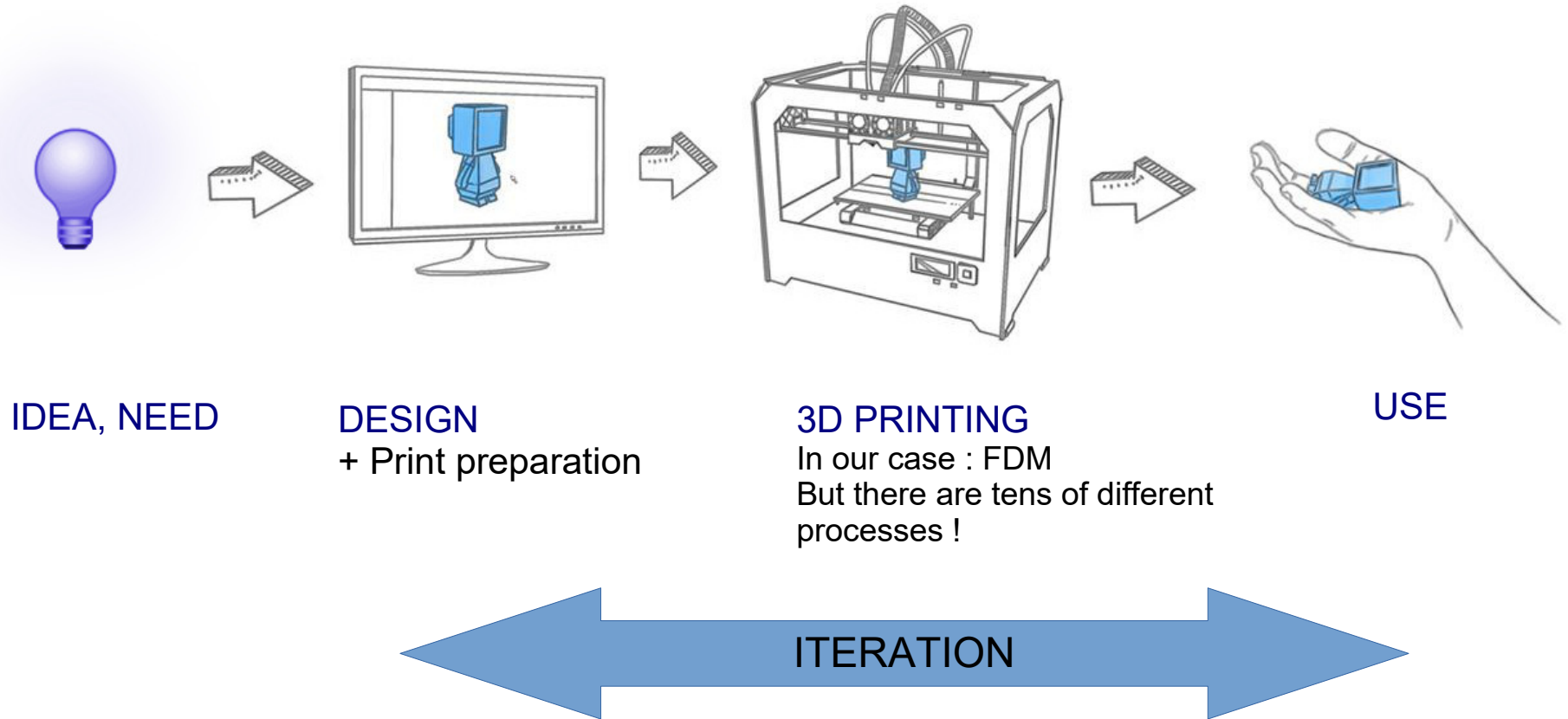
- > Help the others
- > Share the printers (one printer per project)

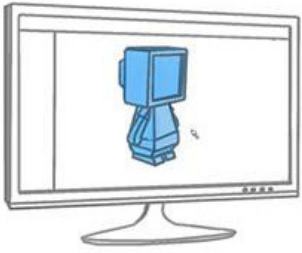
GENERAL RULES

RESPECT THE TOOLS AND OTHER USERS

- > Ask for help (coach, assistant, etc.)
- > Don't use other materials or tools than available here (no glue, acetone, etc...)
- > Printing for the first time ? You have to be trained and supervised by someone (assistant or coach)

PROTOTYPING WITH 3D PRINTING





DESIGN

Using a CAD software

Think about your manufacturing process.

Visualize the «layer by layer» process

Know your machine and its limitations. Such as maximum part dimensions : 21 x 21 x 25 cm

Think about how you will use the part.

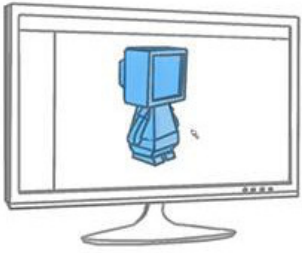
How will it be assembled ?

What are the mechanical, thermal, chemical constraints ?

Design tips for FDM 3D Printing :

<https://wikifactory.com/+wikifactory/stories/ultimate-guide-how-to-design-for-3d-printing>

Export your part in .STL format



PRINT PREPARATION

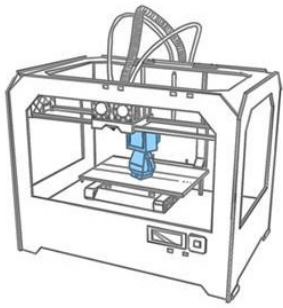
Use **ONLY** Prusa Slicer

[Download](#) and install the software. In the configurator :

Choose the printer > Prusa FF > i3 MK3S > 0.4 mm nozzle
Choose the filaments > PLA > Prusament PLA and Generic PLA
> PETG > Extrudr PETG and Generic PETG

> Import your part and prepare your printjob.
> Choose the right orientation and support structure.
> Choose the printing and material parameters ([use standard parameters](#))
> Slice your part and export the G-Code on the SD Card (USB adapters available)

> Ressources : https://help.prusa3d.com/category/prusaslicer_204



3D PRINT

- > Check the filament :
 - > Right material ? Same as your Prusa Slicer parameters ?
 - > Enough material ?

- > Clean the printbed :
 - > Remove it
 - > Clean with sponge and soap
 - > Rinse it and dry it well
 - > Don't touch the surface anymore

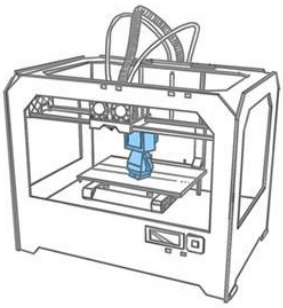
- > Install the printbed properly

- > Insert your SD card > Print from SD > Choose your file

- > Admire your part being printed ! At least during the first layer. Tell us if something's wrong

- > Come back as soon as your print is done.
Remove the printbed, remove your part and clean the printbed





3D PRINT

PLEASE

- > Call your coach before your first print.
- > Call your coach or an assistant if you need to change or load a filament.
- > Call your coach or an assistant if you need to fine-tune the parameters or the printer.
- > Keep the space and equipment as clean as possible.
- > Share your experience !

OTHER RESSOURCES

You can find A LOT of ressources, videos and tutorials on Internet.

Here is a small selection :

General information about 3D printing :

<https://3dprintingindustry.com/3d-printing-basics-free-beginners-guide#03-technology>

EPFL Video :

<https://tube.switch.ch/videos/f8ac7f29>

PROTOTYPING WITH 3D PRINTING

HAVE FUN !

