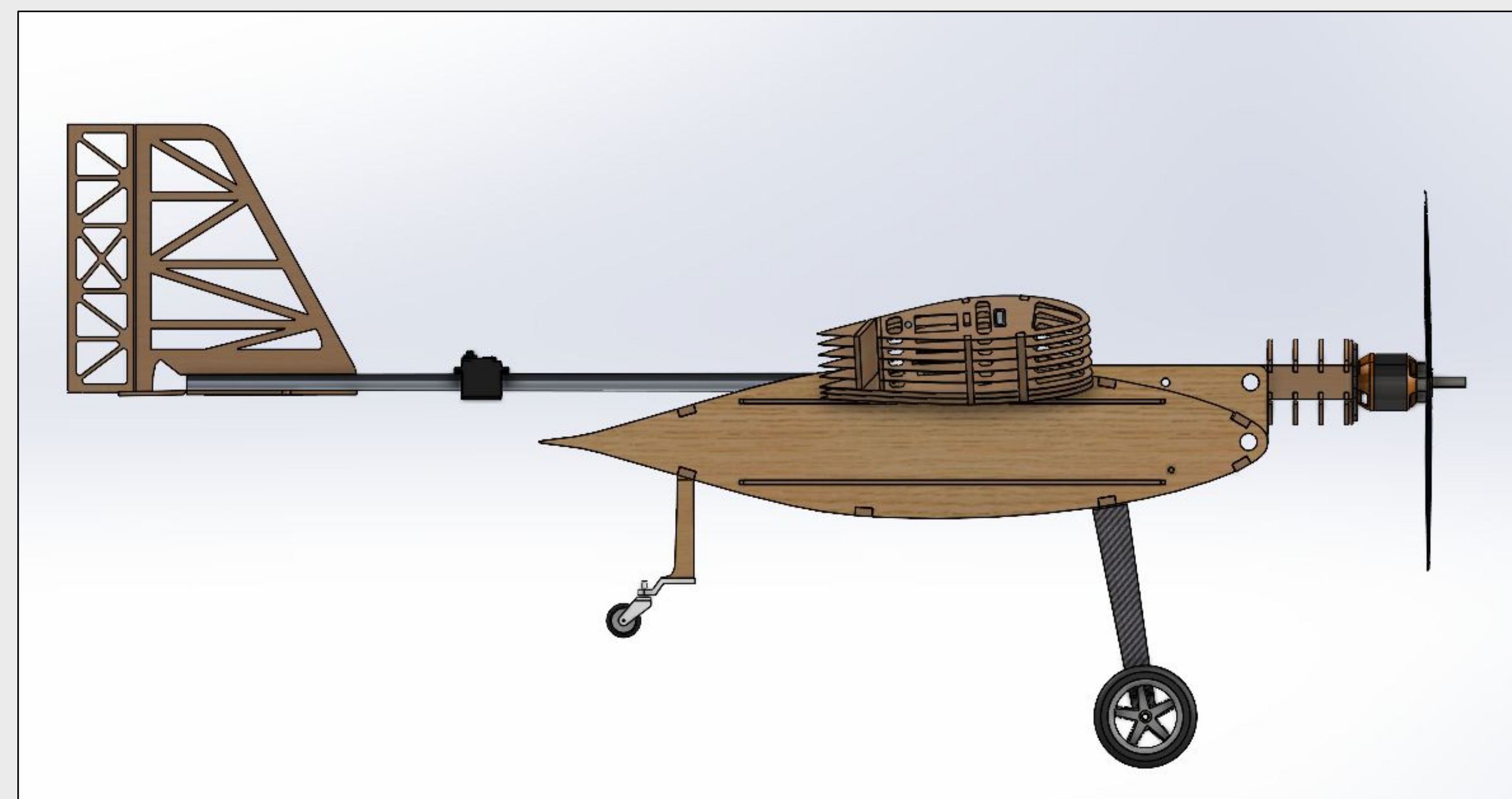


## SAE MICRO AERO DESIGN WEST COMPETITION

- **Competition Location:**  
April 14-16<sup>th</sup> 2023 in Fort Worth, Texas
- **Mission Profile:** Cargo Plane Payload
- **Stage 1:** Take off from 4 x 8-foot-long table 2 feet above the ground
- **Stage 2:** Fly 300 feet in a straight line
- **Stage 3:** Circle around flight circuit
- **Stage 4:** Land within 200 feet and remove cargo within one minute
- Mission is conducted 3 times and flight score of each attempt is combined.
- Flight score is dependent on weight carried and time of flight during stage 2



# MICRO AERO DESIGN WEST COMPETITION TEAM



### DESIGN PARAMETERS

- 36-inch wingspan
- 5 lbs. Maximum Take-Off Weight (MTOW)
- 4-cell battery
- Symmetrical airfoil fuselage
- Single tail boom and Dihedral wing control surfaces
- Optimized for a lightweight, fast, and short-takeoff aircraft

### TECHNICAL SKILLS

- Through this capstone project you could learn the following skills necessary for aircraft design:
- Monokote
- Laser cutting balsa wood ribs
- Solidworks CAD models
- Flight mechanics and calculations
- Professional technical report writing

## HISTORY AND TEAM COMPOSITION

- This is the first year Oregon State University's AIAA chapter is participating in the SAE Micro Aero Design West Competition
- This competition features several fixed-wing aircraft teams from around the globe challenged with a new mission every year.
- This multidisciplinary team is tasked with designing, manufacturing, and flying several fixed-wing aircraft to prepare for competition
- These experiences prepare members for future careers in the Aerospace industry with the support of AIAA mentorship, NASA Grant funding, and other College of Engineering resources.

