

# Hybrid Master's Degree Drone Piloting





## Hybrid Master's Degree Drone Piloting

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

Website: [www.techtitude.com/us/engineering/hybrid-master-degree/hybrid-master-degree-drone-piloting](http://www.techtitude.com/us/engineering/hybrid-master-degree/hybrid-master-degree-drone-piloting)

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# 01

# Introduction

The technological paradigm calls for professionals with in-depth knowledge in Drone Piloting, a spatial and strategic vision and the capacity for analysis and synthesis that can adapt to changes. This indirectly forces these specialists to master Drone Piloting techniques, as well as the characteristics of their flight in open and specific categories. For this reason, TECH has developed a rigorous program, which has a theoretical-practical period 100% online and a completely practical instruction phase of 3 weeks in a prestigious company. A unique opportunity for those seeking to differentiate themselves from the rest of the experts, becoming a pilot ready to take on all kinds of challenges in the aerial operation of this type of devices.





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*Delve into the most important issues of Drone Piloting from a theoretical and practical perspective and become a more competitive professional in this sector"*

The versatile characteristics of drones make these devices a useful tool in aerial services. Today, their application extends from airports, where drones control access and serve as bird deterrents, to the presence in seaports, for surveillance of vessels and monitoring of port facilities. In addition, its use is already applicable in emergencies and in crowded places, such as concerts or sporting events, for surveillance and medical assistance operations that offer a faster route and can provide on-site treatment.

The specialists who are dedicated to this area are right now with a great projection of their profession for the coming years. This increases the market demand for drone pilot specialization. For this reason, it is increasingly important to distinguish yourself from other professionals competing for the same job. Specialists seeking to work in this area must be proficient in navigation and map interpretation, meteorology and human factors for remotely piloted aircraft, operational procedures and communications.

In line with its academic rigor, TECH offers this Hybrid Professional Master's Degree in Drone Piloting for professionals who are looking for a complete theoretical and practical learning about dangerous goods and aviation. The program's syllabus covers basic terms and the legislative framework for longitude, latitude and positioning; atmospheric and meteorological phenomena that influence flight; the legal framework for the transport of dangerous goods; and the theoretical and technical requirements for the radio operator qualification for remote pilots, among many other issues.

In addition, TECH's 100% online teaching methodology allows students total flexibility, so that they can combine the program with their other activities. Likewise, all the knowledge provided in the first instance, will also be developed with the flight practices throughout 3 exhaustive weeks. 120 hours of intensive practice that will train specialists to develop flight plans, coordination and CTR flights, among many other aspects.

This **Hybrid Master's Degree in Drone Piloting** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of more than 100 flight simulation cases presented by instructors based on state-of-the-art aircraft
- ♦ Its graphic, schematic and eminently practical contents, with which they are conceived
- ♦ Proficiency in the basic terms and legislative framework of longitude, latitude and positioning
- ♦ Know the different atmospheric and meteorological phenomena that influence a flight
- ♦ Knowledge of the legal framework for the transport of dangerous goods
- ♦ Theoretical and technical requirements for radio operator qualification for remote pilots
- ♦ Knowledge of the clinical limitations preventing the use of remotely piloted aircraft
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ In addition, you will be able to do an internship in a prestigious company in the sector



*Enroll now to get all the knowledge about operational procedures and learn with the latest pedagogical tools in an emerging sector"*

“*With this Hybrid Master's Degree you will be able to master all the essential aspects to perform all types of aerial operations with drones*”

In this Hybrid Master's Degree proposal, of professionalizing character and blended learning modality, the program is aimed at the flight instruction of professionals interested in Drone Piloting. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge in flight practice, and the theoretical-practical elements will facilitate the updating of knowledge and will allow decision making in piloting.

Thanks to its multimedia content developed with the latest educational technology, they will allow the engineer a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations. The design of this program focuses on Problem Based Learning, through which the student will have to try to solve the different professional practice situations that will arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*This program will allow you to delve into a practical way in aspects such as the transport of dangerous goods or the operation with drones in different meteorological situations.*

*Get the most complete training to pilot drones. Enroll now and advance your career in this important sector.*



# 02

## Why Study this Hybrid Master's Degree?

The current market, motivated by the boom in the use of drones in the commercial, photographic and even in the transport of goods, launches every month thousands of opportunities for professionals in this field. For this reason, TECH has considered it necessary to develop a program that focuses on the exhaustive training of its management, from the basics to the more specialized knowledge of an expert. In this way, through a complete, avant-garde, dynamic and, most importantly, dynamic program that allows to apply everything learned in reality, the graduate will be able to perfectly master Drone Piloting in only 12 months.



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*A program that will deepen your knowledge of aeronautical safety studies for piloting at the highest level"*

### **1. Updating from the latest technology available**

As it cannot be otherwise, the graduate who decides to enroll in this program will find the most innovative technology, both academic and professional, for the updating of their practice, as well as for the improvement of their skills in the handling of drones. This is a unique opportunity to access the latest aircraft models, with special emphasis on their characteristics and the most effective usage strategies for each.

### **2. Gaining In-Depth Knowledge from the Experience of Top Specialists**

The graduate will have the support of a teaching team versed in the area of Drone Piloting during the theoretical period, as well as the tutored assistance during the internship by an expert in the exhaustive handling of these devices. In this way, not only will you be able to resolve any doubts that may arise during the academic experience, but you will also be able to take advantage of their help to get the most out of this Hybrid Professional Master's Degree.

### **3. Entering first-class Management environments**

The company in which the graduate will carry out their practical training will guarantee his participation in all the tasks to be carried out during the 3 weeks, allowing them access to both the maintenance and piloting areas. In this way, the graduate will be able to broaden their skills in a multidisciplinary way, implementing aspects related to mechanics, feeding or stabilization according to atmospheric conditions into his or her praxis and curriculum.





#### **4. Combining the Best Theory with State-of-the-Art Practice**

The Hybrid Professional Master's Degree in Drone Piloting is, without a doubt, the undisputed choice for anyone looking to become versed in this sector. This is a unique opportunity to work on the theoretical knowledge of this area in a deep and exhaustive way, culminating the learning experience with a practical stay in which you will be able to apply all the guidelines, fixing the techniques and implementing the best strategies for your professional performance.

#### **5. Specializing in a booming area through the best professionals**

TECH offers the opportunity to carry out this internship in a top-level company. Therefore, taking this program is a unique opportunity that graduates cannot miss, not only because of the high degree of specialization they will acquire, but also because they will have access to the best and most innovative equipment. Because of this, they will be able to dominate the labor market through an unparalleled professional activity endorsed by an institution of international reference.

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*You will have full practical immersion  
at the center of your choice”*

# 03 Objectives

This Hybrid Master's Degree in Drone Piloting has been created with the main objective of providing professionals with interest in drone flight, the latest piloting techniques and emergency approach with these unmanned vehicles in various scenarios. In addition, the syllabus has been developed by a specialized team with extensive experience in flight instruction to transmit all the theoretical and practical knowledge to the specialists. Thanks to their collaboration, students will learn about the regulations and documentation required for the flight of these devices and the protocols to ensure safe environments for their use.



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*If your goal is to develop as a Drone Pilot this program is for you. Take advantage of this opportunity and enroll now"*



### General Objective

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- This program includes an exhaustive update on the practice of professional safe flights in different scenarios, following the normal and emergency procedures established in the Operations Manual. In addition, TECH has oriented the program towards the practice of test flights, necessary for the development of air operations following the indications of the manufacturer's maintenance manual and current legislation, as well as in the work procedures involved in each intervention, both flight and maintenance. At the end of this intensive theoretical and practical training, students will be able to evaluate situations of occupational risk prevention and environmental protection, proposing prevention and protection measures, personal and collective, in accordance with the applicable regulations in emergency and safety work processes. Thanks to this, professionals will be able to assess risks from the air and provide a wealth of information for the actions and work of other professionals on the ground





## Specific Objectives

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### Module 1. Aeronautical Regulations in Spain for RPAS Pilots

- ♦ Specify the legislative basis of the the general and specific aeronautical environment in Spain, based on the reliability of the sources of information for its interpretation and application in different operational scenarios BORRAR
- ♦ Apply the knowledge acquired to professional flights, following safety criteria for people and goods
- ♦ Develop the ability to put into practice the guidelines published by the aviation authority
- ♦ Identify and apply current regulations as a basis for specialization
- ♦ Update on the future legislative contents on normal and emergency procedures in the different phases of flight

### Module 2. Aeronautical Regulations in Latin America for RPAS Pilots and Operators

- ♦ Specify the legislative basis of the generic and specific aeronautical environment in different countries in Latin America, based on the reliability of the sources of information for its interpretation and application in different operational scenarios
- ♦ Apply the knowledge acquired to professional flights, following safety criteria for people and goods
- ♦ Develop the ability to put into practice the guidelines published by the aviation authority
- ♦ Identify and apply current regulations as a basis for specialization
- ♦ Update on the future legislative contents on normal and emergency procedures in the different phases of flight
- ♦ Identify the aeronautical authority of each country, its limitations and criteria for the development of professional flights in each location

