

11th IEEE UAE STUDENT DAY COMPETITIONS
Academic year 2015 – 2016
Engineering Design Project (EDP) Competition

Air Activated Soccer

General Information

This project is about designing and building a purely mechanical (no electrical parts) air blower that can blow air to push a table tennis ball towards a goal protected by players from the opponent team. The goal and the swing arm will be provided by the organizers. The main objective is to design and build an air blower that can blow air to push a table tennis ball and score goals. The blower should be constructed without the use of any electrical component or source of power and it should operate indoors.

This competition is intended for freshmen and sophomore students; however, higher-level undergraduate student can participate too. Participants are expected to be creative in their design while at the same time conform to the design specifications outlined in this document.

A panel of three referees, to be selected by the IEEE UAE Student Day Steering Committee, will fairly evaluate the competitors on the day of the event. The rules of the competition and the judging criteria are detailed below.

Design Constraints

1. The **weight** of the air blower should not exceed **3 KG**.
2. The air blower (including the nozzle) can be of any shape, but it should fit into a **cylinder** of **height 100cm** and **diameter 50cm**. The **nozzle** should be of length at least **10cm** and at most **15cm**. Within the nozzle, no object should come closer than **5cm** from the ball.
3. The use of explosives, flames, ignitable gases and materials, etc. are prohibited. All other materials are allowed.

Competition Rules

1. Each institution can submit a **maximum** of **two air blowers** to participate in this competition
2. There will be a designated area to place the air blower.
3. There will be a designated area for the goal keepers to stand and move the arm swing to protect the goal and prevent the opponent team to score.

Judging and Scoring

Scoring will be based on the number of balls entering the opponents goal. In case of a tie, additional 5 balls will be given to each team, until a winner is decided.

