



**ASME
STUDENT
DESIGN
COMPETITION**

Official responses to questions supersede original competition statements as well as any earlier question responses where there is contradiction. The questions are numbered sequentially as responded to, where Answer 1 is the earliest response.

Information about the ASME E-Fests and EFX events can be found at:

<https://efests.asme.org/>

(Questions will answered about the 2024 ASME SDC until February 1, 2024)

Q&A Update September 29, 2023

Question 1:

- Do you have the obstacle CAD files to share so I can 3D print them for our local course? Obstacle D, E, G, H specifically, and the ramp to get to the elevated platform.
- Does the robot need to travel under the platform for Hole #4? Assuming they miss and need to get to their ball on the other side of the platform? Or can they reset the ball to tee off again?

Answer 1:

- Yes, .stl files of all obstacles will be made available for manufacture to all competitors. See the SDC website to access these. Teams should recognize that the fabricated obstacles at competitions may have slight variations.
- Teams may choose to play the golf ball where it lies or have the caddy transport it back to the designated tee with approval from the judges (see Rules 15, 22 and 32). Transporting the golf ball back to the tee counts toward the scoring as one stroke. However, the device must be capable of accessing any part of the field under its own capability – it may climb over barriers. For example, during the elimination round, the first stroke must be made from Tee #1 (see Rule 20), and the device must traverse the field without physical assistance from the team.

Question 2:

- How do we move the robot from tee #6 to tee #7? Are we supposed to take the bot over the wall using big tires or something else because increasing the size of the wheels may cause problem in moving the bot from below the elevated surface between tee #5 and tee #4.

Answer 2:

- The “wall” between tees #6 and #7 will be a standard 2x4 lumber on end. Teams may choose to pass over or under the elevated surface between tees #4 and #5. How the device navigates obstacles is part of the design challenge.

Question 3:

- What are the dimensions of the tees? Are the tees flat mini-golf tee mats with an indent, t-shaped stands, or do the golf balls start directly on the ground within a marked circle?
- Once we have putted the golf ball off the tee, are we allowed to have more than momentary contact with the ball? i.e. can we "hold" or center the ball with a mechanism prior to the putting action (without engaging the robot's travel function).
- Can we use Pneumatics (with proper safety precautions)?

Answer 3:

- Golf balls will be placed directly on the ground within a marked area at each of the tee locations.
- See the rules for legal putting given in “Expected Device Functionality.” Devices may secure the ball before making contact with the ball as long as the ball does not touch the device after impact
- Pneumatics are allowed as long as they meet the other requirements in the rules (for example rule #4). Safety precautions are expected but ASME SDC does not provide specific safety requirements regarding pneumatic systems.

Question 4:

- We're interested in competing in the SDC competition this year, and had several questions regarding some specific rules. On the website, it says that an official

Q&A forum will open "in September", but as we're getting closer to the end of the month we wanted to know when the forum will open up.?

Answer 4:

- The Q&A forum is now posted, please direct all questions to sdcd@asme.org

Question 5:

- Can we use pneumatic systems?
- Is having stored air within the rules?
- Can you define the rules for chipping in more detail?
- Can we hit the ball into our own system in order to elevate the ball?

Answer 5:

- Pneumatics are allowed, see rule #4.
- Teams may not start with any stored mechanical energy such as compressed air, but must compress any air during the competition. See rule #4: "...any stored potential energy at the start of the device's duty cycle must be returned to the original state under its own power by the end of each run."
- Chipping the ball should follow all the rules for legal putting given in "Expected Device Functionality." The primary difference is that the chipped golf ball will travel in the air, not roll along the ground after being struck.
- After the device makes contact with the ball and imparts energy, the ball must not touch the device again until the next attempt to putt or chip the ball at the next location.

Question 6:

- The rules state:
"Students participating in the competition must be undergraduate engineering students, including community college students and students in associate degree programs (any engineering discipline is allowed) and must be ASME student members"

Does the wording suggest that only engineering students would be interested, emphasizing that all disciplines can participate- or is it strict that the students must be engineering and cannot be (for example) a business student that has robotics experience?

Answer 6:

- While the primary audience is undergraduate engineering students, we welcome all undergraduate students who are interested in participating, regardless of their major.
- All students who wish to participate must join ASME, regardless of their major.
- This is a competition intended for undergraduate students only. Graduate students who wish to be involved in the competition are welcome to reach out to ASME to enquire about finding a role.