

Postgraduate Diploma Drone Piloting





Postgraduate Diploma Drone Piloting

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/engineering/postgraduate-diploma/drone-piloting

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 22

06

Certificate

p. 30

01

Introduction

The Drone Pilot is a professional who must have extensive knowledge of matters that transcend the actual handling of the vehicle to perform his work effectively and safely. In this line, they must have skills in meteorological interpretation, map interpretation or management of communications areas. To promote the acquisition of these skills and the student's performance in this field of work, TECH has created this program. Through it, you will learn to detect atmospheric phenomena to adapt the flight to each circumstance or investigate the international alphabet for radio communications. Moreover, you will obtain this learning completely online and without leaving your own home.





“

By means of this Postgraduate Diploma, you will be able to detect the different atmospheric phenomena in order to adapt the piloting of drones to each meteorological circumstance”

Over the last decade, in line with scientific and technological advances, the use of drones has become increasingly common in many areas of activity. For example, sectors such as industry, construction and agriculture use these devices to optimize a wide range of daily tasks. In the same way, they are used in search and rescue work, given their ability to work in places that are difficult to access. Therefore, given the great functions that these devices perform in today's society, UAV pilots are professionals who are in high demand in the labor market.

Given this situation, TECH has opted for this Postgraduate Diploma, a program focused on providing students with a series of knowledge that will prepare them to perform with solvency in this precise job. During 6 months of intensive learning, you will be able to delve into the interpretation and use of aeronautical charts or to know in depth the techniques to navigate taking into account the limitations of height and distance. You will also learn how to fly in conditions of reduced visibility or master the most essential aspects of radio communications.

Thanks to the fact that this program is developed through an innovative 100% online methodology, the student will have the possibility to learn without the need to stick to uncomfortable pre-established schedules. Likewise, they will benefit from a set of multimedia and textual didactic resources designed by the best drone pilots, who are actively involved in this profession. Consequently, the knowledge assimilated by the student will be completely updated.

This **Postgraduate Diploma in Drone Piloting** contains the most complete and up-to-date educational program on the market. The most important features include:

- ◆ The development of case studies presented by experts in Renewable Energies
- ◆ The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Special emphasis on innovative methodologies
- ◆ 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



This Postgraduate Diploma will allow you to assimilate the best techniques to navigate with a drone, taking into account the limitations of height and distance"

“

Study in a pleasant and effective way through didactic supports such as video, interactive summary or self-evaluation test”

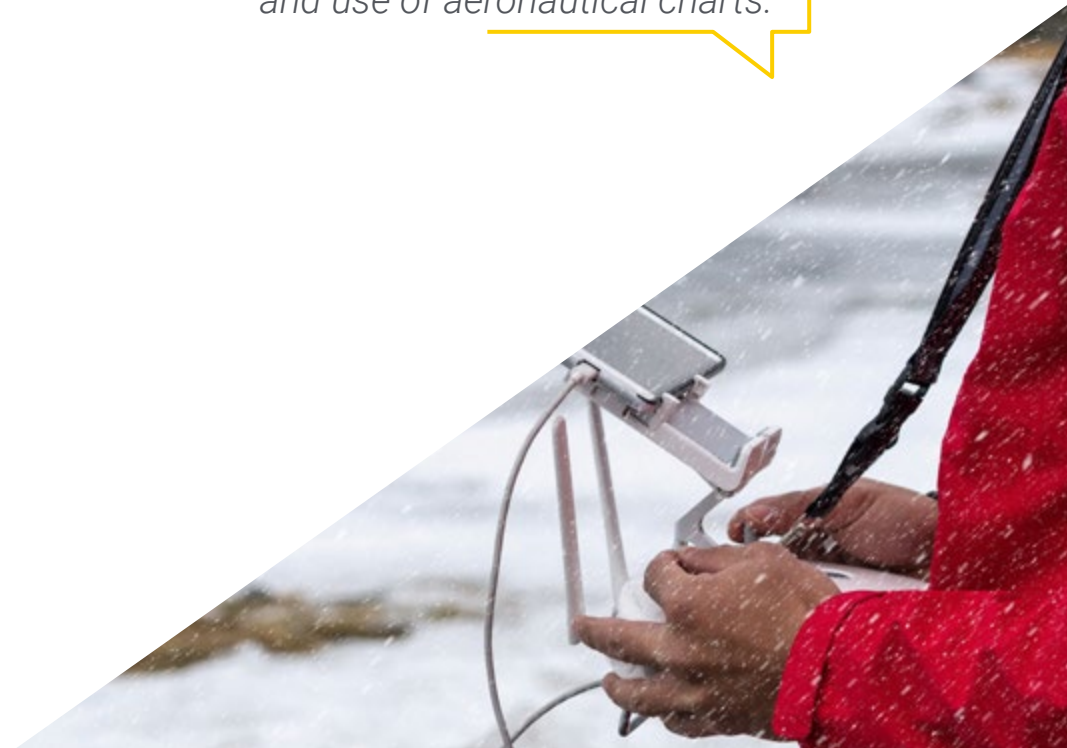
The program’s teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

Consolidate your knowledge at your own pace of study thanks to the Relearning methodology of this program.

With this Postgraduate Diploma, delve deeper into the interpretation and use of aeronautical charts in the interpretation and use of aeronautical charts.



02

Objectives

The design of this Postgraduate Diploma has been carried out with the premise of providing the student with the knowledge the student the knowledge required to perform a rigorous piloting of drones.

Through this academic experience, the student will assimilate the most relevant aspects of navigation and map interpretation or will deepen in international aerial communications. All this, in only 6 months and enjoying the best didactic contents of the educational market.





