**European Project Semester**

**PROJECT OUTLINE**

**Project dates:** September 2019 - December 2019

**Title:** Optimization and realization of 3D metal printed extrusion die, for artistic ceramics.

**Project activity areas:**
*Mechanical design, 3D Printing*

**Keywords:** Design, ALM, Ceramic Extrusion, Artist

**Tutor’s name and coordinates**
Client – End-user: ESA (Ecole Supérieur d’Art de Tarbes): Nicolas Daubanes
ENIT Technical Supervisor + contact: Francois GRIZET: francois.grizet@enit.fr
Lionel ARNAUD: lionel.arnaud@enit.fr

**Project origin**
Creation of extruded ceramic sliced fruits for an artistic exhibition of ESA Tarbes.

**Project technical background:**

The Art School of Ceramics is planning an exhibition of ceramic extruded clay fruits.

First prototypes are shown here.

Numerical and real prototypes have already been investigated by a previous EPS team, the objective is now to improve the design and to 3D metal print a die.

The project will be realized in collaboration with the artists, i.e. students and professor/artist Mr. Daubanne, of the ESA and the EPS team, according to the ideas and the technical possibilities of the extrusion process.
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**Studied topics:**

After having redefined and optimized the shape to be created, in collaboration with the ESA artists, the objective of this project is 3D metal print and test the die using Renishaw AM400 3D printer or ProX300 printer.

In addition, a mechanism will be designed for automatically cutting slices of the extruded shape.

3D metal printers used