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RPAS TECHNICAL & OPERATIONAL SKILLS

TASK FORCE PRON

ACCREDITATION

TRANSPORT CANADA ADVANCED RPAS PILOT CERTIFICATE

For Remotely Piloted Aircraft Systems 250g up to and including 25kg, operating within Visual Line of Sight (VLOS)

ADVANCED RPAS GROUND SCHOOL

In accordance with the Transport Canada TP-15263 Knowledge Requirements

INDUSTRY SPECIALIST MICRO-ACCREDITATION

To meet potential employer needs - specialist training in identified RPAS solutions

ASSESSMENT METHOD

We will assess your progress throughout the course through competency based evaluations, continuous feedback, and a series of short multi-choice exams. This will help you apply, analyze and evaluate your own understanding of the material.

INDUSTRY RECOGNIZED QUALIFICATION

Our team works with Transport Canada and the FAA to future-proof RPAS regulations. As a result, we can provide the North American RPAS Operations training standards of excellence in skills and expertise.

COMMERCIAL QUALIFICIATIONS

The ADVANCED Transport Canada Pilot Certification is the minimum expected qualification for professional RPAS operations. You will need to add specialization skills and work with experienced crews to move forward with your career in the RPAS service and solution industry.



A MESSAGE FROM OUR CEO

At Volatus Aerospace, we take pride in the work we do and the service we deliver. Many of our team are Veterans, and my son proudly serves as a Major in the Royal Canadian Artillery stationed in Petawawa. The drone industry is expanding exponentially every day. New use cases arrive regularly as more people realize the benefits that drone technology delivers. Our business is growing coast-to-coast, and we realize that we need to train drone pilots who share our standards of safety, quality, and excellence. Veterans possess years of field training, leadership principles, and a mindset that is ideal for the challenges drone pilots face. We look forward to working with you. - Glen Lynch

MISSION

Our mission is to train Veterans and Military Family Members in RPAS Operations and Technical skills so that they can find meaningful and well-paying jobs in the industry.

VISION

Our vision is to be the leading Canadian Pilot Network with a reputation for unparalleled excellence and provide a career funnel for releasing military members.



COURSE DETAILS

HYBRID DELIVERY

Self-Paced Study Online with Live Classroom Webinar | 4 Days of In-Person Training

OBJECTIVE

This program aims to build an expert RPAS workforce that can find well-paying jobs in the Canadian RPAS service industry. We expect our successful students to be employed in the industry within six months of qualifying. We will promote the course nationally and successful students will be recognized as holding a valuable industry qualification.

COURSE FEES

Cost is \$5,000 including the Mavic Mini 2 Fly More Combo.

DRONE NEEDED

It is important that all students practice their flying skills. We will set regular NIST challenges for students. The DJI Mavic

Mini 2 weighs less than 250g and as such is easier to fly more often than larger drones.

DISABILITIES

Volatus is committed to providing reasonable accommodations for all persons with documented disabilities. If you need support or assistance due to a disability, please contact your instructor for assistance.

EQUAL

This course is designed for Veterans and Military Family Members. No person shall be denied any training activity on the basis of any legally prohibited discrimination involving such factors as race, color, creed, religion, national or ethnic origin, citizenship, ancestry, sex, gender (including identity or expression), sexual orientation, marital status, or age.





PROGRAM OUTLINE



BASIC WORKBOOK

The Transport Canada BASIC Remote Piloted Aircraft System ("RPAS") workbook will introduce you to basic drone regulations and guide you through the initial certification to fly an RPAS in Canada.

BASIC RPAS	DUTLLINE Tor basic operations, you need to take the <u>online</u> <u>exam</u> , if you pass the Small Back Exam, you auromatically receive your Pilor Certificate - Back perations, You can download and print your certificate through the <u>Drone Management Portal</u> .
WORKBOOK	The Online Fee is \$10 All pilots of drones or "Remotely Piloted Aircraft Systems (RPAS)" with a maximum takeoff weight of 250 grams up to and including 25 kilograms must pass an online exam.
	To conduct <u>basic operations</u> , you must past the <u>Small Basic Sam</u> . This is the only knowledge requirement for basic operations. To conduct <u>advanced Sperations</u> . To conduct <u>advanced Sperations</u> of the <u>Sperations</u> of the <u></u>
	Learn more about Starch Partner and Govern- ment Starch hov Vertiled Me Penalties If you fly a drone without meeting these require, if you fly a drone without meeting these require, ments, you may be fined. Fines are: 51,000 for recreational users Starch and Starc
1 VOLATUS BASIC RPAS GROUND SCHOOL	VOLATUS BASIC RPAS GROUND SCHOOL 2





