

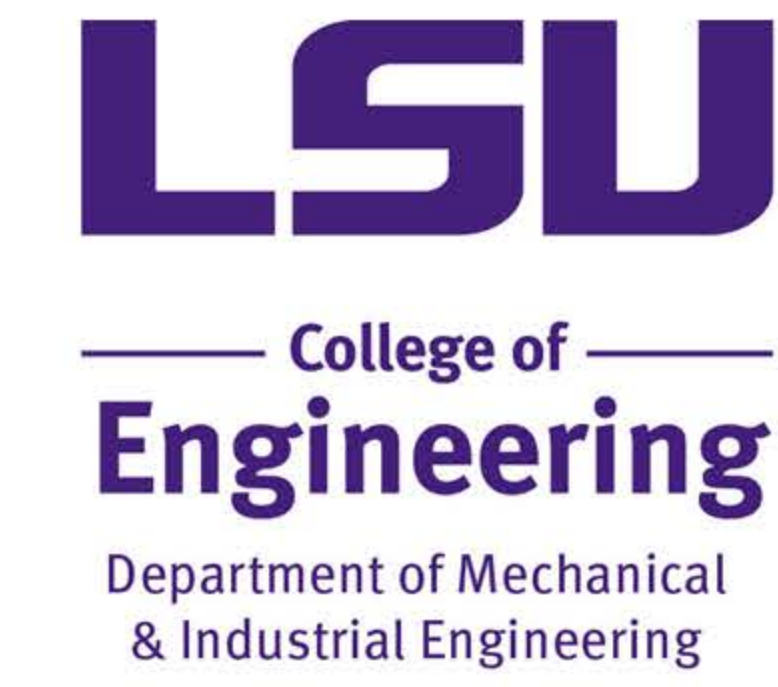
ME, ECE, BE Capstone Design Programs

Team #21: Sons of Icarus SAE Aero Micro Class Competition Team



Michael Basham, Stephen Capella, Ryan Cenac, Daniel Fouquet,
Cade Hoerner, Tommy LeBeau, Ahmed Shawer

Jack Rettig



Objective

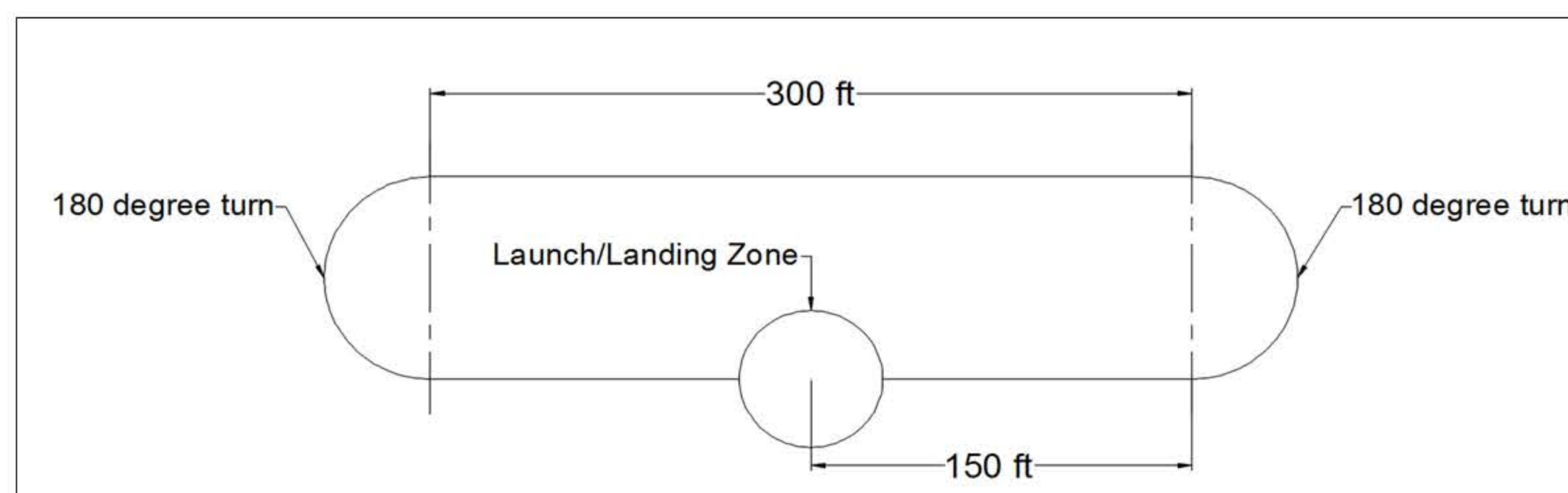
To design an aircraft that maximizes its payload fraction, minimizes its storage space, and assembles quickly and easily out of its container in order to compete in and win the 2016 SAE Aero Micro Class West Competition that takes place in Van Nuys, California on April 22, 2016.

