

Concrete Concerto

Genre

Ensembles will create cylinders using geopolymer concrete, decorate the cylinders to match a three-movement concerto or concerto grosso of their choice, and bowl the cylinders in a bocce tournament. *Concerto Concerto* unites next-generation concrete design, antique music, and a classic lawn game.

Artists

Concrete Concerto ensembles can include two to four members. Only two members can play at a time.

Instruments

Ensembles will produce four 4" x 8" geopolymer concrete cylinders.

Geopolymer Concrete Design Specifications

- The concrete shall not contain Portland cement of any type.
- The aggregate shall pass a 1/2" sieve and shall not pass a No. 200 sieve.
- The concrete shall contain at least 30% aggregate, excluding manufactured microspheres, by volume.
- The concrete may be reinforced by chopped fibers of any material between 0.2" and 0.55" long.
- The concrete shall not be reinforced by bars, grids, or meshes of any material.

Ensembles will decorate three of the four cylinders.

Cylinder Aesthetics

- Decorated cylinders shall correspond to a selected [concerto](#) or [concerto grosso](#).
- Each decorated cylinder shall depict a specific movement from the selected composition.
- Each decorated cylinder shall make visible the name for the specific movement (typically a tempo marking - e.g. *Largo*, *Adagio*, *Allegro* - or a form - e.g. *Rondo*, *Giga*).
- At least one decorated cylinder shall make visible the common name of the composer (e.g. Mozart, Bach, Chopin) and the name of the composition (e.g. *Piano Concerto No. 5 in D Minor*).
- The decoration shall be created using concrete stain.

Ensembles will leave the remaining cylinder undecorated for compressive strength testing.

Tracks

Technical Score - 20% of Total Score

Ensembles will submit a 750 word or less [technical paper](#) and a completed [mix design form](#). Each specifications violation will incur a penalty equal to one-fifth of the maximum possible technical score. Flagrant specifications violations may prevent the cylinders from being used in bocce play. The technical score is non-competitive, and multiple ensembles may achieve the same technical score.

Testing Score - 20% of Total Score

Ensembles will submit the undecorated cylinder for compressive strength testing. Judges will rank the cylinder relative to other cylinders by compressive strength to weight ratio. The ensemble with the highest compressive strength to weight ratio will receive the maximum possible testing score, and the ensemble with the lowest compressive strength to weight ratio will receive one-half of the maximum possible testing score. Cylinders violating any specifications will be ranked behind compliant cylinders.

Aesthetic Score – 20% of Total Score

Judges will evaluate and rank the cylinder decorations relative to other cylinder decorations. The ensemble with highest-ranked cylinder decorations will receive the maximum possible aesthetic score, and the ensemble with the lowest-ranked cylinder decorations will receive one-half of the maximum possible aesthetic score.

Tournament Score – 40% of Total Score

Ensembles will compete in a single elimination bocce tournament. Ensembles will be randomly seeded into the tournament bracket, and some teams may receive a first-round bye. Ensembles will be scored according to tournament results as follows:

- Ensembles losing in the first round (round of 17+) and the second round (round of 16) will receive one-half (50%) of the maximum possible tournament score.
- Ensembles losing in the quarterfinal round (round of 8) will receive five-eighths of the maximum possible tournament score.
- Ensembles losing in the semifinal round (round of 4) will receive three-quarters of the maximum possible tournament score.
- The ensemble losing in the final round will receive seven-eighths of the maximum possible tournament score.
- The ensemble winning in the final round will receive the maximum possible tournament score.

Bocce play will be conducted according to [United States Bocce Federation rules](#), with superseding “house rules” as follows:

- Play will be conducted in doubles; only one ensemble member will bowl per frame.
- Three decorated cylinders per team will be used instead of four bocce balls.
- The bocce court will be 50’ long by 10’ wide.
- Foul lines will be marked 5’ from each end of the bocce court.
- Side and back boards will not be included as part of the bocce court.
- Strict time limits will not be enforced; however, ensembles should still expedite play.
- Play will last until one ensemble has scored exactly 12 points at the end of a frame.
- Ensembles with scores exceeding 12 points at the end of a frame will “bust” and reset to 9 points.
- If no winner is declared by the end of the twelfth frame, the ensemble with the higher score will be declared the winner of the current match.
- If two ensembles have the same score at the end of the twelfth frame, additional frame will be played until one ensemble has a higher score at the end of a frame.
- Ensembles with broken cylinders will continue to play in the tournament using remaining cylinders.

Notes

Assume that unspecified materials are allowed. Decorations should be appropriate for a semi-professional environment. Direct any RFIs to [conference organizers](#). This section will be updated to include RFI responses.

RFI – 10/31/2018

Q: The rules state to make a 4" x 8" cylinder, but the game calls for spheres. What should we make?

A: Per the “house rules” that supersede the basic bocce rules, teams will play with three cylinders instead of four spherical balls. Teams should produce four cylinders – three decorated cylinders for tournament/aesthetics, and one unmarked cylinder for compressive strength testing.