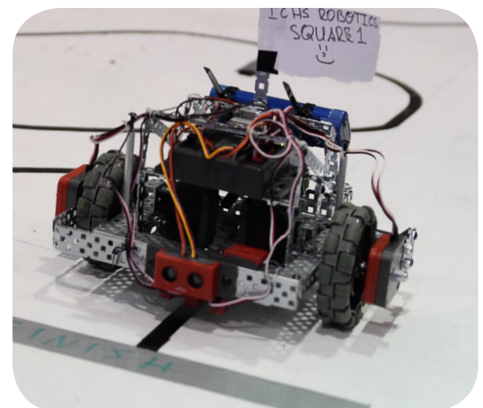


Pathfinder Challenge



Objective

- Objective: Teams will build a robot that can follow a black line on a white platform. Robots will have 3 minutes to complete the course and the fastest times will advance to the winner's board. There will be various obstacles in the path of the robot that it will have to navigate over and around in order to complete the course. Likely obstacles include pebbles, foam rods, and lights; none will be any larger than $\frac{1}{2}$ inch. The line will be between 20 and 30 feet within a 12-foot square.

Parameters

- The maximum weight for each robot is 15 pounds including the battery
- Robot must fit within a 4-gallon crate that is 13" x 13" x 11" at check-in (but can be engineered to include extensions)
- Robot must be able to move independently without a remote control and follow a predetermined path
- Robots cannot alter pathway or obstacles while navigating path

Notes

- All robots must be weighed and checked for correct sizing before competition begins. If they do not meet size or weight requirements they will be immediately disqualified.
- If multiple robots complete the course with the exact same times, they will have to run the course again backwards to determine the final winner.
- If no robots complete the course within the 3-minute period, the robots that finish the greatest amount of the course will advance to the winner's board.
- All robots will be permitted to calibrate their sensors before the start of the competition.

Materials

- Robot must meet weight and size requirements
- No user input will be allowed to control robot during competition; it must be autonomous