



InnovationDay@UTA  
October 22, 2015  
College Park Center

## COMPETITION FAQs

### Rules:

1. Each vehicle must be between 4 in and 8 in.
2. No existing vehicle design is allowed.
3. Teams may use the University's Maker Space, located in the library in the center of campus.

*The judges encourage creativity and the submittal of any questions regarding design, but reserve the right to disqualify designs that patently circumvent the spirit and intent of the competition (e.g., saying that “nuclear waste is not ‘really’ a fluid, etc”).*

### Track Material:

- The track will have an approximate 3” lip around the “sand dune obstacle” to help vehicles stay within the track; the flat portions (6’ straightaways ahead and behind the obstacle) will just be indicated with tape directly on the floor.
- The track will have a vinyl covering—it may be described as having frictional characteristics similar to a linoleum kitchen floor.
- The track is 2 feet wide.

### FAQs

What is the maximum device envelope?

Either 4x4x4 to 8x8x8 inches or one foot square footprint

Are batteries allowed?

No electrochemical (conventional) batteries, but OK for capacitors.

Are CO2 cartridges allowed?

Yes, so long as the gases are not combustible.

Are lighted candles allowed?

No.

What does “design efficiency in the judging rubric mean?

The “design efficiency” in rubric is related only to cost of components, which must bear reasonable market prices (no fair that your uncle gave you a machined block of titanium for free).

Do capacitors count as batteries?

YES, CAPS ARE OK; BATTERIES AS IN ELECTROCHEMICAL STORAGE ARE SPECIFICALLY DISALLOWED.

Is the surface it will travel on smooth?

WOOD PLANK WITH VINYL COVER; SIMILAR FRICTIONAL CHARACTERISTICS TO LINOLEUM KITCHEN FLOOR.

If I grab things from waste/recycling centers or that I already own, does it count towards cost?

YOU MUST REPRESENT A FAIR MARKET VALUE FOR ANYTHING YOU USE, ACCOUNTING FOR THE FACT THAT IT MAY BE SECOND HAND. YOUR UNCLE WORKING FOR NASA COULD DONATE SPARE SPACE SHUTTLE PARTS AND THAT WOULD COST YOU NOTHING, BUT IT'S NOT OK FOR THE COMPETITION.

Is the \$50 cost based on what I purchase from henceforth on for it? Or is it the total item value of the project?

REPRESENT FAIR MARKET VALUE—OK TO PRORATE BASED ON AGE AND QUANTITY (IF YOU BUY \$200 WORTH OF PLASTIC BUT YOUR PROTOTYPE ONLY USES 10% OF THE RAW MATERIAL, THEN THE FAIR MARKET VALUE IS \$20).

What if I own a Lego robotics kit already? Does it count as more than \$50 budget?

COMPETITION RULES STATE NO PREVIOUS DESIGNS ALLOWED, SO YOU MAY NOT COPY AN EXISTING DESIGN MADE OUT OF LEGO PARTS. BETTER TO STEER CLEAR AND DESIGN/BUILD YOUR OWN PARTS. IF YOU DO USE SOME LEGO PARTS, MUST JUSTIFY COST AS PER RULES ABOVE.

Is the \$50 the total cost for the individual model project? What happens if I spend money on one design, completely scrap it and start anew without reusing pieces, does it reset my money spent?

BUDGET ONLY APPLIES TO THE FINAL DESIGN THAT YOU ENTER IN THE COMPETITION.

Does an electrolysis fuel cell count as a battery?

YES SINCE IT IS ELECTROCHEMICAL.

## **Are there other items prohibited at College Park Center?**

Common prohibited items include, but are not limited to, alcoholic beverages, illegal drugs, glass containers, fireworks, laser pointers, coolers, knives, weapons of any type, unauthorized noisemakers, glitter, confetti, streamers, helium balloons, packages or large bags of any kind. All animals or pets are prohibited, except for service animals accompanying guests with disabilities.

## **Have additional questions?**

Please Email: Dr. Raul Fernandez, [fernande@uta.edu](mailto:fernande@uta.edu)

Dr. Fernandez joined UTA's Mechanical & Aerospace Engineering faculty following a continuous 25-year career in engineering practice with the General Motors Corporation and The University of Texas at Arlington. Dr. Fernandez's expertise is in the fields of automated manufacturing/robotics and surgical device development, high-ordered compressible fluid modeling, dynamic simulation, and helium fluid power systems