Update 30 May 2024

Robotic Competition Rules: Line Following (Line Fast)

ASEAN Level: Bachelor's Degree or Below

Robotic Competition

This is an automatic robot racing competition in which teams follow a line to reach the finish line. The team that reaches the finish line in the shortest time will win.

Competitor Requirements:

- Those who are studying at a level not exceeding a bachelor's degree in the ASEAN region.

Robot Specifications:

1. The robot's dimensions must be 20 x 20 cm. Weight and height are not restricted.
2. Only one robot is allowed per team throughout the Competition.
3. Robots can be controlled by using any circuit board or microcontroller. They must be programmed to operate automatically and are prohibited from human intervention except for pressing the start button once.
4. The robot's structure can made of any materials or devices.
5. Robots must move on wheels along the line without limitations on the amount and type of sensors and motors. However, they must maintain the competition field.
6. The electrical power used is not restricted, but the use of liquid batteries or deteriorated batteries, which may cause explosions or danger during the Competition, is prohibited.
7. Robots can be assembled before the Competition.
8. Screw fasteners and any other securing devices on the robot must be securely attached. If any part becomes detached, broken, or damaged during the Competition, the judges will remove it, and the team may continue competing. The judges are not responsible for any consequences of the detached parts outside the field.
9. Robots are prohibited from damaging or harming the competition field. Any team whose robot causes damage or harm will promptly be disqualified from the competition.

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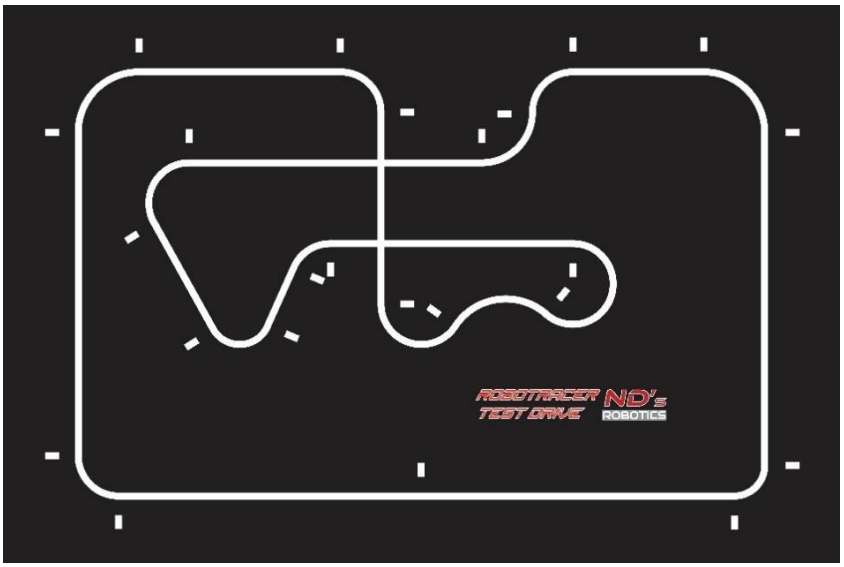
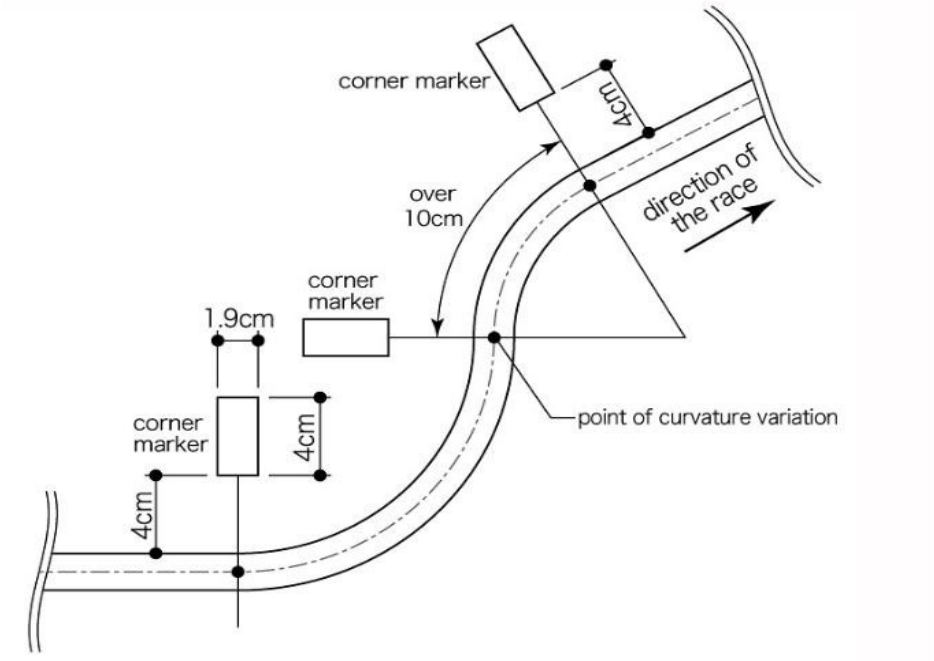
Competition Field:

1. The field is a flat surface with white lines on a black surface made of vinyl.



Sample image of the field.

2. The main running track is a white line with a thickness of 20 mm. (±10% error)
3. A timer Gate will automatically start the timing at the START point.
4. Corner markers are straight lines 4 centimeters away from the main running track and are placed at every corner.



Points where the curvature of the course changes and corner marker

An example of a field with a corner marker

5. The field layout will be announced on the day of the Competition.

General Rules:

1. There will be no field testing upon entering the competition area.
2. Once all teams have completed round 1, round 2 of the Competition will immediately start. Teams can repair or modify their robot's program while not actively competing. However, robots may not be tested on the field during this time.
3. Only competitors are allowed in the competition area. The team will be disqualified if tutors or team controllers are found in this area.

Competition Rules:

1. Each round of the Competition lasts for 3 minutes.
2. Robots must be placed at the designated START point before the competition.
3. Upon hearing the start signal, competitors will release their robots to follow the line to the FINISH gate, passing through the timing gates. If the test duration is within the allocated time for each round, competitors can release their robots for as many rounds as they wish to achieve the best time.
4. When the robot reaches the FINISH gate, the timing stops, and the judges will record the time for each test.
5. Each team has two rounds to compete for the best time, and the winners will be determined based on these results.
6. If a competitor requests to terminate the Competition, the judges will not record the time, and the mission will be considered unsuccessful.
7. The participating robots' names or numbers must be visible and readable on the robot's chassis throughout the Competition.
8. In case of a tie, the competitors must compete again.
9. The judges will decide any situations or cases not specified in the rules.
10. The judge's decision is final.