

# Aerial Mapping and Modeling with DroneDeploy Workshop



Elevate your career in aerial mapping and modeling. Develop the skills you need to effectively gather, analyze and export mapping data.

## PREREQUISITES

### 5+ Hours of Flight Time

Not flying drones yet? Check out our drone pilot training courses at [dartdrones.com](http://dartdrones.com).

### Part 107 Certificate

Not FAA Certified to Fly Commercially yet? Check out our in-person or online Part 107 Test Prep courses.

## WORKSHOP SCHEDULE

### DAY 1

Data Collection

- Lesson 1: Intro to Mapping & Modeling
- Lesson 2: Aerial Photogrammetry
- Lesson 3: Getting Started with DroneDeploy

#### FLIGHT SESSION 1:

Collecting 2D Map Data

- Lesson 4: 3D Modeling
- Lesson 5: Using the Map Engine

#### FLIGHT SESSION 2:

Collecting 3D Modeling Data

### DAY 2

Data Analysis and Accuracy

- Lesson 6: Analyzing Your Data
- Lesson 7: Map Accuracy
- Lesson 8: Ground Control Points

#### FLIGHT SESSION 3:

Using Ground Control Points

- Lesson 9: Exporting Your Data
- Lesson 10: The DroneDeploy App Market

## AERIAL MAPPING & MODELING WORKSHOP CURRICULUM

### LESSON 1

Introduction to Mapping & Modeling

- Types of Mapping Data
- Types of Mapping Products
- Platform and Payload Considerations
- Mapping for Construction Mapping for Agricultural Uses
- Mapping for Engineering and Architecture

### LESSON 2

Aerial Photogrammetry

- Principles of Photogrammetry
- Photogrammetric Geometry
- Aerial Triangulation
- Photogrammetric Procedures
- Common Coverage Errors
- Georeferencing
- Spatial Reference Systems

### LESSON 3

Getting Started with DroneDeploy

- DroneDeploy Account Levels
- Autonomous Flight Planning
- Waypoints
- Collecting Nadir Imagery for 2D Mapping

### LESSON 4

3D Modeling

- Collecting Oblique Imagery for 3D Modeling
- Orbit at End of Mission
- DJI Point of Interest
- Manual Collection

### LESSON 5

Using the Map Engine

- Map Engine Processing Options
- Map Engine Data Requirements
- Uploading Datasets
- Accessing the Final Product
- Common Issues in Low Quality Maps

### LESSON 6

Analyzing Your Data

- Layers of a DroneDeploy Map
- Analyzing Evaluation Data
- Performing Volumetric Calculations
- Cut, Fill, and Volumetric Measurement Calculation
- Lowest Point and Best Fit Base Planes
- Adjusting Histogram to Change Elevation Values

### LESSON 7

Map Accuracy

- Relative vs. Absolute Accuracy
- Project Accuracy Requirements
- Survey-Grade Accuracy
- DroneDeploy Accuracy Levels
- Factors that Improve Map Accuracy
- Techniques to Improve Map Accuracy

### LESSON 8

Using Ground Control Points

- Creating GCPs
- Placing GCPs
- Utilizing the GCP Checklist
- Submitting GCPs in DroneDeploy

### LESSON 9

Exporting Your Data

- Export Options in DroneDeploy
- Static Layer Export Procedures
- Custom Layer Export Procedures
- Sharing Your Map

### LESSON 9

The DroneDeploy App Market

App Market for Enhanced DroneDeploy Capabilities, AirMap App, Linear Mapping App, Overlap Optimizer App, PDF Annotation Report, EZRoof App, Quick Map Overlays App, Tensor Flight App, GCP Volume Analysis, KML & SHP Import, Verify App, AirData UAV Sync App

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