

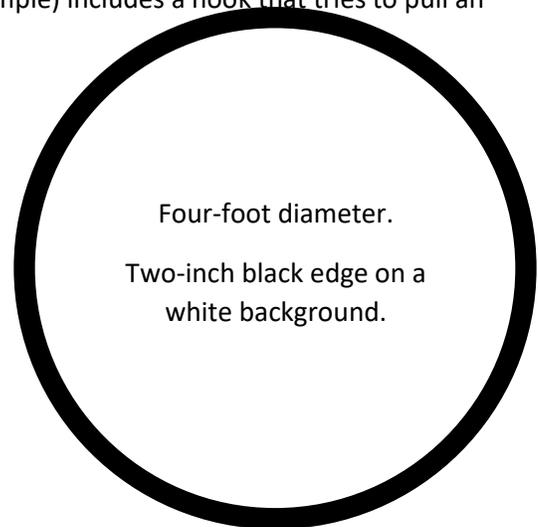
SumoBot Competition April 2018

In a SumoBot competition, two robots are placed in a four-foot diameter circle. The first robot to push the other out of the ring wins. There will be two categories: heavyweight (4 pounds or less) and lightweight (2 pounds or less). *Text in italics are changes/clarifications from last year.*

The Robot ...

- must be autonomous *and have a processor which controls at least one motor.*
- may be built around any processor (e.g. Vex Cortex, Arduino, Mindstorms, etc.) using any non-toxic, non-explosive materials you happen to have lying around.
- *must be turned on, moving, and, in some way, attempting to locate and push the other robot out of the ring. The spirit of the competition is an offensive robot. Passive, completely defensive robots will be disqualified.*
- must weigh four pounds or less *for the heavyweight category. Two pounds or less for the lightweight.* This includes any batteries and other attachments.
- must be 9" by 9" by 9" or less and may not extend outside of those restrictions during the event.
- must not deliberately harm the other robot. For example, wires may come loose as the robots push each other around – that's ok. But a design that (for example) includes a hook that tries to pull an opponent's wires out is not ok.
- must not damage the field or bystanders or nearby buildings.

The Field is a circle with a 4-foot diameter. It is about a half-inch thick plywood that has been painted white. There is a 2-inch wide black strip along the edge. The actual dimensions may be off by +/- 0.5 inches. There are no other markings on the field.



Game Play and Scoring.

- One of the players is randomly selected (coin flip) to go first – let's call them player A and the other is player B. Player A places their robot anywhere on one half of the circle. Then player B places their robot somewhere on the other side. An official will indicate an imaginary line which separates the circle into two halves. For the second game, the player B must place their robot first. For the third match (if necessary), player A goes first.
- When the official indicates, both players turn on their robots and step back.
- The first robot to touch the ground outside the circle (the circle is about 2 inches off the ground) loses. If both robots fall off at the same time, then that game is a tie.
- If neither robot is pushed off after two minutes, then that game is a tie.
- *A win is worth two points. A tie is worth one point. The first robot to get four points wins.*

- *If after three games neither robot has four points, then the robot that weighs less is the winner. If it's still a tie, then a coin flip will decide the winner. But we hope it doesn't come to that.*
- Players will have a maximum of 1 minute between games to replace batteries and/or make repairs. If the robot is not ready, then it forfeits the match.
- It is our hope to run a double elimination tournament. This will be decided once we get closer to the competition date and we have a more accurate count of how many teams/robots are competing.