



Design Systems Training

CRAB Intro to UAV's Class Outline

Objective:

The **CRAB UAV Training Class** course is designed for Washington State County surveyors and engineers who want to learn to leverage off this new innovative technology to vastly reduce the time spent collecting accurate data. By acquiring raster data from the sky – in the form of geo-referenced digital aerial images, with resolutions as sharp as 1.5 cm (0.6 in) per pixel – you can gather millions of data points in one short flight. With collection made so simple, you can focus your energy on using and analyzing data, rather than working out how to gather it.

With such a large increase in the amount of physical data being collected, this does mean an increase in office time spent processing and utilizing this data. However this expansion is cancelled out many times over by the huge time savings a UAV produces out in the field.

Last but not least, less time spent on the ground means that safety is improved by minimizing risk to county surveying crews when measuring locations such as unstable slopes, pit sites and county road realignments. Simply choose take-off and landing locations that are out of harm's way.

Topics and tasks in our process

1. Office Training:

- UAV's and Fixed wing technology
- Basics on Flight dynamics
- UAV vehicle technical parts

2. Software and Firmware Usage

- Downloading the Pre-flight software and Post Flight Software
- Mission Planning and Flight Simulation. Using our UAV flight simulator.
- Plan and save locally different missions

3. Field Base Training

- Checking the weather conditions for flight potential
- Set-up and Take-off Phases
- "Live" Mission with different scenarios
- Mission Control and Abort Techniques
- In-Flight Errors a Critical Warnings

4. Postflight Data Processing

- Description of the Flight Data Software Manager
- Using the Post flight software to manage data.

Prerequisites: Experience with AutoCAD® Civil 3D and a sound understanding and knowledge of survey & civil engineering terminology.