

**Sophomore Clinic I – Fall 2008**  
**Grading Criteria for Assignment 1: Design Report on Rocket Project**

Executive Summary	10	
<ul style="list-style-type: none"> <li>▪ Provides key information regarding the project goal and the design approach</li> <li>▪ Provides relevant performance results regarding the design solution</li> </ul>		
Introduction	5	
<ul style="list-style-type: none"> <li>▪ Identifies the purpose of the document</li> <li>▪ Provides an overview of the content and organization of the document</li> </ul>		
Definition of the Design Problem	10	
<ul style="list-style-type: none"> <li>▪ Defines goal of the project in terms of optimization</li> <li>▪ Identifies and explains parameters</li> <li>▪ States constraints</li> </ul>		
Technical Description of Final Design	15	
<ul style="list-style-type: none"> <li>▪ Provides complete and logically organized technical description of rocket</li> <li>▪ Uses specific dimensions, precise language, and correct terminology</li> <li>▪ Identifies the function of each component and its effect on the performance of the rocket</li> <li>▪ Provides final performance results</li> <li>▪ Includes dimensioned figure of rocket that effectively highlights features of the design</li> </ul>		
Parametric Design Process	25	
<ul style="list-style-type: none"> <li>▪ Defines a parametric model for the rocket with three degrees of freedom</li> <li>▪ Discusses choice of fin parameter</li> <li>▪ Includes a figure defining the fin parameter</li> <li>▪ Explains test matrix and procedures for optimizing parameters</li> <li>▪ Distinguishes between design decisions and constraints/assumptions</li> <li>▪ Explains how data were interpreted to identify optimal values</li> <li>▪ Analyzes impact of varying parameters on performance</li> <li>▪ Assesses effectiveness of choice of fin parameter</li> <li>▪ Suggests additional parameters that could be optimized</li> <li>▪ Uses figures and tables effectively to show data that informed design optimization</li> <li>▪ Provides specified data in appendix</li> <li>▪ Refers to and explains figures and/or tables, including appendix material</li> </ul>		
Conclusions	15	
<ul style="list-style-type: none"> <li>▪ Summarizes optimization</li> <li>▪ Provides quantitative comparison of final performance to predictions based on previous experiments</li> <li>▪ Evaluates quality of the final design instance</li> <li>▪ Provides a quantitative comparison of the final design to other instances that were tested</li> <li>▪ Discusses the relative importance of the three parameters in the context of repeatability of the test launches</li> </ul>		
Document Format, Mechanics, Style, Grammar, and Conventions	10	
<ul style="list-style-type: none"> <li>▪ Follows document specifications, including memorandum format</li> <li>▪ Uses clear and concise language</li> <li>▪ Follows conventions of technical style, including tone, tense, and voice</li> <li>▪ Follows appropriate conventions for numerals and abbreviations</li> <li>▪ Uses correct spelling, grammar, and punctuation</li> </ul>		
Documentation (wiki)	10	
<ul style="list-style-type: none"> <li>▪ Shows evidence of collaboration, exchange, and contributions from all team members</li> <li>▪ Documents design project work, including ideas, data, and other requested content</li> </ul>		
<b>Total (40% of final report grade)</b>	<b>100</b>	