**ME 755 Senior Design**

**Fall 2017**

**Project Statement and Design Criteria**

**Team 13**

**Project Name:** SEDS Rocketry Competition

**Team Members:** Reilly Webb

Nicholas Clegg

Kevin Bucher

**Project Sponsor:** Mark McConnell

Mark.mcconnell@unh.edu

UNH

**Faculty Advisor:** Anthony Puntin

**Project Statement:** The goal of this project is to research, analyze, design, manufacture, and launch a reusable, multistage rocket to the highest possible altitude. In addition, we will need to design and build a launch pad durable enough to withstand multiple launches and a static test fire rig to measure specific engine capabilities.

**Design Criteria:**

* Must reach at least 3000 ft above ground level
* Must safely house an altimeter provided by SEDS
* Must be at least two stages, with a parachute landing for both stages
* No part of the rocket can have a velocity of more than 5m/s during the landing process
* Must be easily manufacturable for rapid prototyping
* Must be lightweight, to have a high thrust to weight ratio
* Carry some form of on-board controls (ie. Fin control, accelerometers, guidance system)