



# Robot Design

Team Number \_\_\_\_\_  
Judging Room \_\_\_\_\_

For each Robot Design criteria, clearly mark the box that best describes the ability of the team to demonstrate or provide evidence (such as analysis or test data) that their robot and processes meet that level of achievement. If the team does NOT describe a particular criteria at all, then put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. Use the back for additional comments if needed.

		Beginning	Developing	Accomplished	Exemplary
<b>Mechanical Design</b>	<b>Durability</b>	Robot designed to maintain structural integrity and have the ability to withstand rigors of competition			
	N D	quite fragile; breaks a lot	frequent or significant faults/repairs	rare faults/repairs	sound construction; no repairs
	<b>Mechanical Efficiency</b>	Robot designed to be easy to repair, modify, and be handled by technicians			
	N D	excessive time to repair/modify	inefficient to repair/modify	appropriate time to repair/modify	streamlined time to repair/modify
<b>Mechanization</b>	<b>Mechanization</b>	Robot mechanisms designed to move or act with appropriate speed, strength and accuracy for intended tasks (propulsion and execution)			
	N D	imbalance of speed, strength and accuracy on most tasks	imbalance of speed, strength and accuracy on some tasks	appropriate balance of speed, strength and accuracy on most tasks	appropriate balance of speed, strength and accuracy on every task
	<b>Programming Quality</b>	Programs are appropriate for the intended purpose and should achieve consistent results, assuming no mechanical faults			
<b>Programming</b>	N D	would not achieve purpose AND would be inconsistent	would not achieve purpose OR would be inconsistent	should achieve purpose repeatedly	should achieve purpose every time
	<b>Programming Efficiency</b>	Programs are modular, streamlined, and understandable			
	N D	excessive code and difficult to understand	inefficient code and challenge to understand	appropriate code and easy to understand	streamlined code and easy for anyone to understand
	<b>Automation/Navigation</b>	Robot designed to move or act as intended using mechanical and/or sensor feedback (with minimal reliance on driver intervention and/or program timing)			
<b>Strategy &amp; Innovation</b>	N D	frequent driver intervention to aim AND retrieve robot	frequent driver intervention to aim OR retrieve robot	robot moves/acts as intended repeatedly w/ occasional driver intervention	robot moves/acts as intended every time with no driver intervention
	<b>Design Process</b>	Developed and explained improvement cycles where alternatives were considered and narrowed, selections tested, designs improved (applies to programming as well as mechanical design)			
	N D	organization AND explanation need improvement	organization OR explanation need improvement	systematic and well-explained	systematic, well-explained and well-documented
	<b>Mission Strategy</b>	Clearly defined and described the team's game strategy			
	N D	no clear goals AND no clear strategy	no clear goals OR no clear strategy	clear strategy to accomplish well-defined goals	clear strategy to accomplish most/all game missions
<b>Innovation</b>	<b>Innovation</b>	Team identifies their sources of inspiration and creates new, unique, or unexpected feature(s) (e.g. designs, programs, strategies or applications) that are beneficial in performing the specified tasks			
	N D	No original feature(s)	original feature(s) with some added value or potential	original feature(s) with the potential to add significant value	original feature(s) that add significant value

**Comments**

*Great Job...*

*Think about...*