



DWS CURRICULUM SYNOPSIS

2019-2020 DRONE/sUAS PILOT TRAINING PROGRAM

70 hours over 10 weeks, 7 hours/week

Anatomy of a Drone and the different types of Drones

1. Class will start with a presentation and a brief overview of the variety of drones available for both recreational and commercial use.
2. Aircraft will be compared and contrasted to show advantages and disadvantages for a variety of applications (i.e., a quadcopter vs a hexacopter).
3. Students will learn the individual components of the drone, both vocabulary and function. Each component will be explained to give an elementary understanding of how they function and their roles in helping the drone operate successfully. This will prepare students for the hands-on build to be performed in the lab ahead.

Acronyms and Abbreviations For the Drone Industry

1. Students will learn the new UAV technology which is flooded with a plethora of new vocabulary giving life to acronyms and abbreviations.
2. UAV operators need to merge with the technical population of the FAA and its large body of pilots. You will be taught the vocabulary and their acronyms which are a must to communicate proficiently when working in this cutting edge field.

Tools for Building and Maintenance of Drones

1. Students will learn the names, purpose and correct use of the tools required to build and maintain a drone.
2. You will be taught the correct soldering techniques, wiring LED's, to choosing the correct adhesive to hold screws together during the normal vibrations of a drone.
3. Students will become proficient at building, troubleshooting, and maintaining a drone.

Introduction to Aerodynamics and Principles of Flight

From fixed wing to rotary wing to multi-rotor drones, all aircraft share the same principles of flight. In this lesson you will explore the principles of flight including Newton's Laws of Motion, Bernoulli's Principle, airspeed, gravity, and all other key topics to help understand flight of the drone. As a drone operator who understands these principles you will be able to make better decisions for safe and efficient flying.

Aeronautical Decision-Making

1. Based on the FAA's official training techniques, ADM (Aeronautical Decision Making) is crucial for you as a drone pilot to grow and become aware of his or her biases when operating a drone. You will learn about your own hidden biases and how to manage them so they do not negatively impact your work.
2. The pressures of performing with a drone in a professional environment to please a client and generate more opportunity to work create a great deal of pressure on you as the pilot. We will show you how to manage this pressure so that it does not take logical and safe

decision making away from you the pilot. ADM gives you strategies to access a situation and make good decisions.

Planning an sUAV Flight

One of the greatest challenges with the increased number of drones around the world is the integration of unmanned aerial vehicles with manned aerial vehicles.

1. This lesson will train the student to study the location of the job site where you will be flying and assess what airspace and responsibilities you have to satisfy FAA regulations.
2. You will independently go through the process with a mock job which will require notifying an airport before they fly.
3. Web based apps will assist you to determine their latitude and longitude.
4. We then help you use another app to determine their distance to the airport and along what radial you will be flying.
5. You will be provided with a worksheet template which will help you collect all of this information and prepare to make the phone call to the control tower of the local airport.

Aerial Photography & Videography

1. Students will learn the fundamental concepts for photography and videography on the DJI GO App.
2. You will learn about light, shutter speed, lens filters, and how to position yourself to get the right shot (light is crucial).
3. You will be assigned a project for you to collect video and photos for an in-class project.
4. Students will use their own video and photos to create a film simultaneously as they are instructed by a teacher step-by-step. This will be a hands-on class and crucial lesson for the course.
5. In addition, you will learn the importance of a "storyline" in producing an efficient video from start to finish.
6. This also includes how to apply music to your video as well as where to go to get free music.

3-D Mapping from the sky - Drone Deploy

One of the greatest tools that a drone offers is 3D mapping to create an interactive map allowing engineers to calculate measurements from the final product.

1. You will learn about 3D mapping and how to create and calculate measurements for your client's project.
2. This class will start in the classroom and then move outside for a demonstration.
3. We will give you a variety of software companies that offer this application.
4. These variations will be compared and contrasted (DroneDeploy vs Pic4D).