Scoring Breakdown



2016 Design Goals: Tube Length = 10", PF = 0.8, Assembly Time = 120 sec

Course Layout

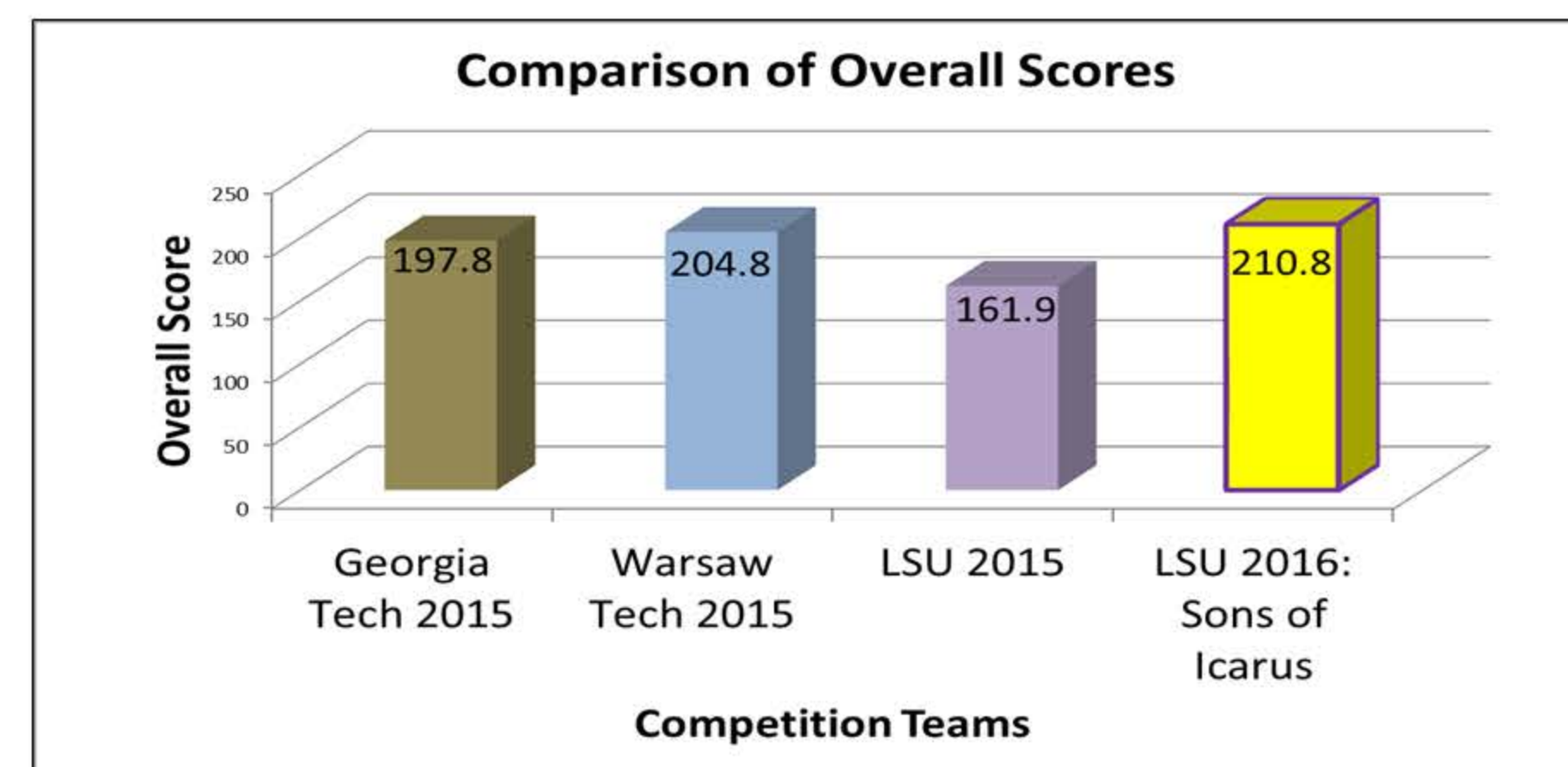


Timeline

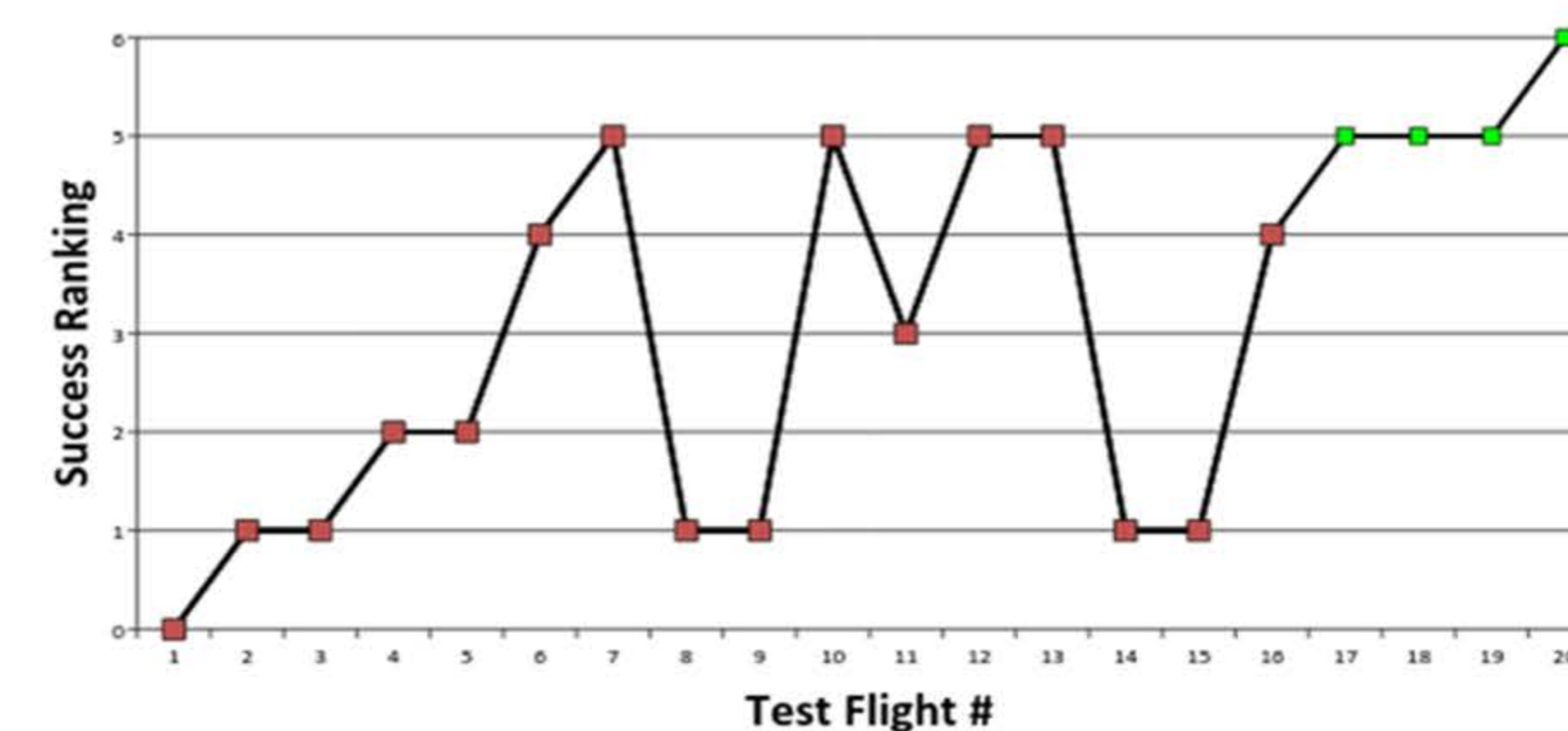
	September	October	November	December	January	February	March	April
Aircraft Design								
Conceptual Generation								
Preliminary Design								
Finalized Design								
Manufacturing								
Component Development								
Building								
Final Aircraft Build								
Testing								
Propulsion								
Strengths of Materials								
Final Aircraft								
Design Report								
Compiling of Design Information								
First Draft								
Finalized Report								

