The Robot Challenge

# Competition

## Summary

Two teams of three will have a total of five minutes to score as many points as possible. Players accrue points by completing designated paths along the track as described in Figure 1. The starting positions will be randomly chosen by the instructor among the teams according to Figure 2.

## Travelling a Path

To receive points for completing paths, the following rules must be observed:

1. If the robot leaves the track, then the path the robot has travelled until that point is nullified. The path of the robot begins when it again finds the track. The robot is considered to have left the track when there is no tape under any part of the robot. This does not include instances where the robot leaves the track to avoid another robot or other obstacle.
2. A robot may choose to leave the track to avoid another robot and continue on its path. The robot’s path will still be considered valid for the section of the path that has been obstructed. This does not give the robot the ability to skip large portions of a path. The robot must return to the track at a reasonable distance after the obstruction.

## Controlling the Robot

Each robot must be controlled one-hundred percent autonomously during this time.

## Disabled Robots

If a robot has been disabled, or gets lost outside of the track it can re-enter the competition if the robot can still function after a minute and a half has elapsed. The robot will be placed at the corner of the track. The corner will be chosen by the instructor.

# Build Restrictions

1. Robots may not have their motors modified or replaced.
2. Robots may have their shapes enlarged outward beyond what the chassis already provides by more than one inch. This will be measured when the robot is to be considered in idle mode. It is acceptable if a part moves beyond this threshold temporarily or under autonomous control. Robots may have their shape enlarged upward indefinitely.

# Point Descriptions

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Figure 1: Player Track

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Figure : Player Positions