FAA Requirements

1. In this class students will learn the legal requirements, rules and regulations of the Federal Aviation Administration (FAA).
2. We will teach you Part 107, the guidelines for drone use, ("Know Before you Fly"), the types of authorized UAS Ops and required documents, the U.S Dept. of Transportation FAA Advisory Circular, among others. The information learned will help students take the FAA's aeronautical test which is required to be a drone operator.

Entrepreneurship: Operating a Drone Business

www.generationwealthcoach.com

1. In this class students will learn the ingredients to start their own drone company should they ever want to take that step.
2. We also provide a sample contract for both a client and a subcontractor, explain the legal language and what the terms and conditions say and how they protect the operator.
3. Each student will receive documents from:
 - Wealth class 1: Generating Wealth
 - Wealth class 2: Credit Repair
 - Wealth class 3: Tax Benefits to starting your own drone business
 - Wealth class 4: How to start and Finance your drone business
 - Contracting with and between sUAS operators
 - Review an agreement for Drone Services

Gen Wealth CLASS 1 – How to Generate Wealth

1. In this 2-Part series, you will learn about wealth, what wealth is, who really has it and the difference between generational wealth and generational poverty.
2. You will receive enlightening statistics and valuable information on household income, national and worldwide wealth; illustrating the proposition because of the lack of knowledge, how families are missing out on key opportunities that keep them from moving ahead financially.
3. Capital markets and investing.
4. We will encourage, empower and equip you to teach your family how to acquire wealth, how to keep it and most importantly, how to transfer it to the next generation.

Gen Wealth CLASS 2 – Credit Repair

Setting goals and living within your means is crucial for achieving a healthy financial life.

1. In this class you will learn what is a "credit score", why it's important, what affects it and why maintaining your "credit report" vital?
2. You will learn ways to "repair" your credit and to raise your score by following THEO's simple Credit Repair Plan.
3. You will be shown how to apply these tips and how they will improve your credit score dramatically, giving you access to lower rates on loans, mortgages, rentals, and even employment.

This valuable information is one of the most important things you can do to begin creating generational wealth for you and your family and will ultimately affect your life, **“FOR LIFE”!**

Companion Documents

Course Outline

Credit Repair Plan of Attack

Smart Goals Worksheet

Wealth Coach Basic Monthly Budget

Guide to Becoming a Millionaire from birth to 64 years of age

Gen Wealth CLASS 3 – Tax Secrets

Learn some surprising deductions to ask your accountant about:

- Possibilities on buying gas as low as the equivalent of 11 cents/gallon
- Why having a home office is deductible and really pays off
- Deductions on personal vacations and trips to visit family

- Deductions for car payments and expenses, cell phones, personal computer, insurance, meals, entertainment, airfare, etc.
- How to pay your children for work and get money back

These legal deductions really can bring thousands of dollars back to you and your family!

Companion Documents

Course Outline

Example of savings by Business Owners

Gen Wealth CLASS 4 – How to Start and Finance your Business

Learn how to start your own company without spending hundreds or even thousands of dollars on a lawyer.

1. Get a basic understanding of the different types of companies and learn which one is right for your business.
2. You will be taken step by step to show you exactly what you need to incorporate your company. The form you need is simple and its included!
3. There are many resources to obtain the funds to start your business. We will explain 13 ways to find the money.
4. There are many tax benefits that may surprise you. This class is packed with information to get you started on the right track and contribute to the success of your business and build your confidence as a drone entrepreneur.

Companion Documents

Course Outline

Business Entity Types

Corporation Order Form

Workshops and Labs and must have websites

1. Students will learn how to build a drone hexacopter and quadacopter for basic understanding on parts and troubleshooting.
2. We will put students on laptop flight simulators to learn how to fly a drone in various terrains and situations.
3. The students will get hands-on experience learning how to fly their drone in the field in various conditions.
4. We will teach you how to capture both video and photo images and how to take the raw footage and edit it, put music to it and tell a story.
5. Students will perform mock interviews in class on how to get work from potential clients.
6. We will give the student a final assessment project which will help learn strengths and challenges so you can begin to work on them once the class concludes.
7. We will provide the important websites and links to put on your cell phone or ipad in order to be a safe and efficient drone operator.

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