

The logo for TOPBOT ROBO SOCCER features the word "TOPBOT" in a bold, sans-serif font. The "O"s are replaced by blue circles connected by blue lines, forming a network-like structure. A small robot icon is positioned above the second "O". Below "TOPBOT", the words "ROBO SOCCER" are written in a large, bold, dark blue sans-serif font.

TOPBOT ROBO SOCCER

Description

Put your design and engineering skills to build two BOTS which will play football as a team with the sole objective of scoring and defending goals. Call it a test of all the features of your bot, viz. mechanical, electronics and coding. A World-Cup styled tournament with group stages and knock-out round will decide the winner.

Objective

Make two **Remote Controlled Vehicular Robots** which can play football as a team, and perform functions such as passing, dribbling, scoring and defending. You may build a third robot as well, which can be used as a substitute. You can control your bot using wireless technologies like (RF, Bluetooth, WiFi) or using wired control (In that case ensure that your wire is of a sufficient length). For fair competition, we stick to some rules and regulations and some guidelines for designing and building your bot.

How to apply

STEP 1:

Make a team of maximum 3 students and get yourself register at <https://topbot.in/>.

STEP 2:

Pay the registration fee using one of the following media:

1. Cash
2. Tezz

GENERAL GUIDELINES

- 1) Each team must assign a Team Leader.
- 2) Each team must consist of a maximum of 3 participants.
- 3) A few selected components will be provided to all participating teams on returnable basis. If any other components are required, you are free to use your own or can purchase them using the coupons that we will provide.
- 4) Teams from IIIT-Allahabad will be provided kits one week in advance. Teams outside IIIT-Allahabad will be given the kit on Day 0 of Aparoksha (15th March).
- 5) Each team will be given only one chance. There is NO rematch.
- 6) The decisions of judges is final.

SPECIFICATIONS FOR BOT

- 1) Bot should not be greater than defined dimensions, i.e 20 cm x 20 cm x 15 cm (L x B xH).
- 2) You can use any microcontroller.
- 3) Bot should be powered using battery only. No direct power supplies will be provided. The maximum allowed voltage to power the robot is 24V.
- 4) The net weight should not exceed 2kg.

RULES & REGULATIONS

- 1) The dimensions of the arena are 10ft X 6ft (L X B).
- 2) The dimensions of the goalposts are 30cm X 20cm (W X H).
- 3) Each team must have two robots which will be controlled by two different members of the team. The substitute robot is optional.
- 4) Each match will consist of two halves of 5 minutes, separated by a break of 2:30 minutes.
- 5) You can change your battery or make any other changes at half time only. No time-outs will be provided, unless your robot is seriously damaged.

- 6) Match Start: At the time of kick-off the ball will be placed at the centre and both the teams' bots will be positioned near their respective goal-posts. The bots have to sprint towards the ball to get it.
- 7) A robot may not hold the ball in a way which obstructs the opponent from playing it for more than 10 seconds. This will amount to a foul and award of free kick to the opponent.
- 8) If a robot tries to damage the opponent's robot intentionally with no intent to contest for the ball, it will lead to a free kick.
- 9) Each team will have to declare one robot as a goalkeeper. Only the goalkeeper can stand in between the goalposts. If the attacker robot stands in between the goalposts, it will lead to a free-kick.
- 10) Procedure for **Free-kick**: The team being awarded the kick will gain possession of the ball at the centre of the arena. The defending team will have to station their bots near their goal-post.
- 11) In case a knock-out match can't be decided at the end of regular time, winner will be decided on the basis of five penalties per side.
- 12) Procedure for **Penalties**: The attacker will start with the ball from the half-way line and the goalkeeper can be placed anywhere in his half. The striker can make as many attempts to score within a time-frame of 15 seconds. If he is unable to put the ball in back of the net, it will be regarded as a miss.

SCORING CRITERIA For Group Stage

- 1) Each group will consist of 3 or 4 teams. A team plays all the team in its group once.
- 2) A win will lead to 3 points and a draw will see both teams awarded 1 point each.
- 3) Top 2 teams from each group will progress to the knock-outs.
- 4) Incase two teams have equal points, Goal Difference will separate them.
- 5) Draws for knock-out will be made randomly by drawing chits from a pot.
- 6) In knock-outs, a match which end level in normal time will be decided by penalties.