### Module 3. Navigation and Interpretation of Maps

- ♦ Interpret the different projections of the earth to apply them to different aircraft positions
- ♦ Navigate the aircraft safely by hand, knowing the position of the aircraft at all times
- ♦ Navigate the aircraft automatically and safely, knowing its position at all times and being able to intervene in any phase of the flight
- ♦ Gain in-depth knowledge of the different navigation aids, their sources and applications
- ♦ Implement navigation aids
- ♦ Develop the ability to take into account the limitations that each legislation publishes, in order to carry out flights in safe conditions

### Module 4. Meteorology

- ♦ Develop the capabilities, skills and aptitude in this discipline
- ♦ Differentiate the quality of the sources when gathering aeronautical meteorology information
- ♦ Interpret the different meteorological products for their application in flights to be performed
- ♦ Apply the knowledge acquired in each phase of the flight
- ♦ Prevent possible adversities to which the flight may be subjected

### Module 5. Human Factors for Remotely Piloted Aircraft

- ♦ Acquire an integrated vision of aviation psychology and medicine
- ♦ Gain in-depth knowledge of the situational causes and consequences related to the remote pilot profession
- ♦ Adapt to new work situations generated as a result of the means and aeronautical techniques used, labor relations and other aspects related to the specialization
- ♦ Maintain fluid relations with the members of the functional group in which they are integrated, taking responsibility for the achievement of the objectives assigned to the group, respecting the work of others, organizing and directing collective tasks and cooperating in overcoming the difficulties that arise
- ♦ Solve problems and make decisions within the scope of their subordinates' and their own achievements, within the framework of established rules and plans

### Module 6. Operational Procedures

- ♦ Establish procedures as a fundamental basis for flight and air operations
- ♦ Develop a critical capacity and prioritize flight safety and the review of procedures in accordance with the company's internal legal formalities and external aviation regulations
- ♦ Acquire an overview of the Operations Manual; and make it a particular Procedure Guide Observe it and communicate any possible improvements through the regulatory channel
- ♦ Identify and respect the different operational scenarios in which we are going to carry out our aerial activity
- ♦ Understand the responsibility of being flight personnel: both pilot and observer
- ♦ Understand how to become an operator
- ♦ Be sensitized to record flight times and aircraft maintenance
- ♦ Inform the pilot of the maintenance of their competence as a pilot
- ♦ Specialize in operating procedures and qualifications

### Module 7. Communication

- ♦ Define and know the characteristics of waves and their transmission
- ♦ Identify the bands of frequency and know their main characteristics. Aeronautical bands of frequency
- ♦ Identify and know the types of wave: Radio waves Ground waves Celestial waves
- ♦ Know and identify the main components in a radio transmission and the elements that make up a transmission
- ♦ Identify the different categories of the messages
- ♦ Using the phonetic alphabet Transmission of letters and numbers Decimal numbers Identifiers
- ♦ Use the structure and components of standard communications Communication structure Message order Listening
- ♦ Correct application of transmission techniques Microphone techniques Message transmissions Message collation

- ♦ Describe and use standard phraseology. Messages and use in air traffic and general air travel
- ♦ Gain in-depth knowledge of the different types of aerodromes and the types of transmission used in each of them: controlled and uncontrolled aerodromes Controlled and uncontrolled aerodromes
- ♦ Comprehend and implement emergency procedures Description and practice of the procedures Danger conditions Content of distress messages Radio silence Powers of the competent authority
- ♦ Prioritize and implement emergency procedures

### **Module 8. Dangerous Goods and Aviation**

- ♦ Develop a critical capacity in accordance with the legal procedures to comply with legislation
- ♦ Establish the appropriate procedures for this type of goods, as a fundamental basis for the specialized transportation requirements
- ♦ Identify possible anomalies, intentional or unintentional, and take action to protect the integrity of people and property
- ♦ Provide technological procedures in order to optimize the processes necessary dangerous goods transportation

### **Module 9. Engineering Technology in Flight**

- ♦ Acquire an overview of the design of a drone based on a concrete example
- ♦ Acquire sufficient skills to perform safe flights, integrating all phases of flight and demonstrating the relevance of design and technology
- ♦ Acknowledge the importance of adequate flight preparation to ensure a safe flight
- ♦ Acquire responsible habits regarding the basic and mandatory maintenance of aerial platforms
- ♦ Register the flights in the corresponding books

### **Module 10. Integration of Drones for Industry and Practical Uses**

- ♦ Applying specific procedures to aerial filming
- ♦ Design and organize, for later use, the most specific modes of action in order to obtain the desired end product: images in the air and on the ground, both indoors and outdoors
- ♦ Perform a variety of tasks applied to technical and scientific work: filming, risk assessment, inspections, surveillance and security, and search and rescue using advanced engineering techniques
- ♦ Manage the images generated in the various scenarios in a complete and specific way
- ♦ Prepare formats for different purposes: conversion, delivery to the final customer, social networks



*Don't wait any longer, increase your skills in the methods of action according to the characteristics of the flight scenarios and become one of the professionals of the future"*

# 04 Skills

The incorporation of drone equipment now covers a large area of application that was inconceivable years ago. This includes its use in the civilian field, such as traffic and the door-to-door sales sector. The great possibilities offered by these instruments go hand in hand with the high demands placed on the professionals who control them. The specialists of the future must not only master its structure, but also know how it works and flies. The fact of including teachers with extensive experience in the aviation field means that the theoretical contents are complemented with real practical cases based on their own experience. All this, with the aim of expanding the specialist's skills and projecting their professional career towards the technological, social and cultural advancement related to drone flight.



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*Master the most demanded professional skills as a drone pilot thanks to this Hybrid Professional Master's Degree"*



## General Skills

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- ♦ Master the global environment of drone flights, from the international context and markets, to project development, operation and maintenance plans and sectors such as insurance and asset management
- ♦ Apply acquired knowledge and problem-solving skills in current or unfamiliar environments within broader contexts related to drone flights
- ♦ Integrate knowledge and gain a deeper vision of the different uses of drones, as well as the importance of their use in today's world
- ♦ Know how to communicate design, development and management concepts of the different drone flight systems
- ♦ Understand and internalize the scope of digital and industrial transformation applied to drone flight systems for efficiency and competitiveness in today's market
- ♦ Be able to critically analyze, evaluate and synthesize new and complex ideas related to the field of drone flights
- ♦ Be able to promote, in professional contexts, technological, social or cultural progress within a knowledge-based society





## Specific Skills

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- ♦ Perform safe flights being familiar with normal and emergency aeronautical procedures, applying and respecting the legislation in force
- ♦ Implement aeronautical communication in the environment, complying with the specific regulations of the aeronautical authority
- ♦ Manage the flight trajectory safely, both automatically and manually, in compliance with the regulatory framework
- ♦ Analyze the different situations in various potential scenarios for safe decision-making
- ♦ Manage workloads effectively
- ♦ Select the technical documentation required according to the operation to be performed, complying with specific aeronautical regulations
- ♦ Adapt to the constant regulatory and technological changes, complying with specific aeronautical regulations
- ♦ Possess a high capacity for constant learning
- ♦ Access and/or expand your professional environment in technical operations or aerial work

