



# **NORTHWEST ISD**

## **CTE INNOVATIVE COURSE APPLICATION**

Advanced Small Unmanned Aircraft Systems Course



*NORTHWEST ISD*  
**Career & Technical  
Education**



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# Course Overview

**Course Name:** Advanced Small Unmanned Aircraft Systems (sUAS)

**Grade Level:** 11-12; **Credits:** 2

**Purpose:** To teach advanced theory and operation of sUAS knowledge and skills to empower students to conduct advanced sUAS operations inside the national airspace safely and proficiently using sUAS, training devices, or equivalent simulated situations.

Students will learn:

- Mission Planning & Development
- Aerial Mapping & Modeling
- Aerial Inspections
- Thermal Imaging
- Search & Rescue
- Disaster Response
- Aerial Photography & Videography



# Justification for Innovative Course

1. There is currently no course that takes drone pilots **beyond basic flying** for the needs of real-world jobs.
2. Provides an **opportunity for all Texas high school students** to master the skills and competencies needed to succeed in the drone pilot industry, including aerial inspections, mapping, 3D modeling, thermal imaging and disaster response.
3. **Advanced industry certification opportunities** such as
  - a. International Drone Pilot Certification Association's Advanced Drone Use Cases and Systems Certification
  - b. Airborne Public Safety Association-National Institute of Standards and Technology's Basic Proficiency Evaluation for Remote Pilots Certificate.



# Post-Secondary Alignment

## College Course Alignment:

- SRVY.2005 4D Mapping/Drone Piloting (Weatherford College)
- PHOT 51 Drone Advanced Still & Motion Camera Operator (Mt. San Antonio College)
- Advanced Mission Course (Dart Drones).

## College Degrees Alignment:

- Associates of Applied Science in Small Unmanned Aircraft Systems (Blinn College)
- B.S. Unmanned Aircraft Systems (LeTourneau University),
- B.S. Aviation Science Management with UAS-Drone Concentration (Texas Southern University).
- Mechanical and Aerospace Engineering: Unmanned Aerial Systems, PhD (Oklahoma State University)



# Current NISD Drone Pilot Program



1st Year	2nd Year	3rd Year	4th Year
			
Introduction to Aerospace and Aviation [1 HS Credit]	Introduction to Aircraft Technology [1 HS Credit]	Introduction to Unmanned Aerial Vehicles [1 HS Credit]	Practicum in Transportation Systems [2 HS Credits]

**Student Internships**

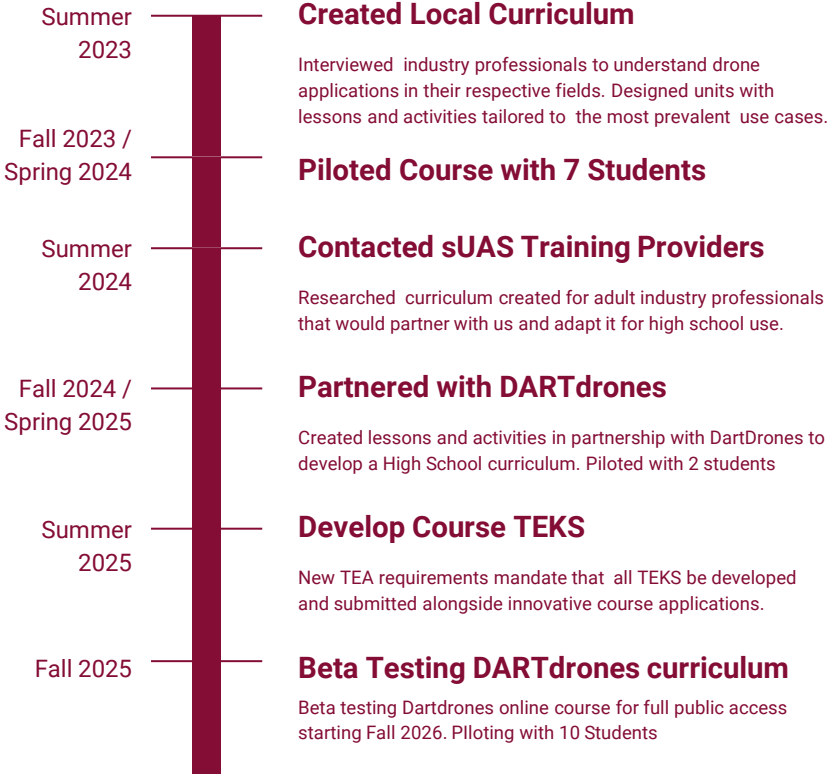
**Student Certifications**

**Expert Instructors**

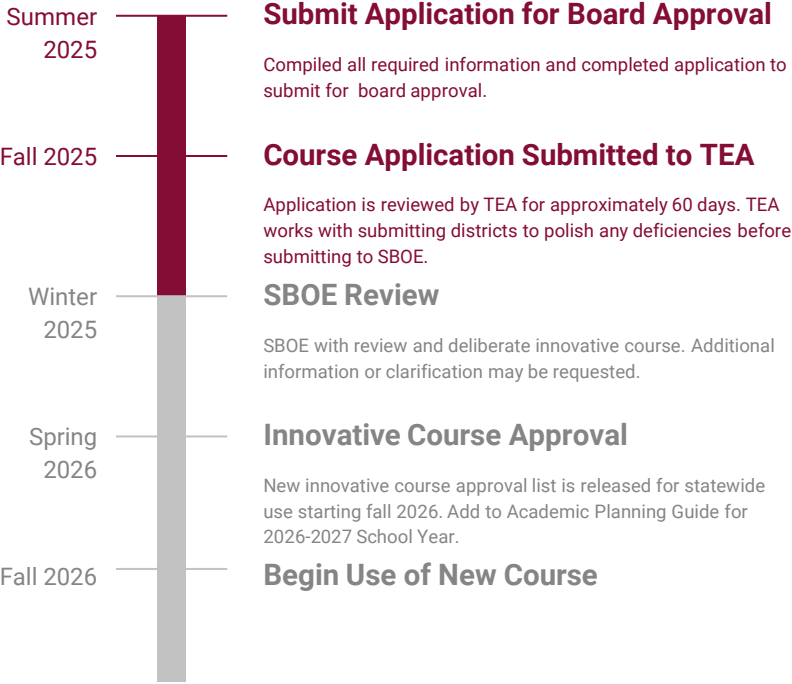


# Innovative Process & Design Work

## Design Process:



## Timeline for Application:



# Questions?



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