

Scientific Research and Design Introduction to Unmanned Aerial Vehicles

Local Course #: 82733

State Course ID: 13037200

Course Description:

The Introduction to Unmanned Aerial Vehicle course is designed to prepare students for entry-level employment or continuing education in piloting UAV operations. The course is designed to instruct students in UAV flight navigation, industry law and regulations, and safety regulations. Students are also exposed to mission planning procedures, environmental factors, and human factors involved in the UAV industry.

Link to TEKS:

<https://resources.finalsite.net/images/v1731429359/kellerisdnet/twfmldlxmtpycjanfxaj8/CareerandTechnicalEducationCTE.pdf>

First 9 Weeks Major Topics:

In the first quarter, students learn about the history of UAVs in aviation and start learning the regulations that the FAA uses to govern UAV flight. The students also create flight logs and learn to fly on our simulators.

Second 9 Weeks Major Topics:

For the second quarter, the students continue to study regulations that are on the FAA 107 test. They build drones for a kit and use QGroundControl to configure them, and also continue to log hours in our simulator and with live flights outside.

Third 9 Weeks Major Topics:

The third quarter focuses on industrial uses of UAVs. This includes working with 3D mapping, LiDAR and point clouds, thermal, and more. The students also continue preparing for the FAA 107 test, focusing on airport operations and weather in this quarter.

Fourth 9 Weeks Major Topics:

The last quarter focuses on finishing preparation for the FAA 107 test. The students also compete in an in-class drone competition, using their knowledge of UAVs to design and program a solution to the given challenge.