

University of South Alabama
Civil Engineering Department

Rules and Regulations For Concrete Bocce Ball



Presented by the Student Chapter of the American Society of Civil
Engineers at the University of South Alabama
for the USA-ASCE High School Competition

Rules Updated October 2025

Concrete Bocce Ball

Requirements

Each team will bring 4 cylinders to the competition; 3 of the cylinders will be decorated for aesthetics judging and tournament play, while the 4th will be left undecorated for compressive testing. Each team should also bring a copy of their canoe mix design for the bocce ball competition. (see concrete canoe rules for specifications)

Specifications

- Each concrete cylinder will have a 4” diameter and an 8” height
- Cylinders should be made using the same mix design as the concrete canoe
- No reinforcement shall be used in the cylinders (e.g. bars, meshes, or grids)

Aesthetics

- Each team will bring 3 decorated cylinders that are decorated to their theme of choice
- The 3 decorated cylinders will be presented to the judges for scoring

Scoring

Technical score (10%)

- Teams should bring and submit the complete mix design chart (see Concrete Canoe rules)
- Teams that follow all specifications will receive the maximum score while each violation will result in a penalty of one third the maximum number of points*
- The technical score is non-competitive and multiple teams may receive the same technical score

Testing Score (30%)

- Teams will submit an undecorated cylinder for compressive strength testing
- Each team will also submit a prediction on the compressive strength of their cylinder in psi
- The team with the nearest prediction will receive the maximum number of points* while the farthest will receive 1 point
- Teams with rule violations will be ranked lower than teams that are following specifications

Aesthetic score (20%)

- Judges will score each cylinder based off of a rubric
- Each team will be scored by multiple judges with the average score being recorded

Tournament score (40%)

- Teams will compete in a single elimination bocce ball tournament using the 3 decorated cylinders as balls
- Teams will be randomly seeded
- The team that wins the final will receive the maximum number of points* while the team in last will receive 1 point

*Maximum number of points is equivalent to the number of teams participating

Tournament Play

Play will follow normal Bocce ball rules with some “house rules” that overrule classic play.

- The game will be doubles with only one player bowling per frame
- 3 decorated concrete cylinders will be used for playing instead of balls
- The court will be 50’ long by 10’ wide
- A foul line will be placed 5’ from the end of the court
- The court will not include side and back boards
- Any cylinder tossed outside of the court will be considered out of bounds and not count for the scoring of that frame
- The first team to reach 12 points at the end of a frame wins, however a team that scores over 12 points will “bust” and be reset to 9 points
- If a cylinder breaks during play, then that cylinder will no longer be used and will not be scored for that frame
- A cylinder will be considered broken whenever it has no section measuring a 4” diameter and an 8” height

To learn how to play bocce ball check out <https://www.youtube.com/watch?v=v3slD-qDIW8>

Rubric

School Name: _____

Group Name/Number: _____

Technical Score (10%): _____

Testing Score (30%): _____

Aesthetic Score (20%): _____

Tournament Score (40%): _____

Total Score: _____