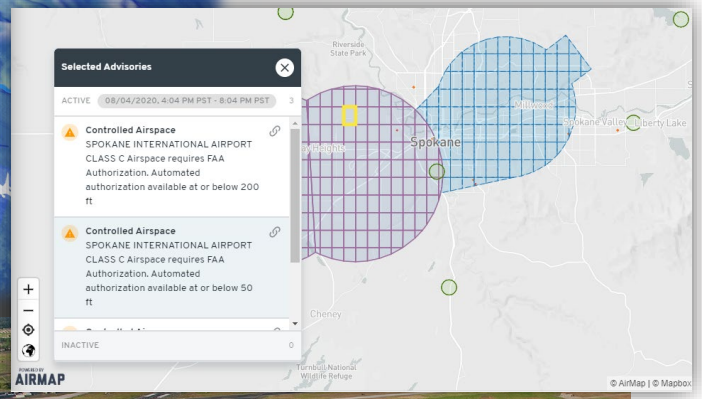
Airspace and Rules of Flight

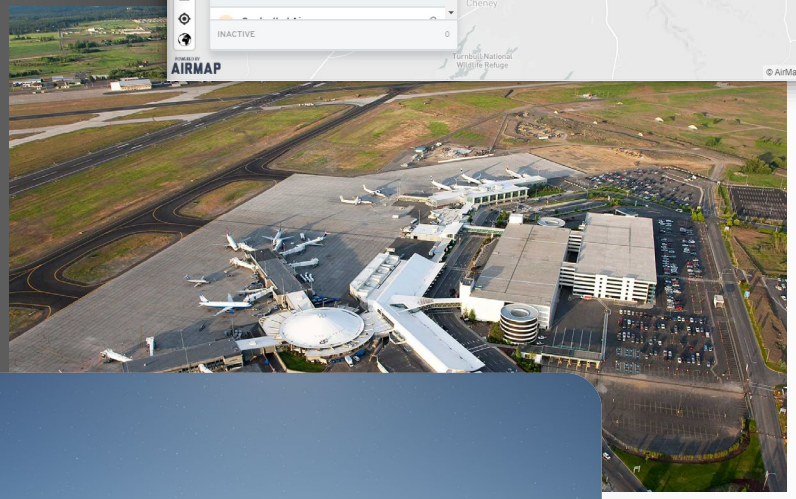
Introduction

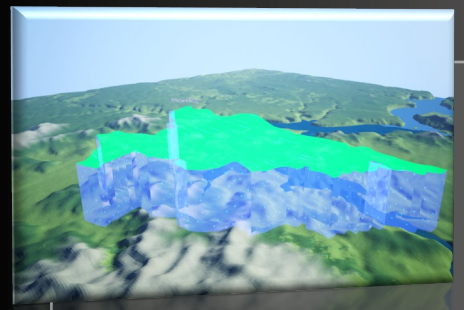
Airspace and Rules of Flight

This module will cover where and when to fly. This includes:

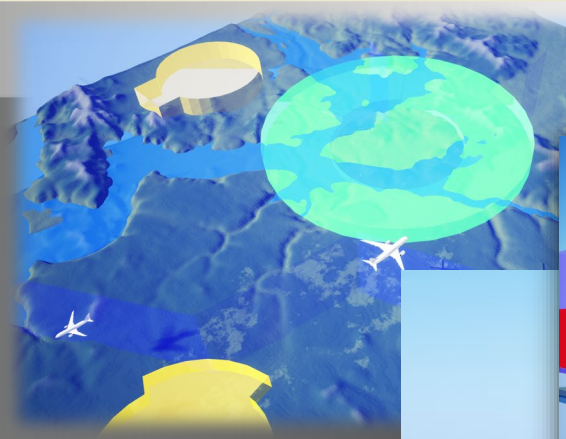
- Airspace Classification
  - The classification of airspace in the United States.
- Airspace Identification
  - The resources available to identify airspace and to determine if unmanned aircraft (UA) flight is allowed.
- Airports & Communication
  - The traffic patterns around airports and information communicated by radio by airports and pilots.
- Rules of Flight
  - The Federal Aviation Administration rules that govern safe flight and collision avoidance.

