

ASCE Virginias Student Symposium Miniature Golf Competition: Guidelines and Scoring Rubric

Objective

Each group will design and construct a modular mini golf hole using concrete and/or recyclable materials including but not limited to, cardboard, aluminum, paper, plastic, etc. The design should demonstrate creativity, structural integrity, and adherence to specified design constraints. The winning team will be determined based on a combination of creativity, ingenuity, playability and their golf score.

Competition Guidelines

1. Team Composition:

- Teams shall consist of 4 players with a minimum of one female student and one male student.
 - If a school is interested in participating but is unable to field a team of 4 players, the school may play with a lesser number. The additional score(s) will be based on the teams average score plus a 10% penalty added per player under 4.
- Each team is responsible for designing and building a single modular mini golf hole.

2. Design Requirements:

- **Modular Construction:** The mini golf hole must be modular, meaning it can be disassembled and reassembled. The design should include a method of connecting the pieces securely without compromising stability.
- **Size Constraints:** The completed mini golf hole must fit within an area of 8 feet by 8 feet. The hole's length should not exceed 6 feet. Each hole shall have a rail or bumper with a minimum of 4 inches to limit balls from leaving the playing surface. The golf hole cup shall have a minimum depth of 4 inches below the playing surface and a minimum diameter of 4.25 inches and maximum diameter of 4.50 inches. Failure to meet size constraints will incur a 5-point penalty.
- **Materials:** The playing surface and major obstacles must be made entirely of concrete and recyclable materials. Teams may use reinforcement (such as rebar or mesh) for durability. Teams may choose to build their hole entirely of concrete, entirely of one or multiple recyclable materials or a combination of both. Using unapproved materials will incur a 5-point penalty to the team's overall score.
- **Hole Complexity:** The design should include at least one obstacle (e.g., ramps, tunnels, or curves). Creativity in obstacle design is encouraged, but the ball must still be able to reach the hole in a reasonable number of strokes. Teams will establish par for their hole (between 2-4).
- **Surface Finish:** Teams should use finishing techniques to create a smooth playing surface. Surface roughness or added textures must be functional and intentional (e.g., for challenging the player).

- **Durability:** The design must withstand repeated use without crumbling or degrading during the competition. Failure of the hole due to normal playing conditions will result in a 10-point deduction. In the event a hole fails before all teams can play, a score of even par will be awarded to all players for that hole.
 - **Aesthetic:** Teams are encouraged to incorporate artistic elements into their designs, such as creative themes or decorations, while staying within the material guidelines.
3. **Safety Guidelines:**
- Modular pieces should be easily transportable (not exceeding 50 lbs per section).
 - Standard safety procedures and Personal Protective Equipment (PPE) shall be used in the construction and assembly of each golf hole. There shall be no jagged or sharp edges or safety hazards that would make the hole dangerous to play.
4. **Timeframe:**
- On the day of the competition, teams will have a designated time of 1 hour on the symposium schedule to assemble their mini golf hole. Judges will then have 1 hour to score the holes before the first pairing will tee off.
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Competition Day

- **Assembly:** Teams will assemble their modular mini golf holes in the designated competition area. Judges will observe the ease of assembly and modularity.
- **Playability:** Each team will demonstrate their hole by having participants play a round of mini golf. This will allow judges to assess the functionality and playability of the design.
- **Playing:** On competition day each school will divide their four players into two pairs of two players. Pairs of two will be randomly assigned by blind draw to play with another pair. Players will be supplied with a mini golf club and a golf ball. Each foursome will be required to keep one scorecard. All four players are to confirm their scores and sign the card. Failure to do so will result in a minimum 1 stroke penalty added to the player's score. Any scoring disputes shall be brought to the head judges' attention as soon as possible.
- **General playing rules:** Each player within a foursome will all tee off from the start of each hole. After tee shots are made the furthest player from the hole will putt next until all balls have been holed. In the case that a player's ball is in the direct line of the furthest player out the closer player may hit first. Intentionally hitting an opponent's ball is strictly forbidden and will result in a penalty at the judge's discretion. In the case of an accidental collision the ball that was hit shall be placed as close as possible to where it was located before the collision. All balls shall be holed out (i.e. no gimme putts). If your ball is against a railing, you may move it out by one club head length. If your ball goes out of play or ends in an unplayable area place your ball as close as possible to where it exited the hole and add a one stroke penalty to your score. Once scores are posted all teams have a 15 minute protest window to appeal any penalty or scoring decision. Once the protest window closes and/or judges rule on all appeals the results are final.

Aesthetic Scoring Rubric

Category	Criteria	Points
Design & Innovation	Creativity in design, use of obstacles, theme aesthetics	25
Functionality & Playability	Ball reaches the hole smoothly in a reasonable number of strokes; fair challenge level	25
Structural Integrity	Durability of the structure, stability of modular parts	20
Modularity	Ease of assembly and disassembly, effective connections	15
Surface Finish	Quality of finish, smoothness of playing surface	10
Aesthetic Appeal	Artistic elements, thematic coherence, and visual impact	5

Total Points: 100

Points awarded for play

1st place individual - 20 points
2nd place individual - 15 points
3rd place individual - 12 points
4th place individual - 10 points
5th place individual - 8 points
6th place individual - 6 points
7th place individual - 5 points
8th place individual - 4 points
9th place individual - 2 points
10th place individual - 1 point

1st place team - 10 points
2nd place team - 8 points
3rd place team - 6 points
4th place team - 4 points
5th place team - 2 points
6th place team - 1 point

Judging and Awards

- Judges will consist of faculty members, industry professionals, and student representatives.
- The team with the highest total score will be declared the winner, with awards for creativity, best overall design, and most innovative use of concrete.

This competition not only provides a fun, hands-on project but also gives students the opportunity to practice design, construction, and teamwork skills using real-world materials and constraints.