Report Due: March 7th | Competition: April 22nd-24th

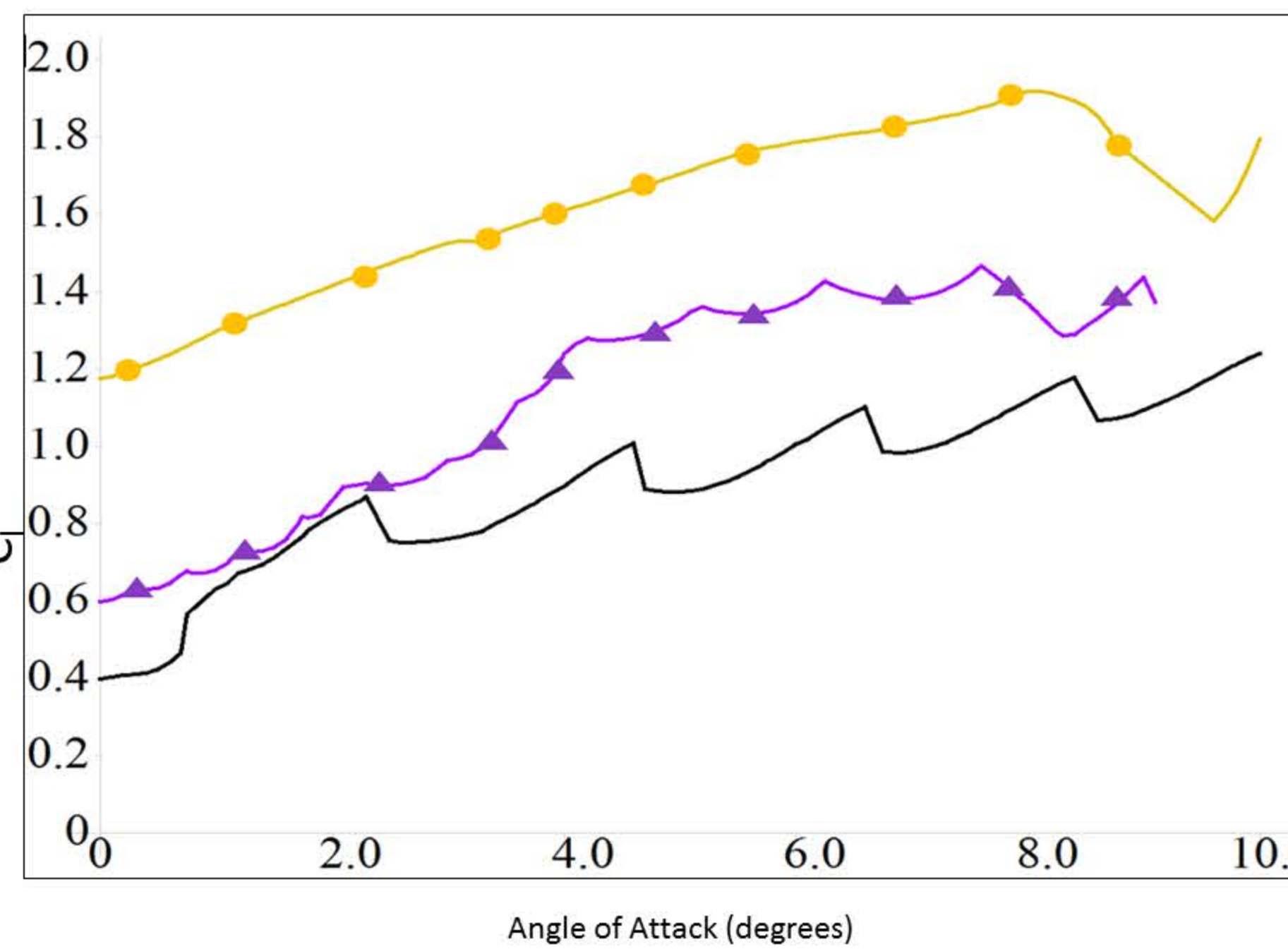
Last Year's Competition vs Projected Design