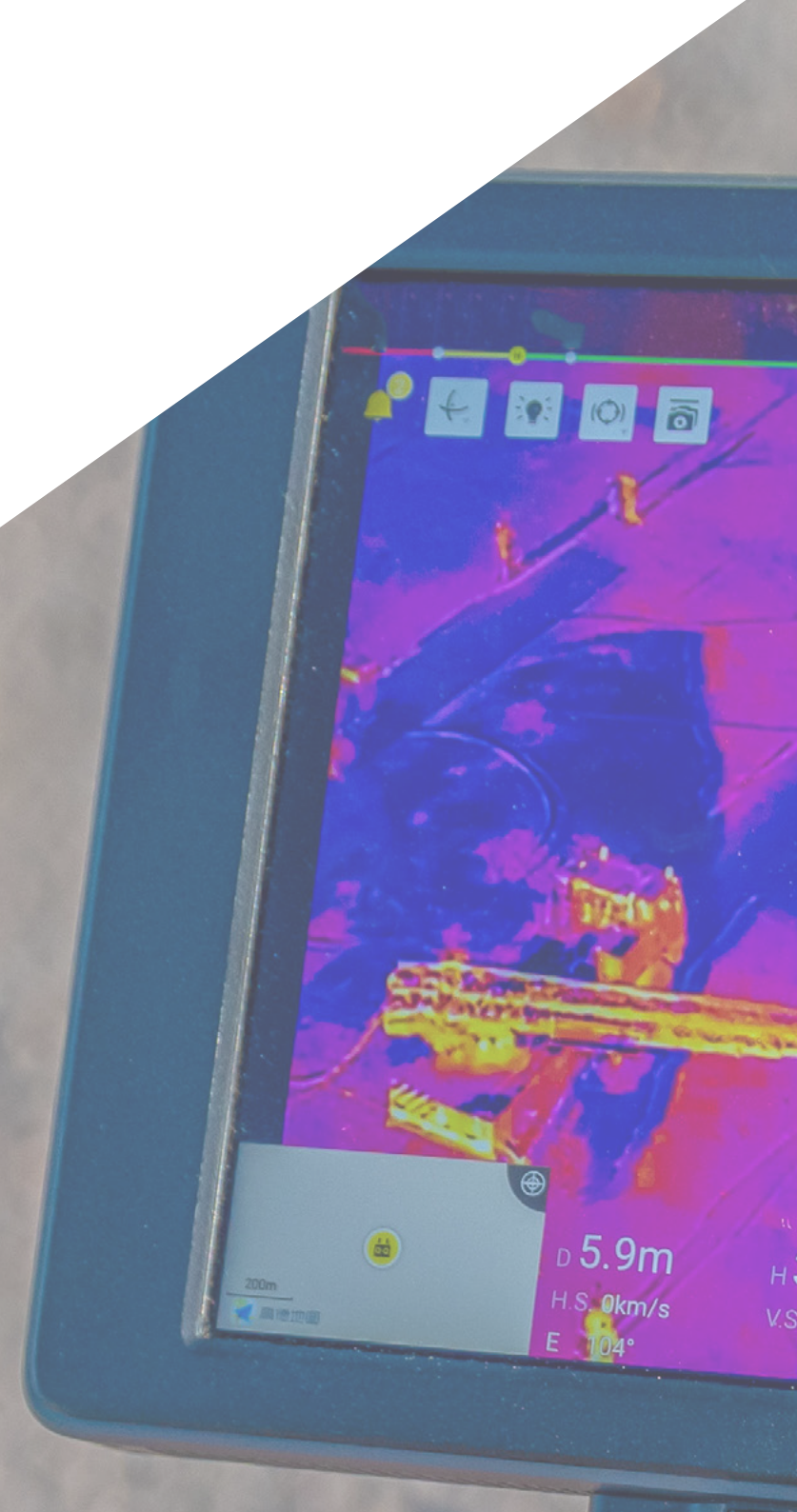


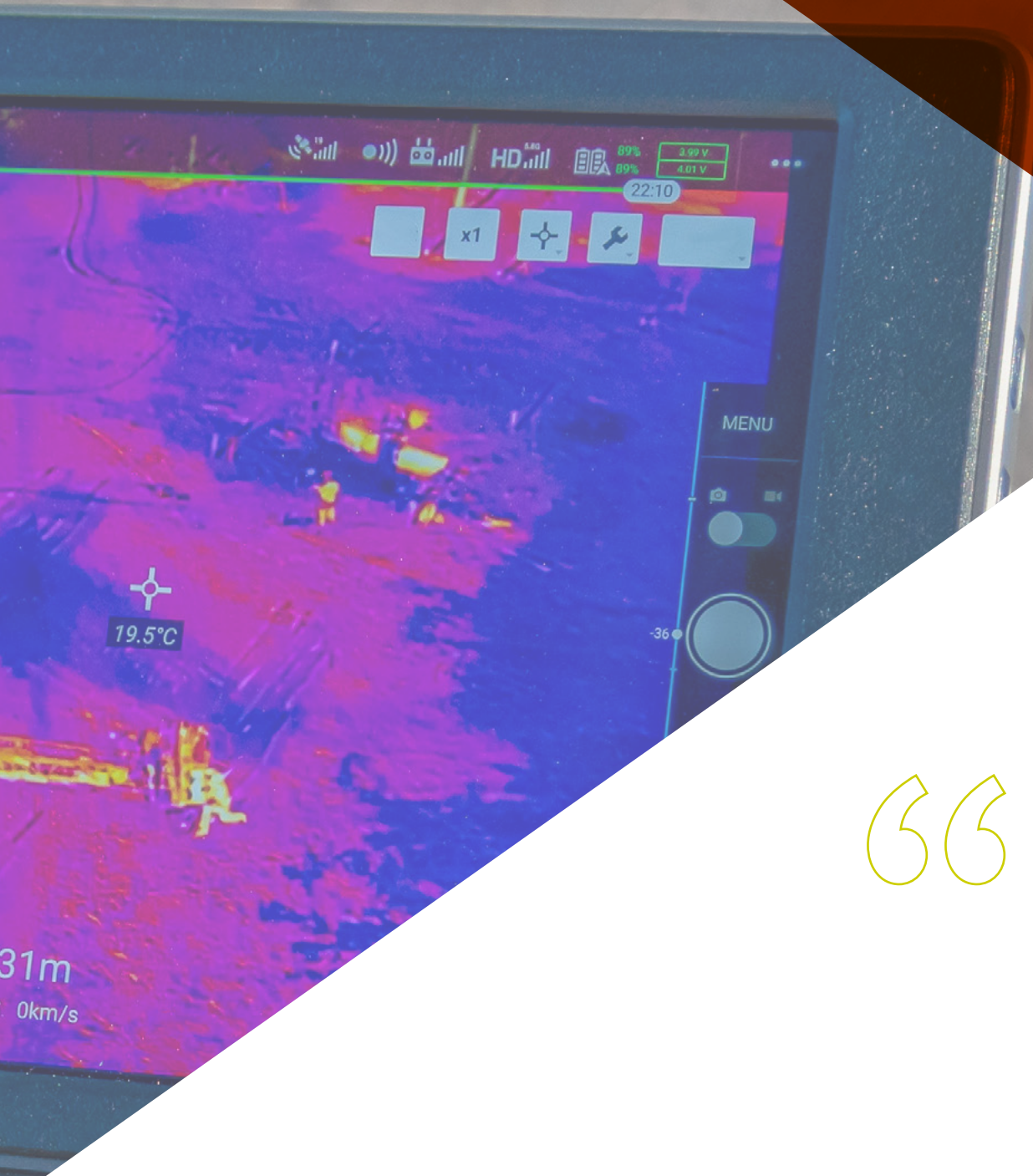
*The teaching materials of this program, elaborated by these specialists, have contents that are completely applicable to your professional experiences"*

# 05

## Course Management

TECH has drawn on a teaching team with years of experience in the airline industry, including pilots and engineers. They are a fully experienced group of teachers who have also been flight instructors and examiners, as well as airport safety specialists and directors of air sports projects. Thanks to their collaboration, the students will not only have reliable theoretical knowledge, but will also have as a reference guide the actions of these experts in the professional drone and aerial engineering market. In this way, students will have a direct communication channel through which they will be able to resolve all their questions regarding the syllabus and the simulation of real cases in the 100% online period. For the practical period, the specialist will continue to receive teaching support from flight instructors attached to the companies where they will carry out their internships.





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*With the teaching support of experts versed in the drone field, you will understand the future vision for this industry and master the most complex aerial operations"*

## Management



### Mr. Pliego Gallardo, Ángel Alberto

- ♦ Airline Transport Pilot (ATPL)
- ♦ Drone flight instructor and examiner at Aerocameras
- ♦ ASE Pilot School Project Manager
- ♦ FLYBAI ATO 166 Flight Instructor
- ♦ RPAS specialist teacher in university programs
- ♦ Author of publications related to the field of Drones
- ♦ Researcher of R+D+i projects related to RPAS
- ♦ Airline Transport Pilot ATPL by the Ministry of Education and Science
- ♦ Primary Education Teacher by the University of Alicante
- ♦ Certificate of Pedagogical Aptitude from the University of Alicante



### Dr. Bazán González, Gerardo

- ♦ Electronics Engineer
- ♦ Founder and CEO of DronesSkycam
- ♦ Senior Managing Consultant en FlatStone Energy Partners Ltd
- ♦ Managing Director and consultant at ON Partners Mexico
- ♦ Deputy Director of Industrial Development of Hydrocarbons
- ♦ Author of publications related to the global energy industry
- ♦ Graduate in Electronic Engineering
- ♦ Master's Degree in Engineering Project Management by the University of Birmingham



## Professors

### Ms. López Amedo, Ana María

- ♦ RPAS Pilot and Instructor
- ♦ RPA Instructor in several different programs
- ♦ RPAS Examiner in several different programs
- ♦ Vice-president of the Valencian Federation of Aerial Sports
- ♦ President of San Vicente del Raspeig Air Sports Club
- ♦ Drone Pilot by ATO-166 FLYBAI
- ♦ Drone Instructor by ATO-166 FLYBAI
- ♦ Radiotelephonist for ATO-166 FLYBAI

### Mr. Fernández Moure, Rafael

- ♦ Drone Pilot and Airport Security Expert
- ♦ Swissport Chief Administrative Officer
- ♦ Deputy Ramp Manager and Training Manager at Eurohandling SL and Air España Líneas Aéreas
- ♦ Drone Pilot at Eventdron
- ♦ Billing Supervisor at Air España
- ♦ Advanced Aircraft Pilot Program by European Flyers
- ♦ RPAS (Multirotor 5 KG) Practical Pilot Program by European Flyers
- ♦ Program for Remote Pilots by European Flyers

# 06

## Educational Plan

The content of this program has been carefully designed by a team of teachers versed in remote piloting and engineering. In addition, TECH has applied the most updated pedagogical methodology to dynamize and increase the student's success around the aerial practice of drones. In this way and thanks to the incorporation of the academic tool Relearning, the student will not have to invest long hours of memorization in the study, but will assimilate the navigation typology and the interpretation of complete maps in a constant and gradual way.





