

# Introduction to sUAS

*Northstar Jet,  
UM Autonomous Aerial Systems Office*

## Overview

This course will introduce students to the fundamental concepts of becoming a remote pilot. Students will learn about basic aerodynamic principles, Federal Aviation Regulations, aeromedical factors, and aviation human factors. Students will learn how to interpret and understand weather products, as well as understand basic weather concepts. Air Traffic Control and airspace operations will be discussed to ensure a thorough understanding. Students will also discuss aviation safety and how human factors influence the safety of aviation.

## Course Materials

- **Text:** ASA Remote Pilot Test Prep Guide (provided by Northstar Jet)
- UAS flight equipment/supplies will be provided by the Autonomous Aerial Systems Office (AASO). Participants may bring their own aircraft provided they sign a release of liability.
- **Exam:** Final exam is taken at a designated FAA facility (provided by Northstar Jet)

## Learning Objectives

Upon completion of the course, the student will

- define his or her desire to pursue employment or a career within the aeronautics sector, based on instructors' assessment related to the student's skills and proficiency, and student's personal evaluation of an aeronautics-related career.
- understand the current Federal Aviation Administration (FAA) regulations and requirements that govern, and define, safe and lawful Unmanned Aviation operations within the United States.
- gain an understanding of the working components, systems, procedures and the physics under which unmanned aircraft operate through course work and hands-on experience with UAS flight time.
- gain a detailed understanding of the FAA Small Unmanned Aviation Systems (sUAS) requirements for attaining a Remote Pilot License and be prepared to take the exam at an FAA designated testing center.

## **Schedule of Course Topics and Activities**

The course will consist of lectures and student unmanned aircraft flight operations. This course loosely follows the ASA Remote Pilot Test Prep curriculum as approved by the FAA.

- Introduction to National Airspace System
- National Airspace System and Weather
- Weather Continued
- sUAS Regulations
- Loading and Performance
- Operations
- Sensors and Workflows

## **Learning Assessments**

- Quizzes (10 points/assignments) 7 assignments
- UAS Flight operations 5 maneuvers/5 procedures
- The FAA Knowledge test for remote pilot exam  
(Must obtain a 70% or greater to obtain license)