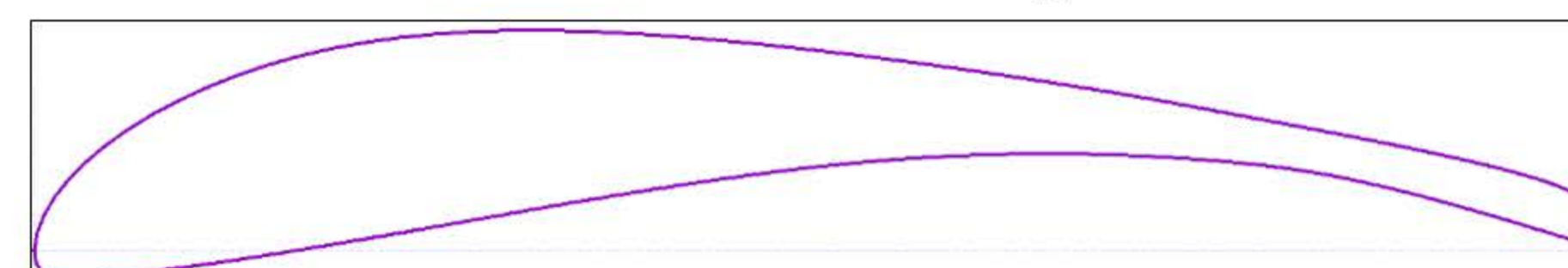
Success Ranking vs Test Flight Number



