

## Introduction to UAS

How to Operate Safely and Legally

### Part 1: Drone Anatomy and Applications



In the eyes of the Federal Aviation Administration (FAA), the colloquial term “drone” is defined as an Unmanned Aircraft System (UAS). The major components of UAS are very similar to that of a manned aircraft, making it vital to understand how these aircraft operate. The FAA has preemptively set rules and regulations for UAS operations that are defined as being hobbies or commercial applications. In this section of the presentation, students will learn the basic components of UAS, and the UAS operational team required for a commercial application. In addition, students will learn how the FAA has outlined and differentiated hobbyist rules from those for commercial operations.

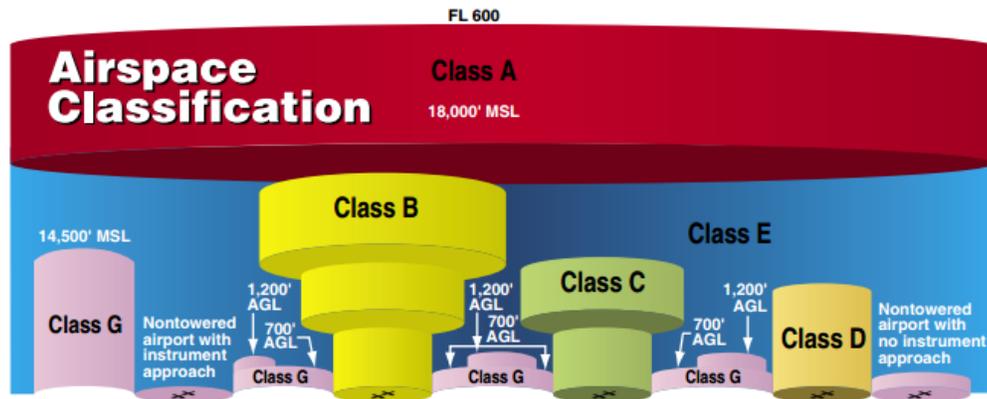
### Part 2: Section 333, CoA, and Insurance Considerations



## Federal Aviation Administration

In order for a commercial entity to legally operate UAS in the National Airspace System (NAS) they must have a Section 333 Exemption and Certificate of Authorization (CoA) from the FAA. In addition, commercial operations will need insurance policies that will cover their operations and any associated liability. Part 2 will clearly define each of these major requirements and how each can be obtained from their respective sources.

## Part 3: How to Safely Integrate UAS into the NAS?



As of 2015, the FAA will only allow commercial entities to utilize UAS that weigh 55 lbs or less. This weight restriction also includes any power source required for the flight operation (e.g., battery, or fuel) as well as payload (e.g., sensors and cameras). The FAA has titled all UAS that fit in this category as small UAS (sUAS), and as soon as these sUAS leave the ground they enter the National Airspace System (NAS) and therefore, FAA jurisdiction. Part 3 defines the NAS, the NAS's different class levels, nationwide UAS regulations, and state-specific UAS laws. Apart from the governmental restrictions, Part 3 will also identify common failures, lapses, and errors during flight operations, as well as useful tools that will help you integrate your UAS into the NAS.

## Part 4: What are Some Opportunities with UAS?



The Association for Unmanned Vehicle Systems International (AUVSI) findings show that within the first three years of integration the industry will have an economic impact of \$13.6 billion in the U.S., and will grow to support more than 100,000 jobs, and \$82 billion by 2025. Part 4 will provide valuable and timely information on the current commercial applications of UAS, and the latest technology and sensor advancements, as well as data collection and analysis software used in UAS applications.