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*You will have access to the Online Campus 24 hours a day so that you can access it whenever you want and from wherever you want"*

## Module 1. Aeronautical Regulations in Spain for RPAS Pilots

- 1.1. Definitions
  - 1.1.1. Operational Definitions
  - 1.1.2. Technical Abbreviations
  - 1.1.3. Operational Abbreviations
- 1.2. Law 48/1960 on Air Navigation
  - 1.2.1. Mandatory
  - 1.2.2. Referring to Pilots
  - 1.2.3. Referring to the Aircraft
- 1.3. Air Traffic Regulations
  - 1.3.1. Book One
  - 1.3.2. Book Two
  - 1.3.3. General Rules
  - 1.3.4. Book Six
  - 1.3.5. Attachments
  - 1.3.6. Appendices
- 1.4. Regulation of the Air (SERA)
  - 1.4.1. ATC and SERA
  - 1.4.2. ATC Updates
  - 1.4.3. Airspace Configuration for Photography and Filming
- 1.5. Royal Decree 1036/2017, of December 15, which regulates the civil use of remotely piloted aircraft, and amends Royal Decree 552/2014, of June 27, which develops the Air Regulations and common operating provisions for air navigation services and procedures and Royal Decree 57/2002, of January 18, which approves the Air Traffic Regulations
  - 1.5.1. Scope
  - 1.5.2. RPAS Operation
  - 1.5.3. Articulated
- 1.6. Category and Type of Equivalent Aircrafts
  - 1.6.1. Settings
  - 1.6.2. Weight
  - 1.6.3. Control systems
  - 1.6.4. Loans
- 1.7. Transport of Dangerous Goods

- 1.7.1. Definition
- 1.7.2. Legal Framework
- 1.7.3. Articulated
- 1.7.4. Classification
- 1.8. Insurance in Compliance with Regulations
  - 1.8.1. Legal Framework
  - 1.8.2. Operator Requirements
  - 1.8.3. Articulated
- 1.9. Notification of Accidents and Incidents
  - 1.9.1. e-Notification Systems
  - 1.9.2. Electronic Channel
  - 1.9.3. Traditional Channel
- 1.10. Limitations Established by the Law 1/1982 on the Protection of Personal Honor and Intimacy
  - 1.10.1. Query
  - 1.10.2. Justified Response
  - 1.10.3. Regulatory Framework

## Module 2. Aeronautical Regulations in Latin America for RPAS Pilots and Operators

- 2.1. Aeronautical Authority: AESA
  - 2.1.1. The State Aviation Safety Agency
  - 2.1.2. Professional Use of RPAS
  - 2.1.3. Frequently Asked Questions
- 2.2. Guide Material
  - 2.2.1. Guide Material
  - 2.2.2. Acceptable Means of Compliance
  - 2.2.3. Regulatory Framework
- 2.3. RPAS Pilot
  - 2.3.1. Theory Training
  - 2.3.2. Practical Training
  - 2.3.3. Medical Requirements

- 2.4. Regulations in Chile
  - 2.4.1. Specific Definitions
  - 2.4.2. Legislative Application
  - 2.4.3. ICAO, SRVSOP and DGAC
- 2.5. Regulations in Colombia
  - 2.5.1. Definitions
  - 2.5.2. Specific Acronyms and Abbreviations
  - 2.5.3. Legislative Application
  - 2.5.4. Remotely Piloted Aircraft
  - 2.5.5. Limitations
  - 2.5.6. General Rules
  - 2.5.7. UAEAC Database Information
  - 2.5.8. Personal Skills
  - 2.5.9. Coordination with the FAC (Colombian Airforce)
  - 2.5.10. General Rules
- 2.6. Regulations in Ecuador
  - 2.6.1. Considerations
  - 2.6.2. Legislative Application
  - 2.6.3. Regulatory Framework
- 2.7. Regulations in Peru
  - 2.7.1. Specific Definitions
  - 2.7.2. Legislative Application
  - 2.7.3. Regulation
- 2.8. Regulations in Uruguay
  - 2.8.1. Classification
  - 2.8.2. Limitations and Requirements
  - 2.8.3. RPAS Dedicated to Sport or Recreation
- 2.9. Operator Guide I. Spain
  - 2.9.1. Requirements in Spain
  - 2.9.2. Steps to Become an Operator in Spain
  - 2.9.3. Diagram of the Process in Spain

- 2.10. Operator Guide II. Latin America
  - 2.10.1. General Aspects in Chile
  - 2.10.2. Requirements in Chile
  - 2.10.3. Format of Documents Chile
  - 2.10.4. Requirements in Peru

### Module 3. Navigation and Interpretation of Maps

- 3.1. Fundamental Concepts
  - 3.1.1. Definitions
  - 3.1.2. Application
  - 3.1.3. Routometer
- 3.2. The Earth: Longitude, Latitude, Positioning
  - 3.2.1. Geographical Coordinates
  - 3.2.2. Positioning
  - 3.2.3. Legislative Framework
- 3.3. Aeronautical Information Publication (AIP): AIP Spain, Structure and Content Relevant to RPAS Operations
  - 3.3.1. AIP
  - 3.3.2. Structure
  - 3.3.3. ENAIRE
  - 3.3.4. Application to RPAS
- 3.4. Aeronautical Charts: Interpretation and Use
  - 3.4.1. Aeronautical Charts
  - 3.4.2. Typology of Aeronautical Charts
  - 3.4.3. Projections of Aeronautical Charts
- 3.5. Navigation: Types and Techniques
  - 3.5.1. Types of Flight
  - 3.5.2. Observed Navigation
    - 3.5.2.1. Dead Reckoning Navigation
- 3.6. Navigation: Aids and Equipment
  - 3.6.1. Navigation Aids
  - 3.6.2. Applications
  - 3.6.3. Equipment for Flights with RPAS

- 3.7. Limitations of Altitude and Distance. Use of Airspace
  - 3.7.1. VLOS
  - 3.7.2. BVLOS
  - 3.7.3. EVLOS
- 3.8. GNSS. Use and Limitations
  - 3.8.1. Description
  - 3.8.2. Operation
  - 3.8.3. Control and Accuracy. Limitations
- 3.9. GPS
  - 3.9.1. Fundamentals and Functions of GLONASS and GPS
  - 3.9.2. Differences Between GLONASS and GPS
  - 3.9.3. GPS
- 3.10. AIP-ENAIRES Maps
  - 3.10.1. ENAIRES
  - 3.10.2. INSIGNIA. Online Aeronautical Information Maps
  - 3.10.3. INSIGNIA VFR. Online Aeronautical Information Maps for VFR Flights

## Module 4. Meteorology

- 4.1. Abbreviations
  - 4.1.1. Definition
  - 4.1.2. Abbreviations Applied to Aviation
  - 4.1.3. Abbreviations and Definitions of the MET Services Guide
- 4.2. The State Meteorological Agency
  - 4.2.1. Guide to Meteorological Services for Airspace Navigation
  - 4.2.2. Aeronautical Meteorological Information Guide
  - 4.2.3. AMA. Self-Service Meteorological Aviation
- 4.3. The Atmosphere
  - 4.3.1. Thesis. Layers of the Atmosphere
  - 4.3.2. Temperature, Density and Pressure
  - 4.3.3. Cyclone. Anticyclone
- 4.4. Altimetry
  - 4.4.1. Particularities and Fundamentals
  - 4.4.2. Calculations with Instruments
  - 4.4.3. Calculations without Instruments
- 4.5. Atmospheric Phenomena
  - 4.5.1. Wind
  - 4.5.2. Clouds
  - 4.5.3. Fronts
  - 4.5.4. Turbulence
  - 4.5.5. Wind Shear
- 4.6. Visibility
  - 4.6.1. Visibility on the Ground and in Flight
  - 4.6.2. VMC Conditions
  - 4.6.3. IMC Conditions
- 4.7. Meteorological Information
  - 4.7.1. Low Elevation Charts
  - 4.7.2. METAR
  - 4.7.3. TAF
  - 4.7.4. SPECI
- 4.8. Meteorological Previsions
  - 4.8.1. TREND
  - 4.8.2. SIGMET
  - 4.8.3. GAMET
  - 4.8.4. AIRMET
- 4.9. Solar Storms
  - 4.9.1. Thesis
  - 4.9.2. Features
  - 4.9.3. Procedures for Obtaining Meteorological Information on Earth
- 4.10. Practical Procedures for Obtaining Meteorological Information
  - 4.10.1. Before the Flight
  - 4.10.2. During the Flight
  - 4.10.3. VOLMET