REGULATORY

Students will be taken through the Advanced RPAS knowledge requirements using a workbook designed with resources, regular knowledge checks and online tuition. NIST exercises will be assigned for practice with regular assessments on progress.

These elements will be taught through online resources/sessions and self-study, with assessments. 35 hours of online self study material includes: Canadian Aviation Regulations, Flight and Aerodynamic Theory, Aeronautical Safety, Essentials of Meteorology, Aerodromes and Airports, Operating and Flight Rules, Aeronautical Maps and Charts, Air Law, Communicating with NAV CANADA, SFOC Application Process, Insurance Requirements, Radio Operators Certification, Flight Operations, Flight and Mission Planning, Pilot Navigation, Dealing with Emergencies, Weather Constraints, Human Factors, Airspace Recognition, and Pilot Discipline.

LESSON PLAN

• TP15263 Knowledge areas required by Transport Canada for RPAS Pilot Certification (following on from the self-study material)

- 02. Site Surveys, Checklists & Basic RPAS controls
- **03.** Flight Exercises & Assignments to do at home with your DJI Mini 2





FOUR DAY PRACTICAL

Four day Practical Training will build on the knowledge students learned in previous lessons. Students will apply their knowledge with hands-on training exercises.

LESSON PLAN

- O1. Introductions, document checks, Housekeeping, Safety Protocols | Flight Review Guide, Site Surveys, Checklists, SOP's, CARS IX Review | Mavic Series RPAS Basic Setup, Control, Function & Calibration | Basic Piloting & Flight Review Skills Practice Routines
- **02.** Basic Aerial Photography & Videography Principles | Cinematic Video Capture Techniques | Basic Data Workflows (Photo Editing, Video Production) | RPAS Accessories (Prop Guards, Payload Release, Parachute etc.) | Advanced Piloting & Skills Practice (NIST) & Flight Reviews
- **03.** Introduction to Drone Thermography | Introduction to the DJI Matrice 300 RTK & Payloads | Basic RPAS Inspection Techniques | Introduction to Fixed-Wing RPAS systems & Multispectral Sensors | Advanced Piloting & Skills Practice (NIST) & Flight Reviews
- **O4.** Mission Planning with the DJI Pilot App | Introduction to RTK GNSS Positioning | Image Stitching & Point Cloud Construction using DJI Terra | Search & Rescue Techniques with Third-Party apps (Highlander & Loc8) | Advanced Piloting & Skills Practice (NIST) & Flight Reviews | Q&A, Debrief & Graduation





ON THE JOB

One of the critical elements of any pilot's training is in the field. Once qualified through the Volatus Task Force Drone training program, it is vital that participants work with our expert teams on jobs and face the challenges of real-time data capture.

As we expand our network and service provision coast-to-coast, North and South America, qualified and experienced pilots will become more and more critical for our business. This may mean further training in GIS (geographical information systems), third-party photogrammetry products, or more time working with our videography/cinematography experts



NEED TO KNOWS

JOBS | MENTORING

We will invite successful students to join our pilot network and introduce them to our services division, who regularly employs pilots across Canada. Mentoring is an important aspect of this new industry, and we take pride in supporting new commercial RPAS pilots.

DELIVERY

The training program is delivered both in the classroom and outside. The course includes increasingly complex piloting skills training with various drone systems used in industry with regular piloting skills practice both outside and inside facilities.

EVALUATION OF PRACTICAL SKILLS

All practical training skills evaluations (other than the flight review) are based on the minimum Standard Test Methods for Small Unmanned Aircraft Systems from the National Institute of Standards and Technology (NIST) U.S. Department of Commerce.

NIST

We use NIST (National Institute of Standards & Technology) for teaching and evaluating maneuvering and payload funcationality in RPAS Operations.

