

## Aeronautical structures (MECA0028-1)

### Project for Erasmus students: Acrobatic aircraft

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## **The project**

The structure of the wing of the semi-aerobatic aircraft studied during the Aircraft Structure class shall be designed. Given the provided information, a taper of 0 is to be considered. The work is either individual or achieved by a group of 2 students.

Each student/group shall deliver a report –and a code—related to the following points.

### **A/ Structural loads:**

Using the maneuver envelope and aerodynamic loads evaluated during the class, the structural loads at wing root shall be computed for the different envelope points.

### **B/ Structural design:**

Using the material of the analytical analysis presented during the class, the structure of the wing shall be designed based on the results of A/.

### **C/ FEM (for groups 2 students only)**

The results of B/ shall be assessed using a FEM model

### **D/ Deadline**

**Report with all the details to be handed by 30th of May 2023.**