## Module 5. Human Factors for Remotely Piloted Aircraft

- 5.1. Aeronautical Psychology
  - 5.1.1. Definition
  - 5.1.2. Principles and Functions
  - 5.1.3. Objectives
- 5.2. Positive Psychology
  - 5.2.1. Definition
  - 5.2.2. FORTE Model
  - 5.2.3. FLOW Model
  - 5.2.4. PERMA Model
  - 5.2.5. EXPANSION Model
  - 5.2.6. Potentialities
- 5.3. Medical Requirements
  - 5.3.1. Limitations in Europe
  - 5.3.2. Classification
  - 5.3.3. Periods of Validity of Aeronautical Medical Certificates
- 5.4. Concepts and Good Practice
  - 5.4.1. Objectives
  - 5.4.2. Domains
  - 5.4.3. Regulations
  - 5.4.4. Considerations
  - 5.4.5. Procedures
  - 5.4.6. Drugs
  - 5.4.7. Vision
  - 5.4.8. Clinical Aspects
- 5.5. The Senses
  - 5.5.1. The View
  - 5.5.2. Structure of the Human Eye
  - 5.5.3. Hearing: Definition and Schema
- 5.6. Situational Conscience
  - 5.6.1. The Effect of Disorientation
  - 5.6.2. The Illusion Effect
  - 5.6.3. Other Exogenous and Endogenous Effects

- 5.7. Communication
  - 5.7.1. Thesis
  - 5.7.2. Factors of Communication
  - 5.7.3. Elements of Communication
  - 5.7.4. Assertiveness
- 5.8. Workload Management; Human Performance
  - 5.8.1. Background and Consequences
  - 5.8.2. Stress of General Adaptation Syndrome
  - 5.8.3. Causes, Stages and Effects
  - 5.8.4. Prevention
- 5.9. Teamwork
  - 5.9.1. Description of Teamwork
  - 5.9.2. Characteristics of Teamwork
  - 5.9.3. Leadership
- 5.10. Health Aspects That Could Affect the RPAS Pilot
  - 5.10.1. Disorientation
  - 5.10.2. Illusions
  - 5.10.3. Illnesses

## Module 6. Operational Procedures

- 6.1. Operational Procedures of Flight
  - 6.1.1. Operative Definition
  - 6.1.2. Acceptable Means
  - 6.1.3. Operational Procedure of the Flight
- 6.2. Operations Manual
  - 6.2.1. Definition
  - 6.2.2. Contents
  - 6.2.3. Index
- 6.3. Operational Scenarios
  - 6.3.1. Justification
  - 6.3.2. Standard Scenarios
    - 6.3.2.1. For Night Flight: STSN01
    - 6.3.2.2. For Flight in a Controlled Airspace: STSE01

- 6.3.2.3. Urban Scenarios
  - 6.3.2.3.1. For Flights in Built-Up Areas: STSA01
  - 6.3.2.3.2. Flights in Built-Up Areas and a Controlled Airspace: STSA02
  - 6.3.2.3.3. Flights in Built-Up Areas and an Atypical Airspace: STSA03
  - 6.3.2.3.4. For Flight in Built-Up Areas, a Controlled Airspace and Night Flight: STSA04
- 6.3.3. Experimental Scenarios
  - 6.3.3.1. Experimental Flights in BVLOS in Segregated Airspace for Aircraft Weighing Less Than 25kg: STSX01
  - 6.3.3.2. Experimental Flights in BVLOS in Segregated Airspace for Aircraft Weighing More Than 25kg: STSX02
- 6.4. Limitations Related to the Space in Which Its Operated
  - 6.4.1. Maximum and Minimum Altitudes
  - 6.4.2. Limitations of Maximum Distance of Operation
  - 6.4.3. Meteorological Conditions
- 6.5. Operation Limitations
  - 6.5.1. Relative to the Pilot
  - 6.5.2. Relative to the Area of Protection and the Recovery Zone
  - 6.5.3. Relative to the Objects and Dangerous Substances
  - 6.5.4. Related to Flying Facilities
- 6.6. Flight Personnel
  - 6.6.1. Pilot in command
  - 6.6.2. The observer
  - 6.6.3. The operator
- 6.7. Operation Supervision
  - 6.7.1. The Operation Manual
  - 6.7.2. Objectives
  - 6.7.3. Responsibility
- 6.8. Prevention of Accidents
  - 6.8.1. The Operation Manual
  - 6.8.2. General Safety Check List
  - 6.8.3. Specific Safety Check List



- 6.9. Other Mandatory Compliance Procedures
  - 6.9.1. Flight Time Records
  - 6.9.2. Maintaining Remote Pilot Aptitude
  - 6.9.3. Maintenance Records
  - 6.9.4. Procedure to Obtain the Airworthiness Certificate
  - 6.9.5. Procedure to Obtain Special Certification for Experimental Flights
- 6.10. Procedure to Become an Operator
  - 6.10.1. Qualification Procedure: Prior Communication
  - 6.10.2. Procedure to Become an Operator: Specialized Air Operations or Experimental Flights
  - 6.10.3. Operator Deregistration and Prior Notification

## Module 7. Communication

- 7.1. Radiophonist Qualification for Remote Pilots
  - 7.1.1. Theoretical Requirements
  - 7.1.2. Practical Requirements
  - 7.1.3. Programming
- 7.2. Emitters, Receptors and Antennae
  - 7.2.1. Emitter
  - 7.2.2. Receptors
  - 7.2.3. Antennae
- 7.3. General Principles of Radio Transmission
  - 7.3.1. Radio Transmission
  - 7.3.2. Causality of Radio Communication
  - 7.3.3. Radio Frequency Justification
- 7.4. Use of Radio
  - 7.4.1. Guide to Radiophony at Uncontrolled Aerodromes
  - 7.4.2. Practical Communication Guide
  - 7.4.3. The Q Code
    - 7.4.3.1. Aeronautical
    - 7.4.3.2. Maritime
  - 7.4.4. International Alphabet for Radio Communication
- 7.5. Aeronautical Vocabulary
  - 7.5.1. Aeronautical Phrasing Applicable to Drones
  - 7.5.2. English-Spanish
  - 7.5.3. Spanish-English
- 7.6. Use of Radio Spectrum Frequencies
  - 7.6.1. Definition of the Radio Spectrum
  - 7.6.2. CNAF (Spanish National Frequency Allocation Chart)
  - 7.6.3. Services
- 7.7. Aeronautical Mobile Service
  - 7.7.1. Limitations
  - 7.7.2. Messages
  - 7.7.3. Cancellations
- 7.8. Radio-Telephonic Procedures
  - 7.8.1. Language
  - 7.8.2. Transmission, Verification and Pronunciation of Numbers
  - 7.8.3. Message Transmission Technique
- 7.9. Communications With Air Traffic Control
  - 7.9.1. Communications and Listening
  - 7.9.2. Communications Failure in Airfield Traffic
  - 7.9.3. Communications Failure in VMC or at Night
- 7.10. Air Transit Services
  - 7.10.1. Classification of Airspace
  - 7.10.2. Aeronautical Information Documents: NOTAM, AIP
  - 7.10.3. Organization of ATS in Spain
  - 7.10.4. Controlled, Uncontrolled and Segregated Airspace
  - 7.10.5. ATC Instructions

