



RoboCupJunior Soccer Rules 2025

Soccer League Committee 2025:

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A Technical Specification For Soccer Field

1.1 Dimensions of the field

- 1.1.1 The playing field is 158 cm by 219 cm. The field is marked by a white line which is part of the playing field. Around the playing field, beyond the white line, there is an outer area of 12 cm in width.
- 1.1.2 The floor near the exterior wall includes a wedge, which is an incline with a 10 cm base and 2 +/- 1 cm rise for allowing the ball to roll back into play when it leaves the playing field. Note that the goal should not contain the wedge.
- 1.1.3 Total dimensions of the field, including the outer area, are 182 cm by 243 cm.

1.2 Walls

- 1.2.1 Walls are placed all around the field, including behind the goals and the out-area. The height of the walls is 22 cm. The walls are painted matte black.

1.3 Goals

- 1.3.1 The field has two goals, centered on each of the shorter sides of the playing field. The goal inner space is 60 cm wide, 10 cm high and 74 mm deep, box shaped.
- 1.3.2 The goal "posts" are positioned over the white line marking the limits of the field.
- 1.3.3 The interior walls and of each goal are colored matte, one goal yellow and the other goal blue. It is recommended that the blue be of a brighter shade so that it is different enough from the black exterior.

1.4 Floor

- 1.4.1 The floor consists of green carpet ideally of darker shade on top of a hard level surface. Teams should be prepared to adjust to different levels of contrast between the green carpet and lines as some events may be restricted to using lighter shades of green. All lines on the field should be painted, marked with tape, or installed as white carpet and be somewhat resistant to tearing or ripping. Lines should have a width of 20mm ($\pm 10\%$).

- 1.4.2 It is impractical to set international constraints on carpet other than it being green. In the spirit of the competition, teams should design robots to be tolerant or adaptable to different fibers, textures, construction, density, shades, and designs of carpet especially when competing amongst different regions. Teams are encouraged to visit regional resources or reach out to Local Organization Committee for suggestions if desiring to build their own practice field(s).

1.5 Neutral spots

- 1.5.1 There are five neutral spots defined in the field. One is in the center of the field. The other four are adjacent to each corner, located 45 cm along the long edge of the field. They align with the sides of the penalty areas. The neutral spots can be drawn with a thin black marker. The neutral spots ought to be of circular shape measuring 1 cm in diameter.

1.6 Center circle

- 1.6.1 A center circle will be drawn on the field. It is 60 cm in diameter. It is a thin black marker line. It is there as guidance during kick-off.

1.7 Penalty areas

- 1.7.1 In front of each goal there is a 25 cm wide and 80 cm long penalty area with rounded front corners (15cm radius).
- 1.7.2 The penalty areas are marked by a white line of 20 mm ($\pm 10\%$) width. The line is part of the area.

1.8 Lighting and Magnetic Conditions

- 1.8.1 The tournament organizers will do their best to limit the amount of external lightning and magnetic interference. However, the robots need to be constructed in a way which allows them to work in conditions that are not perfect (i.e. by not relying on compass sensors or specific lightning conditions).

A diagram of a soccer field illustrating the 'Wedge' and 'No Wedge' areas. The field is green with white lines. The 'Wedge' areas are the regions outside the goal mouths, and the 'No Wedge' areas are the regions inside the goal mouths. The diagram shows the field from a top-down perspective, with the goal mouths at the top and bottom. The 'Wedge' areas are labeled 'Wedge' and the 'No Wedge' areas are labeled 'No Wedge'.

Technical drawing of the RCJ Soccer Field 2023, showing a top view (A-A) and a side view (B-B).

Top View (A-A):

- Overall dimensions: 182 (width) x 243 (length).
- Central circle diameter: $\phi 60$.
- Goals: Blue Goal (top) and Yellow Goal (bottom).
- Dimensions for goals and field layout: 12, 45, 60, 7.40, 10, 40, 25, 80, 158, 22, 10, 2.1.
- Radius: R15.
- Slope: 2+10%.

Side View (B-B):

- Overall dimensions: 219 (width) x 243 (length).
- Field profile: 2.1 (height).
- Labels: Wedge, No Wedge.

Detail View (C-C):

- Corner detail showing a 2% slope and a 10mm radius.

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