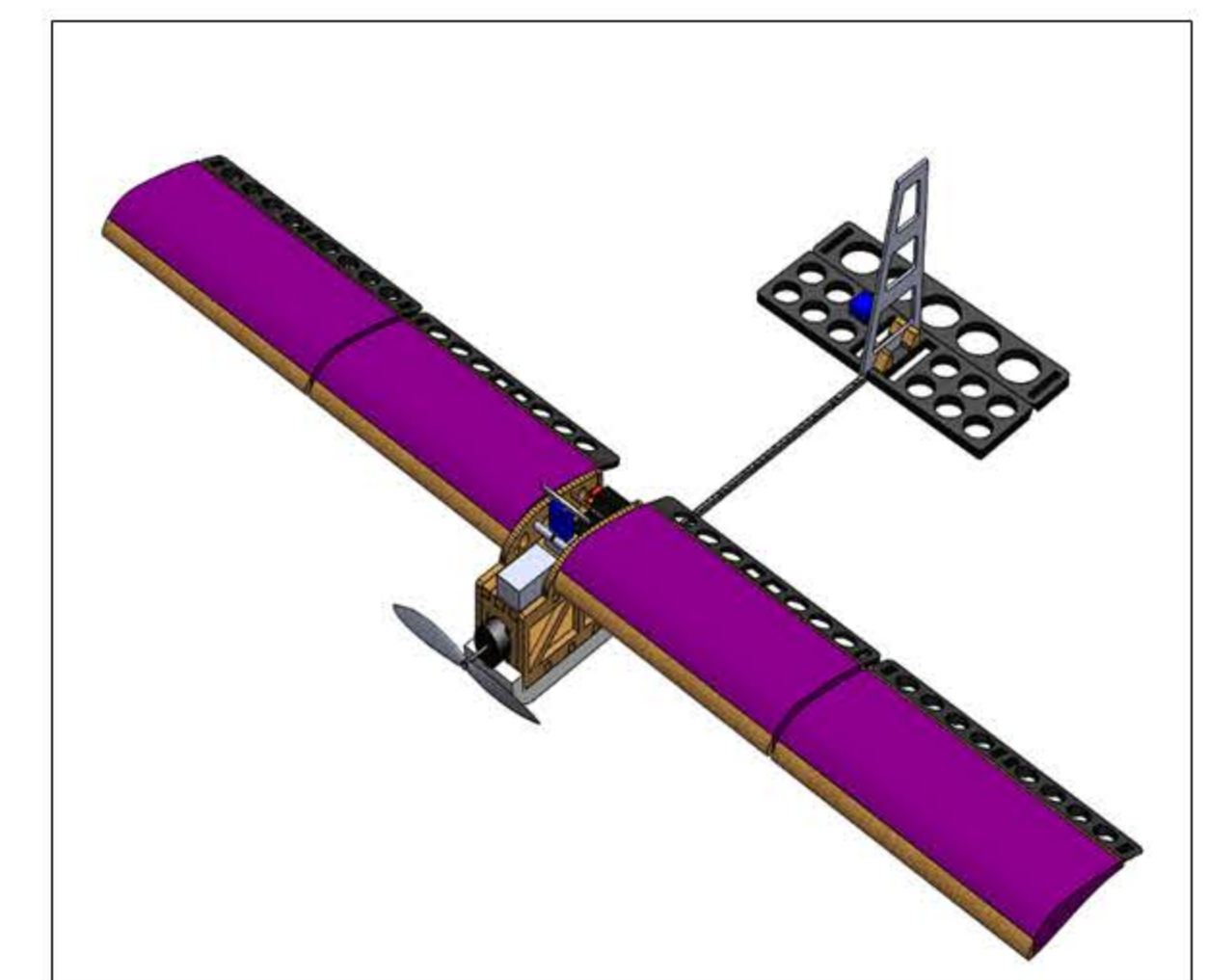
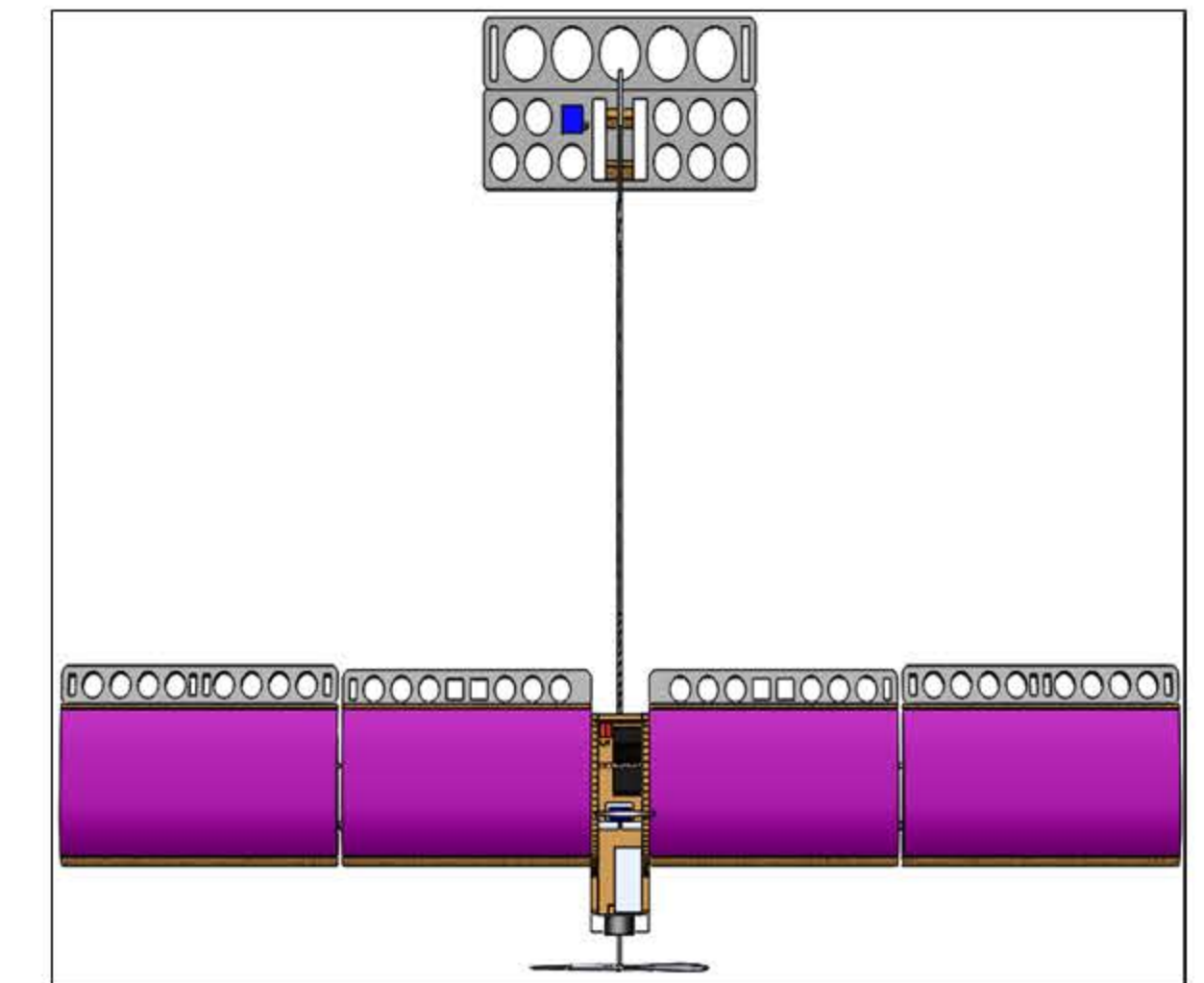
