



POLITECNICO
MILANO 1863

3D printing: file preparation

Labora model making

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Scale of the model and geometries

The model, or model parts to be printed, must be drawn with the actual **measurements already reduced to the model scale and in mm units**.

Remember that to obtain a correct print, **the volumes must be full and the surfaces closed**.

If the surfaces are not closed, use the « **close surfaces** » or « **_cap** » command (Rhino).

Exporting the file

The export format for slicing is **.stl**, preferably *binary* as it is a lighter format.

Once exported, **upload the model to a USB stick** and ask your tutor or a member of staff to check the model using **slicing software** (Cura, Orca Slicer, or Flashprint).

Printing materials

Printing errors, any **power outages**, or **machine malfunctions** that could block printing, will result in the **loss of the material** printed up to that point.

Laboratory filaments

If you do not want to purchase an entire roll of material, **you can use the filaments available in the laboratory**. In this case, **the cost of the material is calculated by the slicing software during file verification**.

Payment is made by purchasing **tickets worth €8, which can be requested from Poliprint**.

Personal filaments

If you want to print with materials that we do not have, we ask you to purchase the printing filament yourself and choose from the following brands: **Ultimaker, 3D Italy, Formfutura, Eumakers, and Color Fabb**.

Ask the staff to find out **the specific filament diameter** for the machine you will be using.

Once printing is complete, the material will be returned to you.



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