## Module 8. Dangerous Goods and Aviation

- 8.1. Application
  - 8.1.1. General Philosophy
    - 8.1.1.1. Definition
    - 8.1.1.2. Historical Review
    - 8.1.1.3. General Philosophy
    - 8.1.1.4. Air Security in the Transport of Dangerous Goods
    - 8.1.1.5. Education
  - 8.1.2. Regulation
    - 8.1.2.1. Basis of Regulation
    - 8.1.2.2. Aim of Regulation on Dangerous Goods
    - 8.1.2.3. Structure of DGR
    - 8.1.2.4. Application of the Regulation
    - 8.1.2.5. Relationship With ICAO
    - 8.1.2.6. Applicable Regulations in the Air Transport of Dangerous Goods
    - 8.1.2.7. Spanish Regulation
    - 8.1.2.8. IATA Regulations on Dangerous Goods
  - 8.1.3. Application for Unmanned Aviation: Drones
- 8.2. Limitations
  - 8.2.1. Limitations
    - 8.2.1.1. Prohibited Goods
    - 8.2.1.2. Goods Allowed Under Waiver
    - 8.2.1.3. Goods Allowed as Air Cargo
    - 8.2.1.4. Acceptable Goods
    - 8.2.1.5. Exempt Goods
    - 8.2.1.6. Plane Equipment
    - 8.2.1.7. On-Board Consumption Goods
    - 8.2.1.8. Goods in Excepted Quantities
    - 8.2.1.9. Goods in Limited Quantities
    - 8.2.1.10. Provisions for Dangerous Goods Carried by Passengers or Crew
  - 8.2.2. Variations Among States
  - 8.2.3. Variations Among Operators
- 8.3. Classification
  - 8.3.1. Classification
    - 8.3.1.1. Class 1. Explosives
    - 8.3.1.2. Class 2. Gases
    - 8.3.1.3. Class 3. Flammable liquids
    - 8.3.1.4. Class 4. Flammable solids
    - 8.3.1.5. Class 5. Substances and Organic Peroxides
    - 8.3.1.6. Class 6. Toxic and Infectious Substances
    - 8.3.1.7. Class 7. Radioactive material
    - 8.3.1.8. Class 8. Straps
    - 8.3.1.9. Class 9. Miscellaneous or Assorted Goods
  - 8.3.2. Exceptions: Permitted Goods
  - 8.3.3. Exceptions: Prohibited Goods
- 8.4. Identification
  - 8.4.1. Identification
  - 8.4.2. Dangerous Goods List
  - 8.4.3. Name of Item Shipped
  - 8.4.4. Generic Name (NPE)
  - 8.4.5. Mixtures and Solutions
  - 8.4.6. Special Provisions
  - 8.4.7. Quantity Limitations
- 8.5. Packaging
  - 8.5.1. Packaging Instructions
    - 8.5.1.1. Introduction
    - 8.5.1.2. General Conditions for All Classes Except Class 7
    - 8.5.1.3. Compatibility Requirements
  - 8.5.2. Packaging Groups
  - 8.5.3. Packaging Brands
- 8.6. Packaging Specifications
  - 8.6.1. Packaging Specifications
    - 8.6.1.1. Features
    - 8.6.1.2. Interior Packaging Features

- 8.6.2. Packaging Tests
  - 8.6.2.1. Suitability Testing
  - 8.6.2.2. Preparation of Packaging for the Tests
  - 8.6.2.3. Area of Impact
  - 8.6.2.4. Stacking Test
- 8.6.3. Test Reports
- 8.7. Branded and Labelled
  - 8.7.1. Branding
    - 8.7.1.1. Specifications and Requirements of Branding
    - 8.7.1.2. Packaging Brands Specification
  - 8.7.2. Labelling
    - 8.7.2.1. The Need to Put Labels
    - 8.7.2.2. Attaching the Labels
    - 8.7.2.3. Labelling on Packaging
    - 8.7.2.4. Labelling of Class or Division
  - 8.7.3. Labelling Specifications
- 8.8. Documentation
  - 8.8.1. Shipper's Declaration
    - 8.8.1.1. Cargo Acceptance Procedure
    - 8.8.1.2. Acceptance of Dangerous Goods by the Operator
    - 8.8.1.3. Verification and Acceptance
    - 8.8.1.4. Acceptance of Containers and Cargo Units
    - 8.8.1.5. Shipper's Declaration
    - 8.8.1.6. Air Waybill
    - 8.8.1.7. Conservation of Documents
  - 8.8.2. NOTOC
    - 8.8.2.1. NOTOC
  - 8.8.3. Event, Accidents and Incidents Report
- 8.9. Management
  - 8.9.1. Management
    - 8.9.1.1. Storage
    - 8.9.1.2. Incompatibilities

- 8.9.2. Stowage
  - 8.9.2.1. Handling Packages Containing Liquid Dangerous Goods
  - 8.9.2.2. Loading and Securing of Dangerous Goods
  - 8.9.2.3. General Load Conditions
  - 8.9.2.4. Magnetized Material Load
  - 8.9.2.5. Dry Ice Load
  - 8.9.2.6. Stowage of Living Animals
- 8.9.3. Handling Radioactive Goods
- 8.10. Radioactive Material
  - 8.10.1. Definition
  - 8.10.2. Legislation
  - 8.10.3. Classification
  - 8.10.4. Determination of the Level of Activity
  - 8.10.5. Determination of Other Features of the Material

## Module 9. Engineering Technology in Flight

- 9.1. Particularities
  - 9.1.1. Aircraft Description
  - 9.1.2. Motor, Propeller, Rotor(s)
  - 9.1.3. Three-View Plan
  - 9.1.4. Systems That Form Part of the RPAS (Ground Control Station, Catapults, Nets, Additional Information Displays, etc.)
- 9.2. Limitations
  - 9.2.1. Mass
    - 9.2.1.1. Maximum Mass
  - 9.2.2. Speeds
    - 9.2.2.1. Maximum Speed
    - 9.2.2.2. Loss of Speed
  - 9.2.3. Limitations of Altitude and Distance
  - 9.2.4. Maneuvering Load Factor
  - 9.2.5. Mass and Centering Limits
  - 9.2.6. Authorized Maneuvers
  - 9.2.7. Drive Unit, Propellers, Rotor, If Applicable
  - 9.2.8. Maximum Potential

- 9.2.9. Engine, Propeller, Rotor Speed International Development Cooperation Environmental Limitations of Use (Temperature, Altitude, Wind, Electromagnetic Environment)
- 9.3. Abnormal and Emergency Procedures
  - 9.3.1. Engine Failure
  - 9.3.2. Restarting an Engine in Flight
  - 9.3.3. Fire
  - 9.3.4. Gliding
  - 9.3.5. Self-Rotation
  - 9.3.6. Emergency Landing
  - 9.3.7. Other Emergencies
    - 9.3.7.1. Loss of a Means of Navigation
    - 9.3.7.2. Loss of Connection With Flight Control
    - 9.3.7.3. Others
  - 9.3.8. Safety Devices
- 9.4. Normal Procedures
  - 9.4.1. Pre-Flight Revision
  - 9.4.2. Commissioning
  - 9.4.3. Take-Off
  - 9.4.4. Cruise Control
  - 9.4.5. Hovering
  - 9.4.6. Landing
  - 9.4.7. Engine Shutdown After Landing
  - 9.4.8. Pre-Flight Revision
- 9.5. Loans
  - 9.5.1. Take-Off
  - 9.5.2. Limit of Crosswind at Take-off
  - 9.5.3. Landing
  - 9.5.4. Limit of Crosswind When Landing
- 9.6. Weight and Centering, Equipment
  - 9.6.1. Reference Unladen Mass
  - 9.6.2. Vacuum Reference Centering
  - 9.6.3. Configuration for the Determination of Mass in Vacuum
  - 9.6.4. List of Equipment

- 9.7. Assembly and Adjustment
  - 9.7.1. Instructions for Assembly and Adjustment
  - 9.7.2. List of User-Accessible Settings and Consequences on Flight Characteristics
  - 9.7.3. Impact of the Installation of Any Special Equipment Related to a Particular Use
- 9.8. Software
  - 9.8.1. Identification of Versions
  - 9.8.2. Verification of its Correct Functioning
  - 9.8.3. Updates
  - 9.8.4. Programming
  - 9.8.5. Aircraft Adjustments
- 9.9. Safety Study for Declarative Operations
  - 9.9.1. Records
  - 9.9.2. Methodology
  - 9.9.3. Operations Description
  - 9.9.4. Risk Evaluation
  - 9.9.5. Conclusions
- 9.10. Applicability: From Theory to Practice
  - 9.10.1. Flight Syllabus
  - 9.10.2. Expert Testing
  - 9.10.3. Maneuvers

## Module 10. Integration of Drones for Industry and Practical Uses

- 10.1. Advanced Air Photography and Video
  - 10.1.1. The Triangle of Exposition
  - 10.1.2. Histograms
  - 10.1.3. Use of Filters
  - 10.1.4. Camera Settings
  - 10.1.5. Delivered to Clients
- 10.2. Advanced Applications of Photography
  - 10.2.1. Panoramic Photography
  - 10.2.2. Low-Light and Night Shots
  - 10.2.3. Interior Videos