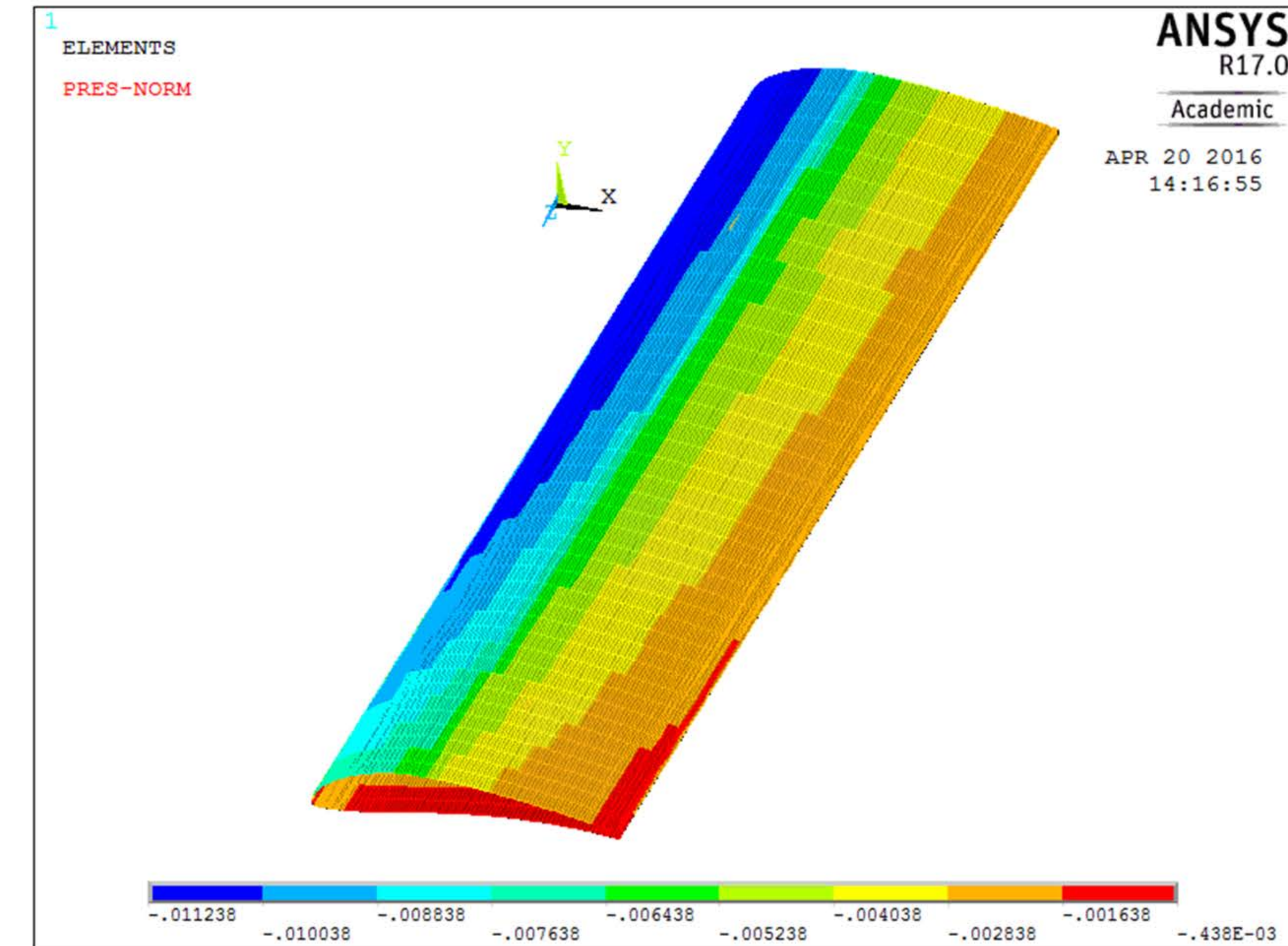
Lift to Drag Ratio vs Angle of Attack



