



# European Project Semester

## PROJECT OUTLINE

**Project dates:** March – June 2020

**Title:** Retrofit of a 3D printer

**Project activity areas:** 3D Printing FDM,  
Mechanical design, Automatization.

**Keywords:** 3D Printing machine,  
Design, Catia V5, Realization

**Tutor's name and coordinates**

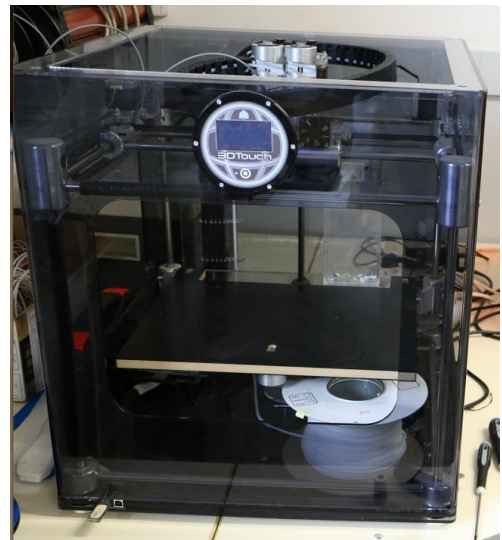
Client – End-user: ENIT  
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**Project origin**

Retrofit of an old 3D printer at ENIT

**Project technical background:**

ENIT has been using a commercially available 3D printer for more than 10 years.  
This machine is a "3D Touch" cartesian with 2 heads.  
(See photo opposite)  
Thanks to this machine, we have been able to realize multiple projects such as the construction of ten 3D printers which are used as part of student projects.  
This machine is a "3D Touch" cartesian with 2 heads.  
This machine is an older generation, the parts are very heavy which is not compatible with high speeds.  
Electronics is also out of date compared to what exists today.  
The project is therefore to build from the existing structure a powerful 3D printer, equipped with the latest FDM printing technologies.



**Studied topics:**

- Definition of requirements and technical specifications
- Analysis of the existing machine and reusable parts
- Search and purchase of necessary components
- Design and realization of the new parts of the machine
- Cabling, debugging and starting the machine
- Print test parts