- 10.3. Drones in the Construction Industry
  - 10.3.1. Expectations of the Industry and Budgets
  - 10.3.2. Solutions
  - 10.3.3. Automated Image Taking
- 10.4. Risk Assessment With Drones
  - 10.4.1. Air Inspection
  - 10.4.2. Digital Modes
  - 10.4.3. Safety Procedures
- 10.5. Inspection Work With Drones
  - 10.5.1. Inspection of Roofs and Covers
  - 10.5.2. The Right Drone
  - 10.5.3. Inspection of Paths, Roads, Highways and Bridges
- 10.6. Surveillance and Security With Drones
  - 10.6.1. Principles for Implementing a Program With Drones
  - 10.6.2. Factors to Consider When Buying a Drone for Safety
  - 10.6.3. Applications and Real Uses
- 10.7. Search and Rescue
  - 10.7.1. Planning
  - 10.7.2. Data Science
  - 10.7.3. Basic Knowledge of the Pilots and Operators for Search and Rescue Missions
- 10.8. Drones in Precision Agriculture I
  - 10.8.1. Particularities of Precision Agriculture
  - 10.8.2. Normalized Difference Vegetation Index
    - 10.8.2.1. Visible Atmospheric Resistance Index (VARI)
- 10.9. Drones in Precision Agriculture II
  - 10.9.1. Drones and Applications
  - 10.9.2. Drones for Monitoring in Precision Agriculture
  - 10.9.3. Techniques Applied in Precision Agriculture
- 10.10. Drones in Precision Agriculture III
  - 10.10.1. Image Acquisition Process for Precision Agriculture
  - 10.10.2. Process of Photogrammetry and Application of the Visible Atmospheric Resistance Index
  - 10.10.3. Interpretation of the Vegetation Indices



*Thanks to flight practices in different scenarios, you will obtain a high level of mastery of the piloting systems of these unmanned vehicles"*

07

# Internship

This Hybrid Professional Master's Degree in Drone Piloting includes in its itinerary a practical stay of 3 weeks in a piloting center of reference, recognized for its private security services, security systems and investigation. In this way, the student will be able to work in a highly demanding and prestigious professional environment, preparing them to work in this sector according to the most advanced flight techniques.





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*Join now to be part of the evolution of the drone industry, thanks to the internships offered by TECH with experienced flight instructors”*

Students will not only have access to lecturers during the 100% online teaching, but will also have an adjunct tutor and expert as a flight instructor during the internship. In this case, the assistant will be in charge of providing technical guidance to the student on an individual basis, in order to guarantee their adequate performance in the aerial scenario. In addition, this will allow specialists to work as drone pilots, with the support of professionals who have extensive experience in the drone sector.

During the Internship Program, students will be instructed in situ, in airfields where they will acquire all the specific knowledge in aviation. These are 8-hour days from Monday to Friday in which the students will perfect their skills and aptitudes in Drone Piloting. In this way, students will be able to achieve their professional objectives and work in the drone sector to which they aspire with ease. In addition, during this three-week period they will address the design of a complete flight plan with coordinations and flights in the CTR zone. All this, in order to expand in a guaranteed way the competences in drone flight and in drone engineering.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of the professors and other fellow trainees to facilitate teamwork and multidisciplinary integration as transversal competencies for the praxis of oncological Nursing (learning to be and learning to relate).

The procedures described below will be the basis of the practical part of the training, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:





| Module                                                                              | Practical Activity                                                                                                              |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Navigation and map interpretation                                                   | Master the interpretation and use of aeronautical charts                                                                        |
|                                                                                     | Know the different types and techniques of flight through piloting                                                              |
|                                                                                     | Manage dead reckoning (Dead Reckoning)                                                                                          |
|                                                                                     | Know in detail the equipment for RPA flights                                                                                    |
|                                                                                     | Know the height and distance limitations on the use of airspace                                                                 |
|                                                                                     | Working on the use and limitations of GNSS                                                                                      |
|                                                                                     | Mastering the use of GPS                                                                                                        |
| Weather management for pilotage                                                     | Analyze the reports of the different meteorological agencies                                                                    |
|                                                                                     | Know the different atmospheric and meteorological phenomena that influence a flight                                             |
|                                                                                     | Manage weather forecasts and establish flight plans according to them                                                           |
| Operational and communications procedures                                           | Implement the flight operational procedures correctly in practice                                                               |
|                                                                                     | Know the different operational and experimental scenarios                                                                       |
|                                                                                     | Manage the constraints related to the space in which you operate                                                                |
|                                                                                     | Master flight time recording                                                                                                    |
|                                                                                     | Manage the remote pilot suitability maintenance                                                                                 |
|                                                                                     | Know in detail all the procedures to become a qualified operator                                                                |
|                                                                                     | Define the theoretical and technical requirements for the radio operator qualification for remote pilots                        |
|                                                                                     | Perform radio transmission tasks, mastering radio communication processes                                                       |
| Dangerous goods transport and aviation, and use of in-flight engineering technology | Conduct communications with ATC                                                                                                 |
|                                                                                     | Operate flights taking into account the limitations of operation with dangerous goods                                           |
|                                                                                     | Work on the correct classification of different goods                                                                           |
|                                                                                     | Know how to identify merchandise labeling and documentation                                                                     |
|                                                                                     | Work on writing the correct report of events, accidents and incidents                                                           |
|                                                                                     | Master radioactive material legislation                                                                                         |
|                                                                                     | Interpret the three-view plan                                                                                                   |
|                                                                                     | Know the limits of mass and centering                                                                                           |
|                                                                                     | Know in detail the correct abnormal and emergency procedures: engine failure, fire, glide, autorotation, emergency landing, etc |
|                                                                                     | Master the assembly of equipment                                                                                                |
|                                                                                     | Perform a software update                                                                                                       |

## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieving this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this educational entity undertakes to take out civil liability insurance to cover any eventuality that may arise during the stay at the internship center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. In this way, the professional will not have to worry in case they have to face an unexpected situation and will be covered until the end of the practical program at the center.



## General Conditions for Practical Training

The general terms and conditions of the internship program agreement shall be as follows:

**1. TUTOR:** During the Hybrid Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Hybrid Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Hybrid Master's Degree will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** the Hybrid Master's Degree shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Hybrid Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

# Where Can I Do the Internship?

TECH has organized an intensive internship program to provide the student with the highest level of instruction in Drone Piloting. During 3 weeks, the professional will participate in the daily activities of a company of recognized prestige in this sector, preparing them to operate drones in demanding environments. It is, therefore, a unique opportunity to perfect performance with this type of aerial vehicles.



“

*Complement your theoretical instruction with a practical internship that will give you a boost to your professional career in sectors such as the FFCCSE, geo-information and the audiovisual market, among others"*

## tech 46 | Where Can I Do the Internship?



The student will be able to take the practical part of this Hybrid Professional Master's Degree in the following centers:



Engineering

### Drone Prix

|         |        |
|---------|--------|
| Country | City   |
| Spain   | Madrid |

Address: Cam. de los Entreterminos, s/n,  
28450, Collado Villalba, Madrid

Drone Prix, incorporates the latest drone technology  
in its services.

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**Related internship programs:**  
Drone Piloting





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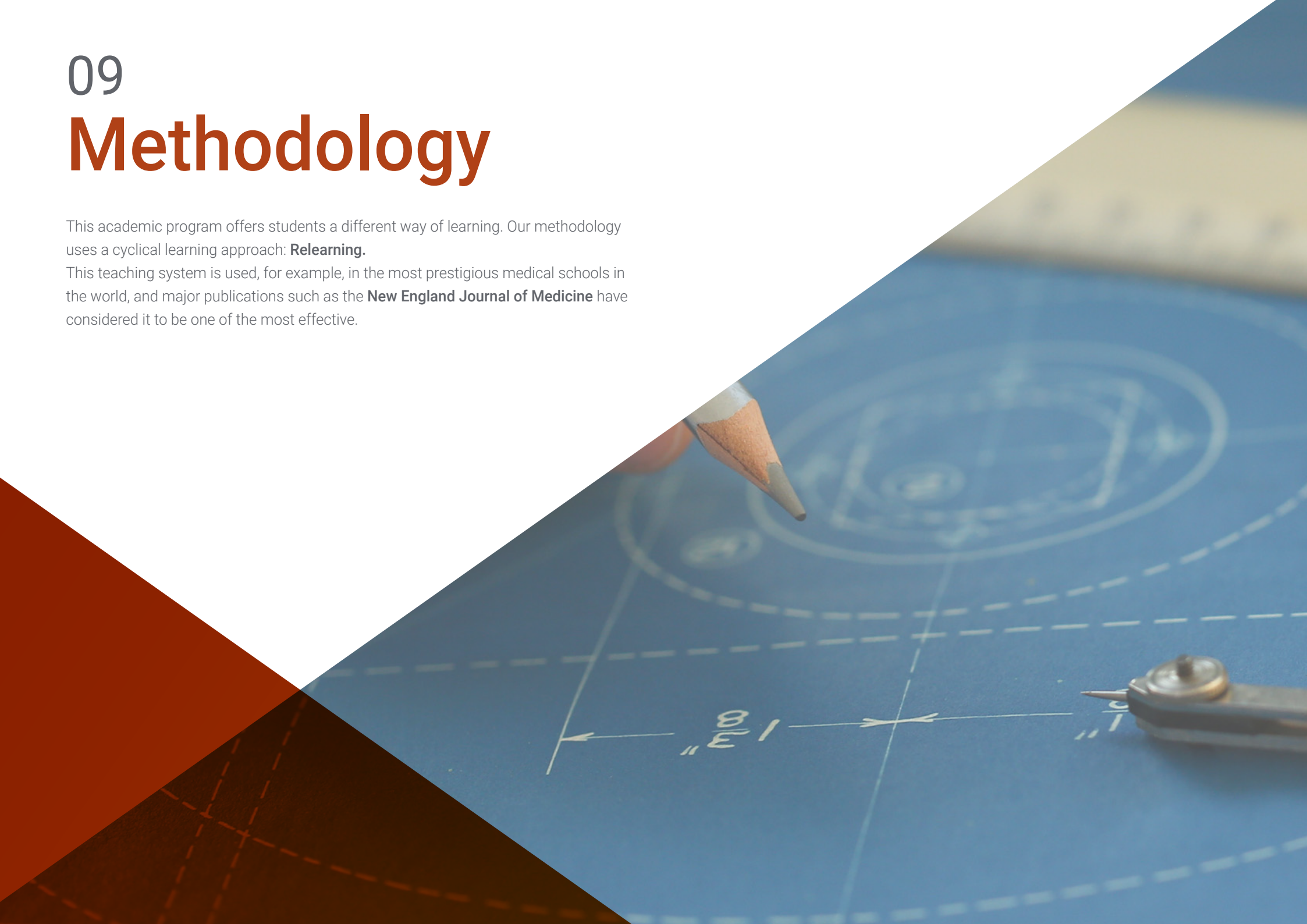
*Boost your career path with holistic teaching, allowing you to advance both theoretically and practically”*