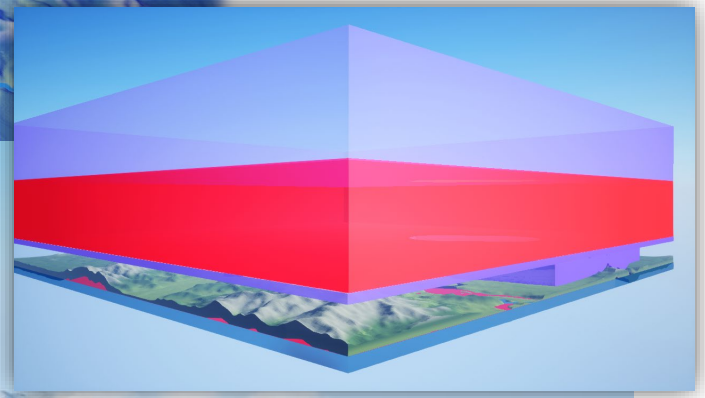


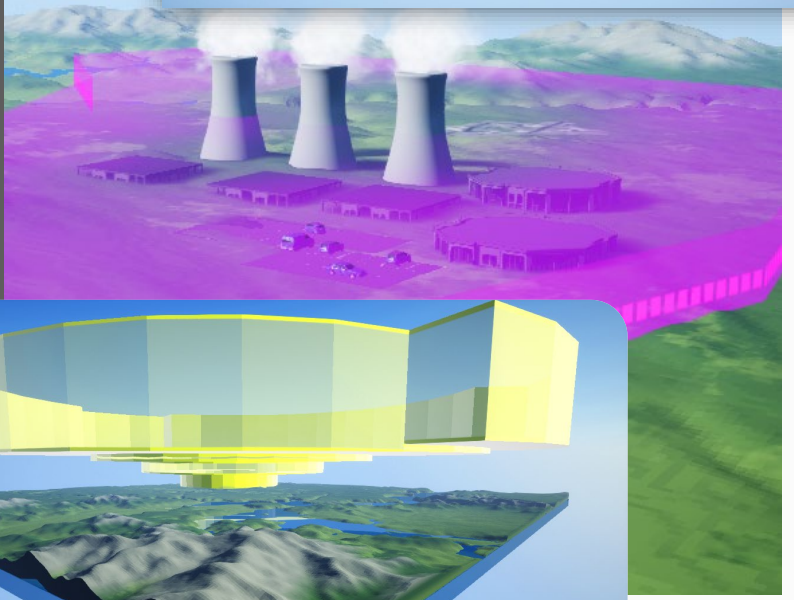




Airspace Classification







There are six types of airspace where operation is either banned, requires authorization, or is hazardous:

- Controlled Airspace: Class A, B, C, D and E.
- Prohibited or banned airspace: Prohibited airspace and Flight Restricted Zones.
- Airspace that is restricted unless permission can be obtained: Restricted, Military Training Routes, Air Defense Identification Zones, and park airspace.
- Airspace where temporary flight restrictions are frequent: Temporary Flight Restriction areas, Military Operations Areas, Warning Areas, and National Security Areas.
- Hazardous airspace, or other airspace where additional caution is requested: National Oceanic and Atmospheric Administration Airspace, Alert Areas and Controlled Firing Areas.

All other airspace is class G, where flight is allowed under 400 feet.

Airspace Identification

There are several means to identify the airspace before flight. These are:

- Charts & Chart Supplements, including Terminal Area, IFR Enroute and Sectional Charts.
  - Sectional Charts are important in understanding airspace structure.
- LAANC, the primary source of information on airspace is the automated system which can be accessed from the FAAs website.
  - LAANC provides Low Altitude Authorization and Notification Capability showing near-up-to-date information on airspace status to allow for flight authorization at certain altitudes and locations.
- NOTAMs or Notices to AirMen, are available from the FAAs website and provide the only fully up-to-date source on Temporary Flight Restrictions.

