FREQUENTLY ASKED QUESTIONS

1. What is the size of the Basketball?
   a. The Basketball will be a Men’s regulation ball.

2. What is the weight of the Bowling?
   a. The weight of the bowling ball is yet to be determined. I will update as soon as we have a donated ball.

3. What color is the tape for the goals for challenge 4, the Gather mission?
   a. The colored markers will be electrical tape. The markers go from the center of the playfield to the corners of the goals. The Green tape leads to the goal that is flush with the field (marked by a border of black electrical tape). The Yellow tape leads to the goal that is raised by ¼” quarter round oak (or like material). The Red tape leads to the banker’s box goal. The Blue tape leads to the 2 foot high goal.
2015 Wisconsin Technical College System Robotics Competition

4. What types of tape are being used in the challenges?
   a. Scotch or 3M Blue Tape (Painters tape)
   b. Colored 1” electrical tape (Green, Yellow, Red and Blue)
   c. Black 1” electrical tape

5. What are the dimensions of the Banker’s box?
   a. 12” x 10” x 15”

6. What is the ball bearing size?
   a. ¾” (19mm) and they all will be this size (no assortment)
   b. http://www.amazon.com/Avler-Chrome-Bearing-Paracord-Monkey/dp/B00C7KGVK4/ref=sr_1_cc_1?s=aps&ie=UTF8&qid=1423077868&sr=1-1-catcorr&keywords=avler+3%2F4+%2819mm%29

7. As for challenge distinction, and setting the robot for the correct challenge, are DIP switches allowable? I understand only 1 power switch may be used but what about 1 power switch and 4 other switches to tell the Robot which challenge it is at?
   a. This is a deviation from the original rules. I will allow the teams to change dip switches to tell the robot which mission it is attempting.

8. What is the color of the bowling ball?
   a. The weight of the bowling ball is yet to be determined. I will update as soon as we have a donated ball.

9. What is the straight track surface material?
   a. The straight track will be carpet with a 2” Scotch or 3M Blue Tape (Painters tape) border.

10. If a robot has spikes or metal tracks for traction, will it be legal?
    a. Spikes will not be allowed. Anything that could damage the play field will result in a 25% penalty.

11. Is there a weight limit for the robot this year?
    a. No weight limit.

12. For the “Gather” mission, will there be a numbering order for the goals and will the tape color leading to each goal be given?
    If so, what will be the numbering order for the goals be?
    a. Answer: No numbering. Built as seen below.

    What will the colors of the tape leading to each goal be?
    b. Answer: Built as seen below.
13. What will the units of measurement used for scoring purposes be? Grams-oz-lbs? in-ft? Will the units used be consistent for all missions?
   a. Answer: Yes.
   b. Answer: Units will be consistent.

Units will be in ounces and inches.

14. For mission 4, the rules say “grab” balls. Please define grab. Does the ball have to break contact with the surface and be carried or can a ball be pushed to a goal?
   a. In the gather mission the robot may move the balls any way they seem fit. Push, Pull, drag, lift, carry… are all acceptable means of grabbing a ball.

15. For mission 4, will the balls be placed on the mission surface before we place the robot or after? If we decide to go for a specific ball(Example: bowling ball), can we place the robot directly in front of the ball?
   a. The balls will be distributed after the robot has been placed within the play field.

16. For the “Gather” mission, it says we can place our robot anywhere. If a ball(s) are in our way (Example: blocking access to our desired ball) can we move any ball(s)?
   a. There can be no human interference. The robot may discard balls that are not desired.

17. In the Gather mission is the quarter round facing in or out?
   a. The rounded edge faces into the play field and the flat edge is considered inside the goal.
18. Rule removed: Rule Presentation Information: Rule #7 is removed. The entire team can be at the play field for each competition play.

19. Can the robot grow?

The robot needs to fit in the 18” x 18” x 18” cube at the beginning of the match. The robot can grow during the match.

20. For the Gather mission can your robot place foreign objects in the goal? Also can the robot enter and stay inside of one of the 4 goals?

Yes to both.

21. Do you get docked points if the balls are in one of the raised goals but over the lip of one of the containers?

The balls need to be within the goal perimeter but may extend above the goal. The goal height is infinite.

22. It has come to my attention that the points were not very well spread out based on the formulas. The game rules document has been updated. Scoring will be 100 points max on all missions. 100 points goes to the first place team in the event. Second place get 90 points, third place 80 points, so-on-so-forth.

23. Do all robots complete the missions in the same order? If so, what order? If not, what determines the order? When will we learn our order??

The order of the missions will be randomly selected the night before the competition. The competitors will learn their order at check-in.

24. Compressed gas is not allowed for safety. Does that mean pneumatic tires are prohibited, or can there be an exception? Could a robot include an air compressor to compress room air during the missions, to operate pneumatic components and so on (perhaps if was limited to low pressures, such as 10 PSI)?

Pneumatic tires will be allowed. Pneumatic components will not be allowed.

25. For the gather event, what exactly will the two-foot-high goal be like? Will it be a 24" x 12" x 12" frame made of 1/2" CPVC pipe at the edges, with no actual sides, or is there some kind of 12"-square CPVC pipe that will be used? Will the goal be anchored to the plywood? If so, how? (Basically, can you provide details for us to construct an identical goal to test our robot with?)

Construction details will be provided ASAP. The goal will be anchored with electrical conduit holders to the plywood play field.

26. Is there a reason for the two-points-of-contact rule, or could it be waived to allow a robot that moves around on top of a single sphere or ball? (There would be quite a poetic elegance to a robot balancing on a ball for a ball-centered competition.)
Two points of contact is to prevent flying robots. A ball robot will be allowed.

27. What is the true maximum height to which a robot may lift a ball? For example, how high is the ceiling, or what is the maximum height the judges could measure?

The maximum heights for any ball lift be to the ceiling. The maximum ball lift for the bowling ball will be the height of the light pipe in our student lounge. I will measure that and post it. The bowling ball will have one of the holes filled with epoxy and eye bolt will be inserted. The eye bolt will be attached to a safety rope. The safety rope will wrapped over the light pipe and will be operated by the judge. The teams will not have to worry about the eye bolt interference. If the team and judge agrees that the robot would have successfully grabbed the bowling ball then the judge will place the ball in the robot and the lift will continue. The bowling ball used in the gather mission and the carry mission will not have the added eye bolt. Therefore two different bowling balls may be used the day of competition. The colors of these balls may not be the same.

Update March 5, 2015: 12’9” for bowling ball, 14’5” for any other ball.

28. Will the plywood be painted?

No. The plywood will be purchased and then unmodified. The tape will be added directly to the plywood. If the tape is not sticking then an adhesive may be used.

29. What kind of carpet will be used in the race?

Industrial carpet. Short. The room for competition this year will the student lounge.

30. See FAQ # 27 Update.