09

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

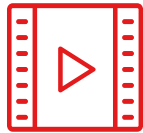
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



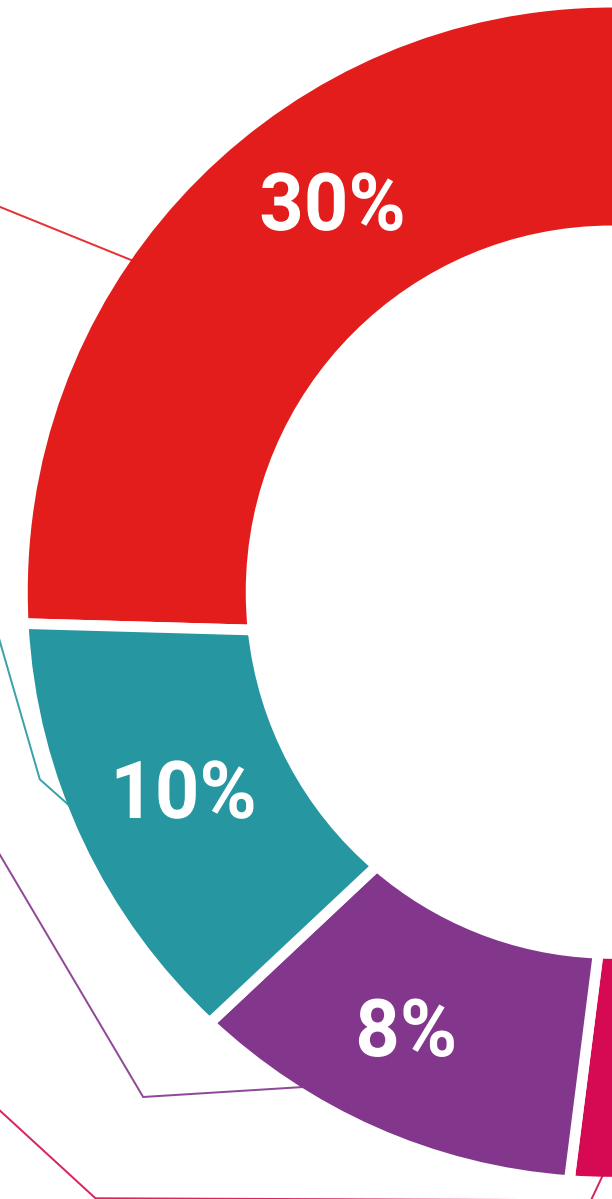
#### Practising Skills and Abilities

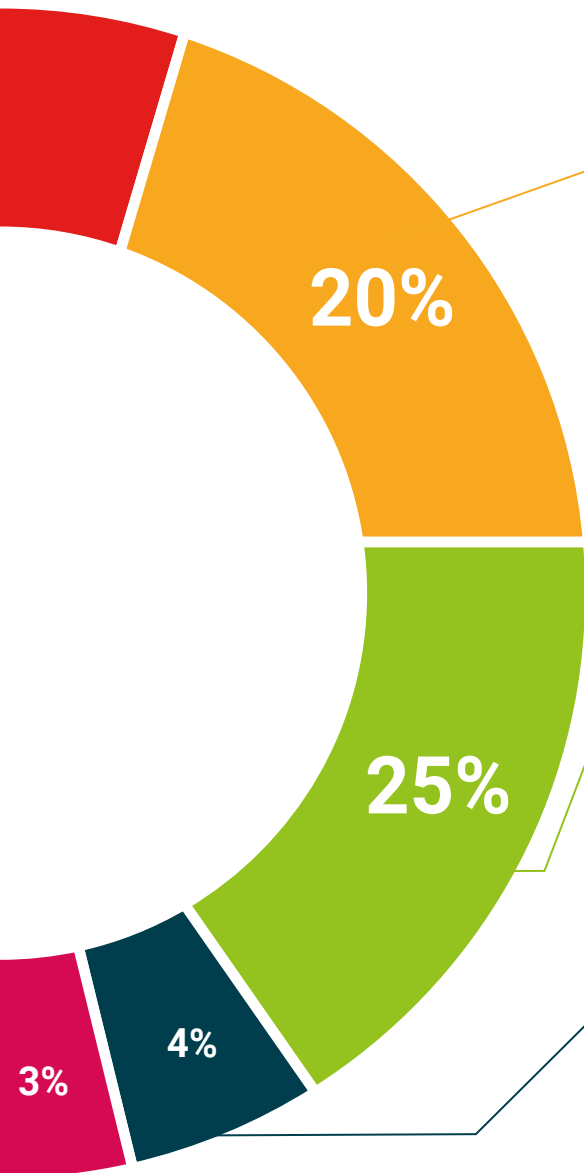
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.



**Case Studies**

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

**Interactive Summaries**

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

**Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 10 Certificate

This Hybrid Master's Degree in Drone Piloting guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Master's Degree diploma issued by TECH Global University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This program will allow you to obtain your **Hybrid Master's Degree diploma in Drone Piloting** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

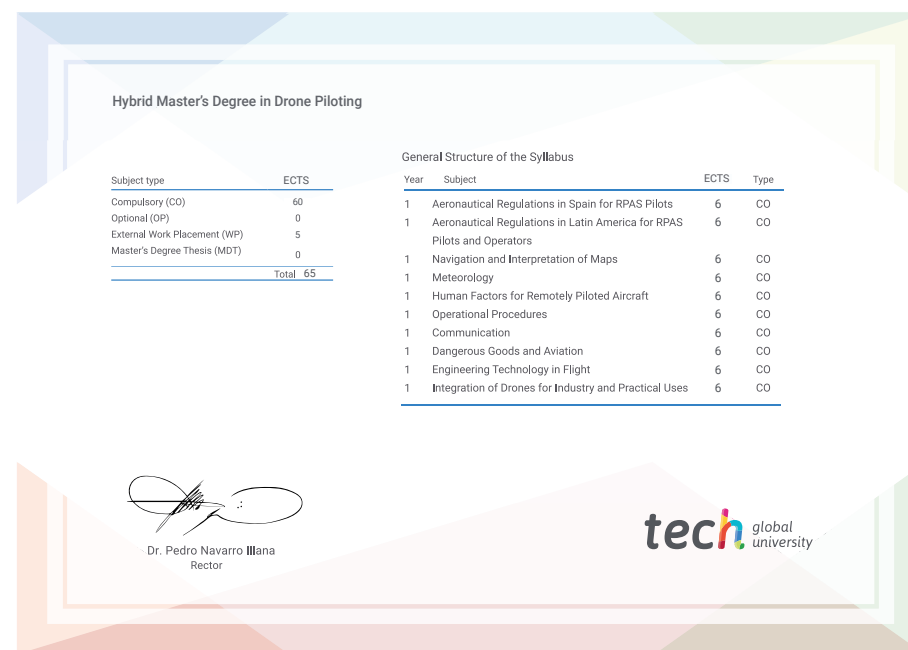
Title: **Hybrid Master's Degree in Drone Piloting**

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
online training  
development languages  
virtual classroom



## Hybrid Master's Degree Drone Piloting

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

# Hybrid Master's Degree Drone Piloting

