

Sophomore Clinic I
Grading Criteria for Assignment 5: Final Design Report on Crane Project

Demonstrates awareness of audience and purpose	25	
<input type="checkbox"/> Provides key information regarding the project goal, the design approach, and the design solution in the executive summary		
<input type="checkbox"/> Employs appropriate technical style and tone for designated audience; uses first-person sparingly and only where necessary for clarity		
<input type="checkbox"/> Includes appropriate level of detail in the body of the report for designated audience and genre; does not assume that reader already understands what is being discussed		
<input type="checkbox"/> Summarizes and evaluates performance results in the conclusion		
<input type="checkbox"/> Includes essential figures and tables of results in the body of the report; includes requested information in appendices and refers to it in the report		
Demonstrates ability to present technical information	15	
<input type="checkbox"/> Provides complete and logically organized technical description of crane, using specific dimensions, precise language, and correct terminology		
<input type="checkbox"/> Uses figures and/or tables effectively to highlight features of the design, including SolidWorks side-view, table of member forces, and table of materials and costs		
<input type="checkbox"/> Uses figures and tables effectively to show data that informed design optimization		
Demonstrates understanding of design practices and ability to apply specific design methods	35	
<input type="checkbox"/> Summarizes project goal and identifies parameters and constraints		
<input type="checkbox"/> Explains basis for choice of truss family and shows at least 2 ideas that were eliminated		
<input type="checkbox"/> Explains procedures for optimizing final design		
<input type="checkbox"/> Describes role of MATLAB in optimization, including how the program was used to determine the optimal truss within the chosen truss family and what steps were taken to verify that MATLAB results were valid		
<input type="checkbox"/> Explains how data were interpreted to make design decisions		
<input type="checkbox"/> Provides a quantitative prediction of the performance of the truss and rationale for the prediction and identifies assumptions made for purposes of analysis		
<input type="checkbox"/> Provides a quantitative comparison of lift results to predictions based on analysis; offers insightful failure analysis if applicable		
Demonstrates ability to follow document specifications and meet requirements	15	
<input type="checkbox"/> Organizes content according to specified subsections and follows appropriate conventions for each (content, tense, grammatical structure)		
<input type="checkbox"/> Follows document format instructions (including letter format, fonts, margins, labeling of figures and tables, and other specifications given in the Style Sheet)		
<input type="checkbox"/> Proofreads and corrects errors (spelling, grammar, punctuation)		
Demonstrates effective communication and teamwork	10	
<input type="checkbox"/> Shows evidence of collaboration, exchange, and contributions from all team members (wiki and individual contributions section of report)		
<input type="checkbox"/> Documents design project work, including ideas, data, and other requested content (wiki)		
Total		