

California State 4H Robotics/STEM
Event at State Field Day June 1, 2019
at UC Davis 11AM to 2PM



**ROBOT EGG
TRANSPORTER**

**ORANGE ROUND
OBJECT MOVING
MANIA**



4H Field Day Robotics Event: ROBOTIC EGG TRANSPORTER

Go to this you-tube video site for
An example robot entering the
Egg Delivery Robot Event.



<https://youtu.be/U66Lf7nwdzo>

Rules: AUTONOMOUS ROBOTS: The egg is placed in the holder (by hand) at the beginning of the course. The robot must follow the black line to the end of the course and place the egg into a cup filled with water. If an obstacle is placed in the middle of the course, the robot will stop and wait for the obstacle to be removed. The robot must perform this operation three times in a row successfully. The robot teams can place their cup any distance after the black line ends.

Rules: USER DRIVEN ROBOTS: The robot must be able to pick up the egg from the floor and transport it to the cup filled with water three times in a row. The robot must avoid all obstacles put in its path from the egg pick up point to the egg drop off point in the cup of water.

4H Field Day Robotics Event: ROBOTIC EGG TRANSPORTER -SCORING

Safety: The egg must arrive in the cup without damage to the shell of any kind.

Speed: The total time to load, transport, and dispense the egg should be minimized; and must not exceed 60 seconds for a 13 foot, obstacle-free path.

Reliability: It should work correctly – first time; every time. (There will be 3 repeated trials to verify reliable operation.)

Aesthetics: Customer likes “Sleek simplicity” in the appearance of all parts of the system. The basic robot will need to be “dressed up” to appear like a professional product.

Cool Factor: The “Egg’s Here” notification tune will be judged by an “American Idol” Celebrity Judge Wannabee (your instructor)

4H Field Day Robotics Event:

ORANGE ROUND OBJECTIVE MOVING MANIA

A general overview of the
Course is found at the following
You tube web site. The 4H challenge
Will use the same course and hardware
But with different rules. ANY robot,
Not just vex robots are welcome in
This robot activity



https://www.youtube.com/watch?v=IJML1_JNCLI

Rules: AUTONOMOUS ROBOTS: Push all of the orange round objects to within 1 inch of the outer wall. The robot has two minutes to do this. Each orange round object within 1 inch of the outer walls scores 5 points. Each round Object within 2 inches of the outer wall scores 2 points.

Rules: USER DRIVEN ROBOTS: Follow the Vex IQ next level rules but eliminate the autonomous and team activities and allow for two minutes to manipulate the orange round objects.. VEX I-Q robots will be separately scored from non VEX-IQ robot entries. We would love to see many VEX entries from around the state in this competition as well as non-VEX entries to see how they compare.

We would love to see you at State Field Day for our Robotics event. You can also bring your own Robotics demonstration if you do not want to participate Directly in our event.

We will have drop-in robotic Programming activities using scribbler robots for the entire event. Stop by and learn how to program Robots!

We will set up a set of pop-up tents on the campus green For the event. Bring by your robots earlier in the day to Practice the two different course types.

This will be a low stress event and we want everyone to have A successful and positive experience with robots.

More Questions?

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