Documentation Section*		
Design Process		
Research Methods	10pts.	
Refinement	30pts.	
Structural Analysis	10pts.	
Engineering Drawings set	30pts.	
Material Selection	20pts.	
Manufacturing Plans	30pts.	
Assembly Models	20pts.	
Weapon System Details	10pts.	
Drive System Details	10pts.	
Power System Details	10pts.	
Wiring Schematic	10pts.	
Testing Results		
5pts.		
Sub Total	**195pts.**	
Performance Section		
Arena		
Durability of Robot	50pts.	
Construction Techniques	50pts.	
Safety	30pts.	
Pits		
Serviceability of Robot	40pts.	
Design Innovation	25pts.	
Total		
390pts.		

*The Documentation scores will be taken directly from the engineering notebook evaluation scores determined by the documentation judges.

Durability of Robot	Construction Techniques	Safety
0-10pts. • **Robot is destroyed during competition and is unable to be repaired.** • **Robot is nearly destroyed during competition and is barely operable.**	**0-10pts.** • After competing, the robot's parts will not line up and allow for the robot to be rebuilt. • The use of materials for parts contributed significantly to part failures and shows a disregard in designing for materials properties.	**0-8pts.** • Team does not enter, activate, or remove robot in safe manner according to arena safety guidelines. • Offensive system does not have an approved positive locking system. • Offensive system and any other pinch points do not have approved safety shields.
11-29pts. • **Robot is heavily damaged in most of its bouts in the ring, including structural damage, requiring significant effort to repair. Robot is able to compete again once repairs are made.**	**11-29pts.** • After competing, the robot's parts take significant effort to bring them back into alignment to allow for the robot to compete again. • The application of materials shows a minimal understanding of materials properties.	**9-17pts.** • Team enters, activates, and removes robot from arena with minor deviations from arena safety rules. • Robot has a cumbersome to use positive locking system that allows minimal movement of offensive systems once installed. • All pinch points and offensive systems shields over them though they are cumbersome to install and/or remove.
30-45pts. • **Robot is damaged in most of its bouts in the ring; the damage is mostly cosmetic in nature and does not require significant effort to repair. The robot is able to continue in the competition with or without repairs being performed.**	**30-45pts.** • After competing, the robot's parts do not quite line up requiring some effort to line back up for continued competition. • The application of materials shows an understanding of materials properties as well as consideration of this during the design of the parts.	**18-27pts.** • Team enters, activates, and removes robot from arena in accordance with arena safety rules. • Robot has a positive locking system that allows minimal movement of offensive systems once installed. • All pinch points and offensive systems shields over them.
46-50pts. • **Robot is able to survive most of the competition with little damage due to competitors, and is able to continue without repairs. Robot is still operating at the end of the competition.**	**46-50pts.** • Parts fit together nearly perfectly after competing in bouts where damage occurs. • The application of materials used in the parts of the robot reflects a deep understanding of materials properties and shows a distinct consideration in the design of the parts.	**28-30pts.** • Team enters, activates, and removes robot from arena while perfectly following arena safety rules. • Robot has a positive locking system that is easy to use and does not allow any movement of offensive systems once applied. • All pinch points and offensive systems have easy to use shields over them.
Durability of Robot **0-50pts.**	**Construction Techniques** **0-50pts.**	**Safety** **0-30pts.**

Serviceability of Robot	Design Innovation
0-9pts. • **Robot layout is such that even routine maintenance requires significant sections of robot to be disassembled.** • **Battery pack removal/charging requires significant work and part removal to occur.**	**0-7pts.** • Robot has no system or component that is outstanding. • Robot has a system or component that is better than most when compared to others on the robot.
10-22pts. • **Robot layout allows for minimal access to normal wear items, requiring work to be done to access part to be replaced.** • **Battery pack is accessed for replacement or charging with moderate difficulty and removal of more than one part.**	**8-15pts.** • Robot has a system or component that stands out as an exemplary specimen of design or construction when compared to others on the robot.
23-36pts. • **Robot layout allows for most normal wear items to be accessed with little to no work to make access possible.** • **Battery pack is accessed with little work for replacement or charging.**	**16-24pts.** • Robot has a system or component that is better than most when compared to other robots in the competition.
37-40pts. • **Robot is smartly laid out in that all normal wear items are easily accessed for repair.** • **Battery pack is quickly and easily accessed for replacement or charging.**	**23-25pts.** • Robot has a system or component that stands out as an exemplary specimen of design or construction when compared to other robots in the competition.
Serviceability of Robot **0-40pts.**	**Design Innovation** **0-25pts.**