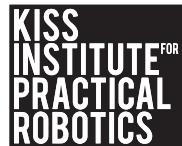


Oklahoma Drone Challenge Day

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Afternoon challenges

Regular challenges

1. Deliver blood to a single hospital
2. Deliver blood to multiple hospitals
3. Flying Art: N-sided Horizontal Polygons
4. Traversing obstacles (flying through hoops)

Advanced challenges

1. Flying Art: N-sided Vertical Polygons
2. Vision Challenge: Looking for a marker
3. Vision Challenge: Using vision to navigate obstacles and land precisely

Recent Drone Advances: Healthcare

- Remember drones delivering blood?
 - Now drones can deliver organs for transplant!
 - Prototyping in the US!
 - <https://dronelife.com/2018/11/20/maryland-tests-organ-delivery-by-drone/>

DRONE ARTICLES

Need a new organ? Perhaps a drone will deliver one for you..



Published 3 weeks ago on November 21, 2018

By Feilidh Dwyer



<https://www.wetalkuav.com/need-a-new-organ-perhaps-a-drone-will-deliver-one-for-you/>

Recent Drone Advances: Food delivery

- Drones can deliver food
- Uber plans a US deployment of this in 2020
- One golf course is doing it already:
 - https://www.youtube.com/watch?time_continue=75&v=4g00KUjlbnE



<https://www.nrn.com/technology/tech-tracker-flying-burgers-coming-soon-backyards-drones>

Recent Drone Advances: Packages for Remote Locations

- First drone delivery network to a remote location



Canada Moose Cree First Nation to get drone deliveries

🕒 3 minutes ago

Share



Residents of a remote First Nation island in northern Ontario will begin receiving goods by drone next year.

https://www.bbc.com/news/world-us-canada-46500367?ocid=socialflow_twitter

Recent Drone Advances: Live Performance

- Intel drones put on a live show with the Rockettes in NYC
 - <https://www.youtube.com/watch?v=RzEE4mHWe74>



Challenge Rules

- All drones must be autonomous (no remote controls or touching the drone).
- **All code must be written by the kids (K-12) on the team and not mentors or coaches or helpers!**
- At any point during a run the team may forfeit the chance for completion during the run by asking an adult to catch their drone. Teams are then allowed to start a new run, time permitting.
- At any time, the catcher on site may choose to catch the drone (even without the team requesting it) if the catcher feels that the safety of occupants of the room or the room itself is at risk.
- Drones must start on the ground and completely inside the starting box. There is no height limit to the starting box.

Challenge Rules

- Controlling laptops do not need to be in the starting box but they must not be touched after the user starts the program other than for the user-input challenges. Any touching of keys that could be considered controlling the drone will invalidate a run, at the discretion of the judge.
- The drone must take off at least 1 foot in the air.
- Drones may fly anywhere within the flight zone (e.g. they may fly far beyond the starting box). The room size will be specified at the event location.
- Only 1 drone is permitted to fly at a time. Teams may change parts or drones or laptops between runs or challenges, but only 1 drone may be on the challenge surface at a time.

Challenge Rules

- Teams will have 5 minutes to complete as many runs as they wish. Time will start after checking in with the judges and will include all set up time. At least one team member must remain with the judge for 5 minutes. Other team members may leave the area to make changes within the 5 minutes.
- If the challenge is not completed within the 5 minute time limit, teams must leave the enclosure area, but can return and retry the challenge later as time allows.

Challenge Scoring

- Judges will be generous
 - We know the sensors are not perfect but be sure to share your code and to get as close to the sensor based goals as possible
- If you are stuck:
 - We have lots of helpers here today to keep you from getting stuck! PLEASE ask for help!! The helpers are OU students and want to see you succeed!

Challenge Scoring

- Everyone gets a certificate of participation
- Each **school** that finishes at least regular challenges 1-3 will go home with a drone
- Any team that finishes ALL regular and advanced challenges should compete in KIPR aerial at GCER this summer!
 - July 6-11 Embassy Suites