2014 SAE AERO DESIGN

FIU

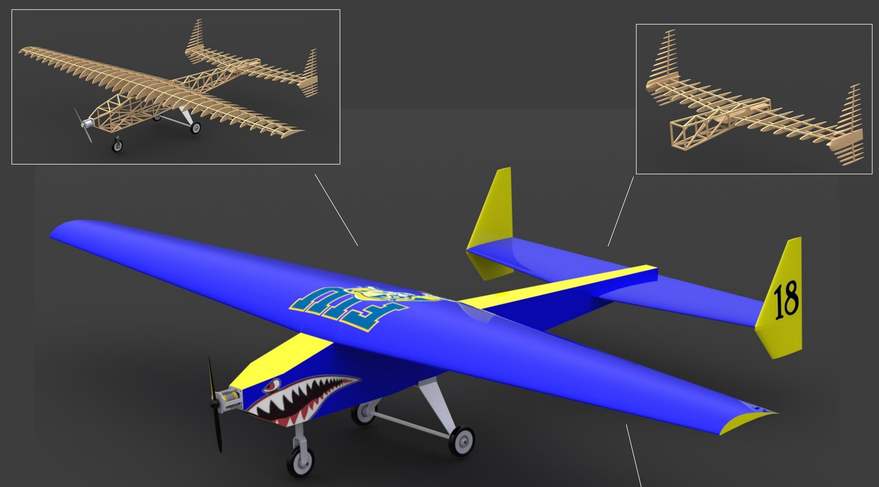
SAE®

Problem Statement

Design a remote controlled cargo aircraft and predict the aircraft's payload capacity while complying with the requirements of the competition.

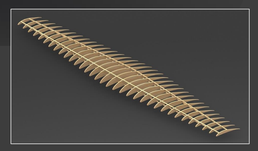
Objectives

- Analyze design alternatives to select the best option based on cost, manufacturing time, loads, etc.
- Engage in current research in aerodynamics by performing computational fluid dynamic analysis, wind tunnel testing, and finite element analysis.
- Improve airplane design to obtain results that can increase efficiency in aircrafts.



Conceptual Design

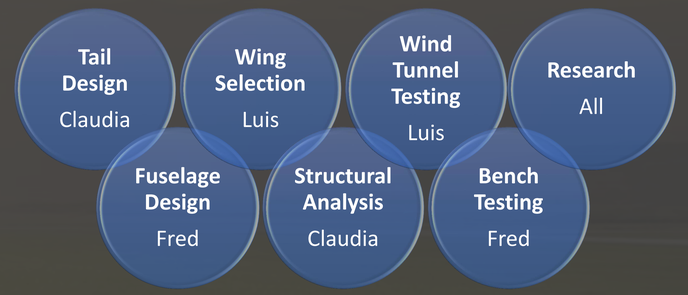
- H-TAIL
- TAPERED WINGS
- HIGH WINGS



Requirements

- Maximum combined length, width, and height of 175 inches.
- Maximum weight of 65 pounds
- Travel through a predetermine path
- Land and takeoff within a limited runway
- Use a single electric motor
- Have a closed payload bay

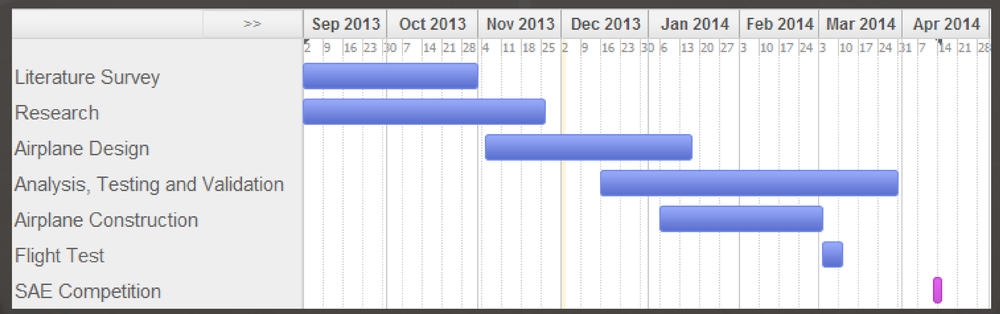
Responsibilities



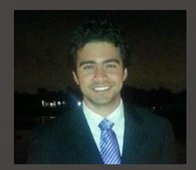
Motivation

- Chance to implement engineering knowledge acquired in a real life scenario
- Represent FIU at a worldwide event
- Passion towards the aviation industry

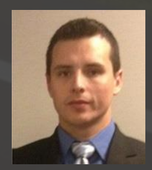
Timeline



Team Members


Fred Al-Abdala


Claudia Eyzaguirre


Luis Vallejos

Advisor: Dr. Andres Tremante