

# 2024 ChemE Cube Competition

## Virtual Qualifying Presentation Rubric

Version 1.0, January 2024



Judge's Name:	
Team University:	

			Beginning	Developing	Advanced	Exemplary
Does the team clearly communicate the problem they are trying to solve?	/10	Lacking communication of a problem statement	Begins to describe the problem they are attempting to solve	Adequately communicates the problem	Clearly and effectively communicates the problem they are trying to solve and its importance	
Does the team clearly communicate the market potential of this problem?	/10	Lacking communication of market potential	Begins to describe the market potential	Adequately describes the market potential	Clearly and effectively communicates the market potential of this problem	
Does the team present a cube design that is complete and address all aspects/output requirements of the problem statement?	/20	The majority of the requirements of the cube design/output are lacking	Cube design addresses a few of the aspects/output requirements	Cube design addresses the majority of the aspects/output requirements	Cube design addresses all aspects of the competition and will effectively achieve all output requirements	
Does the team present a cube design that is unique and innovative?	/20	Cube design is not unique nor innovative	Cube design has some unique or innovative potential	Cube design is unique and/or innovative	Cube design is exceptionally unique and innovative	
Does the team present a cube design that is robust and resilient?	/20	Cube design is not robust nor resilient; likely to fail when used in everyday conditions	Cube design is lacking in robustness and resiliency; may fail when used in everyday conditions	Cube design is robust and resilient; unlikely to fail when used in everyday conditions; may fail when used in severe conditions	Cube design is exceptionally robust and resilient; unlikely to fail even when used in severe conditions	
Does the team present a cube design that is realistic, feasible to build, and will likely work?	/20	Cube design unrealistic and not feasible to construct given constraints of the competition	Cube design slightly unrealistic and may not be feasible to construct given the constraints of the competition	Cube design is likely realistic and may likely be built within the constraints of the competition	Cube design exceptionally realistic and can be feasibly built within the constraints of the competition	
Does the team describe potential hazards associated with their design and adequately anticipate and mitigate safety risks and hazards in their cube design? *Safety considerations identified below	/20	No safety considerations addressed. <b>Note: this would automatically disqualify a team</b>	Some (1-3) safety considerations addressed.	Minimal (>5) safety considerations addressed.	Adequately address safety considerations (>5 and no major gaps)	
Do you have any safety concerns of this team's design? If so, list them here.						
Does the team provide a compelling unique selling proposition?	/60	Lacking a compelling unique selling proposition	Proposed design and value proposition could be improved	Proposed design and value proposition is adequate	Proposed design and value proposition is unique and impressive	

**TOTAL** **180**

Comments:	<p>*Safety considerations should include but are not limited to:</p> <ul style="list-style-type: none"> <li>•Potential loss of containment</li> <li>•Waste considerations</li> <li>•Chemical compatibility</li> <li>•Expected side reactions or hazardous materials generated</li> <li>•Potential risk to human health</li> <li>•Control mechanisms</li> <li>•Safety considerations with scale-up or number-up</li> <li>•Personal protective equipment</li> </ul>
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