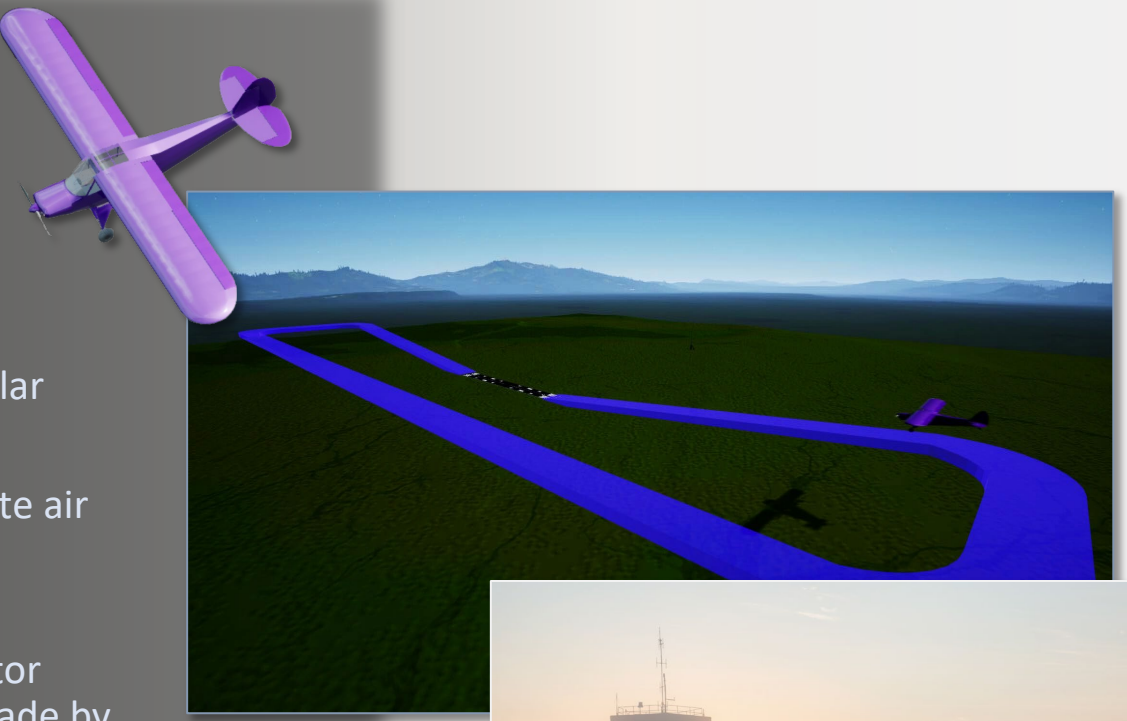
Airports and Communication

When operating in the vicinity of an airport, a UA pilot should understand some basics about airports and air traffic.

- Airports come in many sizes and forms, some without regular runways and serve both civil and government operations.
- Airports may, or may not, have a control tower to coordinate air traffic.

Radio transmissions are used to coordinate air traffic, provide information and aid in navigation around airports. A UA operator should understand the basics of the air traffic transmissions made by aircraft navigating in patterns above the airport.

- General aviation air traffic follows a standard rectangular pattern above most smaller airports.
- Aircraft approaching the airport, landing and advancing through various stages in the pattern typically signal their intentions.



Rules of Flight

Rules of flight provides guidelines for the safe operation of the unmanned aircraft in the context of airspace. Operating the unmanned aircraft safely requires that:

- The airspace of flight must be class G or authorization must be obtained and no temporary flight restrictions may be in place.
- Altitude restrictions must be obeyed.
- The unmanned aircraft must be operated within visual line of sight (VLOS).
- The unmanned aircraft must avoid people and other aircraft, with a few exceptions.

Airspace and Rules of Flight

At the end of this module the student should understand how to safely fly a UA without risk of collision with other aircraft, vehicles, vessels or persons which can be accomplished through obeying FAA directives on airspace and collision avoidance.

The next section will begin with Airspace Classification.