



**Afrobot**



# **SPARK LEAGUE**



by  
Vision & Innovation Club  
SPARK Scientific Departement

# **COMPETITION SPECIFICATIONS**



# SUMMARY

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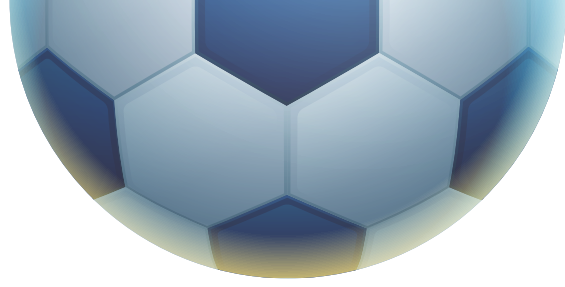
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## I. ORGANIZER DETAILS

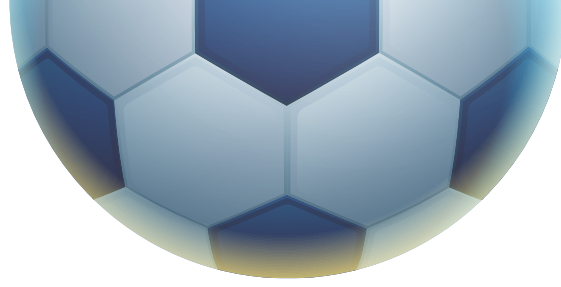
### A. CLUB DESCRIPTION

**The Vision and Innovation Club (VIC)** is an English-speaking scientific club founded in 2014. It is affiliated with the scientific association **El Maârif**.

The **VIC**'s vision is to train engineers with strong skills by giving them practical experiences through events, projects, and diverse activities including scientific, cultural, and even language-based ones.

### B. SPARK DESCRIPTION

**Spark** is the scientific activity department for all tech enthusiasts within the club to share their passion. The main objective of the department is to provide members with the right resources and tools -through training sessions and the E-lab, and the opportunities to participate in national and international competitions within the field.



# I. INTRODUCTION

Remote-controlled robot football is a growing competitive field, with similar events held worldwide in countries like the UK, USA, Japan, Singapore, India, and South Korea.

This year, the scientific department of the Vision & Innovation Club "SPARK" proudly launches the first edition of "SPARK LEAGUE",

a one-of-a-kind robot football challenge that blends engineering, control, and strategic gameplay.

The competition will feature two categories:

**Senior Category:** 2 robots vs 2 robots

**Junior Category:** 1 robot vs 1 robot

## A. THE CONCEPT OF THE COMPETITION

In Spark League, two teams face off in a robot football match with a duration of **3 minutes**. The team that scores **the most goals within the time limit** is declared the winner.

If the match ends in a **draw**, an additional **2-minute tie-breaker round** will be played to determine the winner.

All matches follow the same set of rules and begin with the ball placed at **the center** of the field.



## II. GENERAL RULES

### A. RULES ABOUT TEAMS

Each team consists of 2 to 4 members.

Participants will compete in two distinct categories:

**Senior Category (2v2):** For older and more experienced individuals (university students)

**Junior Category (1v1):** Designed for younger participants (middle/high school students)

Teams must register under the appropriate category based on age. Cross-category participation is not allowed.

### B. ROBOT SPECIFICATIONS

1. Each robot must be entirely **custom-built** by the team, including the chassis; the use of pre-assembled or commercial robot kits is strictly prohibited.

Junior section are allowed to use legos or pre build kits to make the robots

2. The robot must not exceed the dimensions of **25 cm (length) × 20 cm (width)**, with a maximum weight of **1.5 kg**.

3. The robot must operate **wirelessly** and be remotely controlled by the team. The battery must be **fully integrated** within the robot's structure, no external power sources or batteries placed on the field are allowed.

4. Robots may use a **two-or four-wheel** drive system.

5. During gameplay, the robot is allowed to **push, pass, or kick** the ball using mechanical components. However, **grabbing, holding** and **lifting** the ball in any form (e.g., suction, claws, grippers) is strictly **forbidden**.

6. The robot must not jump, fly over, climb, scratch, cut, burn, mark, damage, or destroy the walls or the floor of the field.



## III. THE FIELD OF PLAY

### A.FIELD DIMENSION

**Total field size:** 200cm (L) × 100 cm (W).

**Wall height:** 200 mm. Constructed from impact-resistant, non-reflective material.



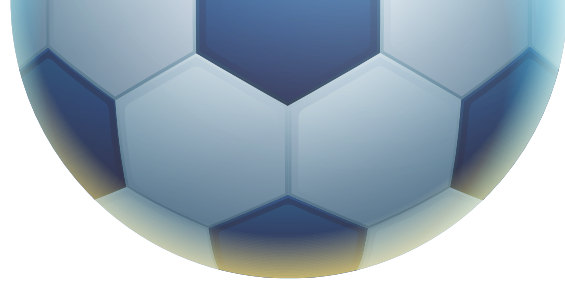
### B.BALL SPECIFICATIONS

**Material:** Rubber.(tennis ball material)

**Diameter:** 6.54 cm.

**Weight:** 56 g.

**Color:** High-contrast (e.g., orange or yellow) to ensure visibility against the field surface.



## D. COMPETITION PROCEDURE

### 1. HOMOLOGATION PHASE – VERIFICATION AND CHECK-UP

- The organizing team will verify that each team meets all **registration and eligibility requirements**.
- If any condition related to the participants or their robot is not met, the team may be **penalized** or **disqualified**, depending on the severity of the violation.

### 2. WARM UP PHASE

- Each team will be allowed to **test and explore** their assigned stadium during a warm-up period of one hour at the start of the event.
- During this phase, teams may **install, maintain, or reposition** their robots freely within their designated arena.





## D.COMPETITION PROCEDURE

### 3.MATCH CASE

- Matches will be conducted in either **1v1 (Junior Category)** or **2v2 (Senior Category)** formats, depending on the team's registration **category**.
- Each match will last **3 minutes**.
- The team that scores more goals within the 3-minute duration will be declared **the winner**.
- In case of a **tie** (equal goals), an additional 2-minute round will be played to determine the winner.
- After each goal is **scored**, the ball will be **placed back** at the center of the field and play will resume.
- If the ball remains **stuck** in a corner or against the wall for more than 10 seconds, the judge will reposition the ball to the **center** of the field to resume play. Any time lost during this interruption will be **added** to the end of the match.
- All matches follow the **same rules** and begin with the ball placed at **the center of the field**.
- Teams must be **present and ready** at their scheduled match time. **Delays** may result in **disqualification**.





## 4. TOURNAMENT STRUCTURE

- The tournament will begin with **randomly assigned** matches based on the number of participating **teams and category** (Junior or Senior).
- Teams will advance through the **knockout stages**, which include:
  - Qualification matches
  - Quarter-finals
  - Semi-finals
  - Final
- All stages will follow the same match **format** and **rules** outlined above.
- **Match pairings will continue to be assigned** at random throughout the tournament.