Competition Rules and Required Tasks for Robots

Robot design criteria:

1) The robot should be designed using INEX Robot Design Kit and additional parts provided. No other additional parts or components shall be used.
2) Sensors must be selected and configured to detect a start signal and perform tasks as described in the competition rules.
3) You may not alter and cut INEX parts, sensors and the AX-11 board beyond repair. The design kit should be returned in working conditions and in an organized manner so that they can be used next year. If this practice is not honoured, the course may not be able to continue in the future.

Competition rules: (2011, Blind Soccer)

1) Each round of the competition will be held for one robot against another, on a designated playing field. An example playing field is shown in Figure 1-1.
2) The playing field has two starting areas in the opposite sides of the field. The starting areas are made of 20 cm by 20 cm squares painted black and with a white LED light in the middle. The robot must fit into the dimension of the starting area.
3) There is a large playground in the middle of the playing field, outlined by a black line with 24 mm width. This is a soccer field. In the field, there are five soccer balls.
4) The distance between the black line and the edge of the playing field is 15 cm. The floor of the playing field is made of wooden board painted in white.
5) At the beginning, each robot will be placed in the starting area of its own side. At the center of the starting area, there is a white LED lights beneath it. The lights will be kept on until the competition begins. The starting signal for each competition is the lights being turned off. With the starting signal, the robot should start on its own.
6) The objective is to score more points than the opponent by kicking out the balls. The red ball is worth two points and the blue balls are worth one point each.
7) The score is earned only when the ball is kicked out by the robot. If the ball is pushed off by another ball, the ball will be replaced at its original position or nearby.
8) The initial positions of the balls can be different for each game, but the positions will have symmetrical and have no apparent advantage for one robot. The red ball will be placed in the middle of the soccer field.
9) If the robot moves out of the boundary of the soccer field, or if the robot falls off the playing field, the robot is declared 'disqualified' and lose the competition.
10) Any ambiguity arising at the final competition will be resolved by the supervising professor.
11) The competition rules and the complexity of the game can be adjusted depending on the progress of the students in the design course and the availability of the resources.