

## 2021 CoE CELEBRATION OF ENGINEERING DESIGN COMPETITION

### WRITTEN REPORT SUMMARY RUBRIC

INDICATOR	SCORE	3–EXCELLENT	2-GOOD	1-ADEQUATE	0-INADEQUATE
Identification of the need or problem or opportunity		Concise, clear description of the need or problem or opportunity; Addressed all relevant content areas.	Reasonable description of need or problem or opportunity; most relevant content areas were addressed.	Described the need or problem or opportunity in vague terms; addressed some of the relevant content areas.	Did not adequately describe need or problem or opportunity.
Methodology		Developed a design strategy including a plan, subtasks, and a timetable. A comprehensive list of critical design criteria were provided and justified.	Developed a design strategy including a plan of attack, partial subtasks, and a timetable. Most critical design criteria were provided and justified.	Developed a limited design strategy. Some critical design criteria were absent or unjustified.	No comprehensive design strategy was developed.
Use of equations, numerical expressions, figures, illustrations and/or drawings		All equations were clear, accurate and labeled. All variables were defined with units. All figures, illustrations, or drawings were accurate, consistent with text and of good quality.	Most equations were clear, accurate and labeled. Most variables were defined with units. Most figures, illustrations or drawings were accurate, consistent with text and of reasonable quality.	Most equations were accurate but variables undefined, units missing or incorrect significant digits. Figures, illustrations or drawings did not always display information clearly. Labeling was incomplete.	Some equations were inaccurate and there was little attempt to justify their use. Variables were not defined and units were often missing. Figures, illustrations or drawings were poorly made and not always consistent with the text.
Impact of realistic applicable constraints on the project (economic, environmental, ethical, societal, health and safety, manufacturability, sustainability)		Incorporated all applicable factors into the design process. Provided analysis which explored how each factor constrained the design.	Incorporated most applicable factors into the design process. Explored how each factor constrained the design but provided limited analysis.	Incorporated minimal applicable factors into the design process. Analysis contained both correct and incorrect reasoning as to how each factor constrained the design.	Unable to identify the major applicable constraining factors in the design process. Unable to correctly analyze how any factor constrained the design.
Use of engineering standards – if they exist (or state none)		Able to locate, evaluate and incorporate appropriate engineering standards into design at multiple levels.	Able to locate and evaluate appropriate engineering standards. Incorporated applicable standards into the design.	The need for engineering standards was acknowledged. Able to identify method of locating appropriate standards but did not incorporate standards into design.	No reference made to engineering standards.
Credibility of Results		Frequently demonstrated an ability to independently define an optimal, realistic and technical approach that meets requirements in terms of appropriate technical and/or economic criteria.	Often demonstrated an ability to define an optimal, realistic and technical approach that met requirements in terms of appropriate technical and/or economic criteria.	Sometimes demonstrated an ability to define an optimal, realistic and technical approach that met requirements in terms of appropriate technical and/or economic criteria.	Rarely demonstrated an ability to define an optimal, realistic and technical approach that met requirements in terms of appropriate technical and/or economic criteria.
Language: word choice and grammatical structure		Sentences were complete and grammatically correct. They flowed together smoothly. Engineering terms were used appropriately; There were no spelling, labeling, or punctuation errors.	Sentences were mostly complete, grammatically correct and flowed smoothly; Generally, the engineering terms were used correctly. There were a few errors in spelling and/or punctuation.	Some errors in sentence structure, grammar, or flow; Inappropriate use of engineering terms led to some confusion; several instances of spelling and/or punctuation errors.	Multiple errors in sentence structure/grammar/flow significantly distracted the reader from message; Engineering terms often used incorrectly. Multiple errors in spelling, labeling, and punctuation.
<b>Total Score (Max. 21 pts.)</b>					

Reviewer Name: \_\_\_\_\_ Team Name/Department: \_\_\_\_\_