

SAE Aero uOttawa

SAE Aerospace University of Ottawa

9/9/2017

[Edition 1, Volume 2]

Progression



There are 7 sub teams a project manager and a technical inspector that makes up the team for SAE Aerospace Club uOttawa. The 7 teams include Finance Team, Engine Team, IT Team, Landing Gear Team, Body Team, Marketing and Sponsorship Team, and Design Team. Each team has around 3 people on the team and we are looking forward to expand our team in the next few months.

As the months passed many changes have been made to the design and more will be changed as discussions with professors at University of Ottawa is being held with members of the club. In order to enhance the design of the plane.

As we look further into the design changes. The left picture down below is the previous design and the right picture is the improved design. So far the changes made for the body section include the L-Brackets added on, to secure the wings. There are four on each wing top and bottom. And three on the two rudder pieces to secure them in place. The inside of the fuselage is cut out to let passengers, cargo, and engine to fit in.

Moreover when it comes to landing gear every part is changed to their actual material. Landing gear being made out of aluminum and wheels being out of plastic and a cylinder in between wheels to secure them to the aluminum. The aluminum will be glued to the planes fuselage using foam as relieving some pressure and epoxy.

As for interior cabin 10 tennis balls are made to fit in the fuselage and at the back is the cargo compartment that has 25 cm of space. The tennis balls represent the passenger on a plane. Front of the plane cabin has the engine, servos, and battery attached. And cables run along the interior of the plane to connect the servos together and to transfer power from engine to propeller.

In the next few months we will finalize the design and finish up the calculations for Center of Gravity and where is the best place to choose to be the center of gravity from the calculations made. And fluid flows over the wings as well as wing tunnel testing with a 3D printed prototype.