LSU-CD-323 Airfoil

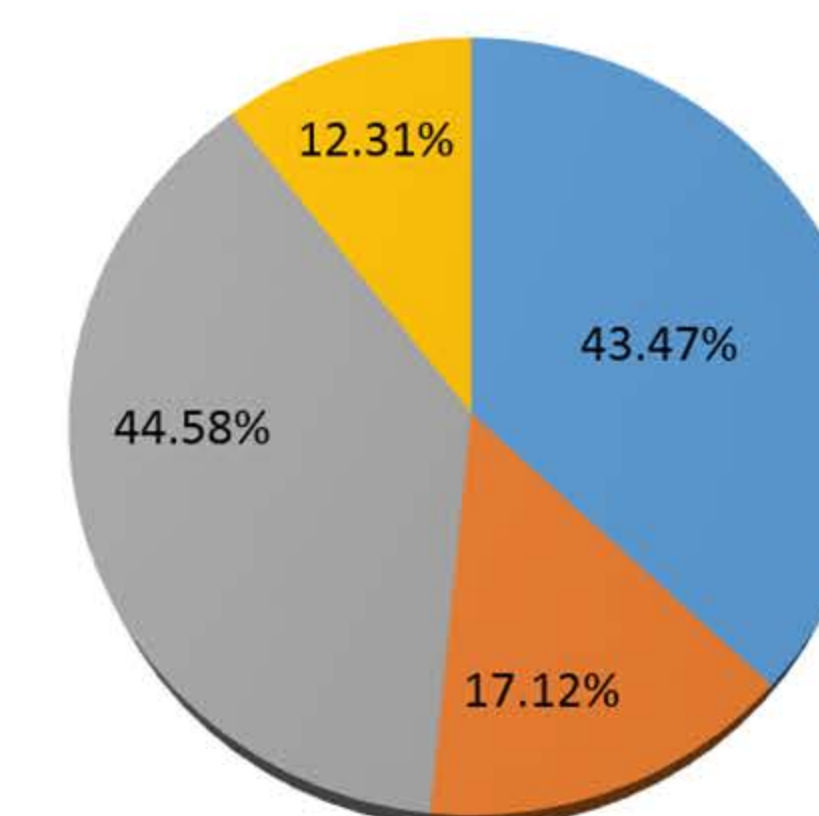


Wing Loading



Competition Results

Budget



Initial Budget	-	\$ 8,000.00
Total Budget	100%	\$ 6,500.00
Team Travel	43.47%	\$ 2,825.50
Pilot Travel	17.12%	\$ 1,113.03
Manufacturing Expense	44.58%	\$ 2,897.54
Competition Fee	12.31%	\$ 800.00
Total Expenditures	117.48%	\$ 7,636.07