“

*Become a great expert in
Drone Piloting thanks to this
Postgraduate Diploma"*



General Objectives

- ◆ Carry out professional safe flights in the different scenarios, following the normal and emergency procedures established in the Operations Manual
- ◆ Carry out the test flights necessary for the development of air operations following the manufacturer's maintenance manual indications and the legislation in force
- ◆ Identify the work procedures involved in each intervention, both flight and maintenance, in order to select the required technical documentation
- ◆ Evaluate situations of occupational risk prevention and environmental protection. Propose and apply prevention and protection measures, both personal and collective, according to the applicable regulations in the work processes, in order to guarantee safe environments



Through this TECH academic program, you will be able to know in depth the international alphabet for radio communications"





Specific Objectives

Module 1. Meteorology

- ◆ Develop the capabilities, skills and aptitude in this discipline
- ◆ Be able to 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 2. 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 3. Aeronautical

- ◆ Define and know the characteristics of waves and their transmission
- ◆ Identify the bands of frequency and know their main characteristics
- ◆ Identify and know the types of wave: radio waves, ground waves, sky 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
- ◆ Use the phonetic alphabet, transmission of letters and numbers, decimal numbers, identifiers
- ◆ Use the structure and components of the standard communications: Structure a communication, order the messages and listen
- ◆ Correctly apply the transmission techniques, microphone techniques, message transmission, 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
- ◆ Understand and implement distress procedures, description and practice of procedures, condition of danger, content of distress messages, radio silence of the competent authority
- ◆ Prioritize and implement emergency procedures

03

Course Management

Thanks to TECH's untiring commitment to raise the academic level of its programs to the highest level, this program is directed and taught by leading specialists in drone piloting, who have accumulated extensive professional experience in this field. Since they are responsible for the elaboration of the didactic contents of the Postgraduate Diploma, the knowledge that the student will assimilate will be completely applicable in daily practice.





“

In order to provide you with the most up-to-date knowledge on Drone Piloting, this program is taught by active specialists in the field"

Management



Mr. Pliego Gallardo, Ángel Alberto

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



04

Structure and Content

The syllabus of this 100% online program has been designed with the intention of offering the student an excellent specialization on drone piloting, attending in depth to all the aspects involved in the activity. Each of its 3 exquisite learning modules has didactic resources in formats such as readings, practical exercises or interactive summary, with the idea that the student can choose the one that best suits their educational preferences.





“

Thanks to the wide range of textual and multimedia didactic formats offered by this program, you will be able to choose those that best suit your academic needs”

Module 1. Meteorology

- 1.1. Abbreviations
 - 1.1.1. Definition
 - 1.1.2. Abbreviations Applied to Aviation
 - 1.1.3. Abbreviations and Definitions of the MET Services Guide
- 1.2. The State Meteorological Agency
 - 1.2.1. Guide to Meteorological Services for Airspace Navigation
 - 1.2.2. Aeronautical Meteorological Information Guide
 - 1.2.3. AMA. Self-Service Meteorological Aviation
- 1.3. The Atmosphere
 - 1.3.1. Thesis. Layers of the Atmosphere
 - 1.3.2. Temperature, Density and Pressure
 - 1.3.3. Cyclone. Anticyclone
- 1.4. Altimetry
 - 1.4.1. Particularities and Fundamentals
 - 1.4.2. Calculations with Instruments
 - 1.4.3. Calculations without Instruments
- 1.5. Atmospheric Phenomena
 - 1.5.1. Wind
 - 1.5.2. Clouds
 - 1.5.3. Fronts
 - 1.5.4. Turbulence
 - 1.5.5. Wind Shear
- 1.6. Visibility
 - 1.6.1. Visibility on the Ground and in Flight
 - 1.6.2. VMC Conditions
 - 1.6.3. IMC Conditions
- 1.7. Meteorological Information
 - 1.7.1. Low Elevation Charts
 - 1.7.2. METAR
 - 1.7.3. TAF
 - 1.7.4. SPECI

- 1.8. Meteorological Previsions
 - 1.8.1. TREND
 - 1.8.2. SIGMET
 - 1.8.3. GAMET
 - 1.8.4. AIRMET
- 1.9. Solar Storms
 - 1.9.1. Thesis
 - 1.9.2. Features
 - 1.9.3. Procedures for Obtaining Meteorological Information on Earth
- 1.10. Practical Procedures for Obtaining Meteorological Information
 - 1.10.1. Before the Flight
 - 1.10.2. During the Flight
 - 1.10.3. VOLMET

Module 2. Navigation and Interpretation of Maps

- 2.1. Fundamental Concepts
 - 2.1.1. Definitions
 - 2.1.2. Applications
 - 2.1.3. Routometer
- 2.2. The Earth: Longitude, Latitude, Positioning
 - 2.2.1. Geographical Coordinates
 - 2.2.2. Positioning
 - 2.2.3. Legislative Framework
- 2.3. Aeronautical Information Publication (AIP): AIP Spain, Structure and Content Relevant to RPAS Operations
 - 2.3.1. AIP
 - 2.3.2. Structure
 - 2.3.3. ENAIRE (The Spanish Air Navigation Manager)
 - 2.3.4. Application to RPAS

- 2.4. Aeronautical Charts: Interpretation and Use
 - 2.4.1. Aeronautical Charts
 - 2.4.2. Typology of Aeronautical Charts
 - 2.4.3. Projections of Aeronautical Charts
- 2.5. Navigation: Types and Technique
 - 2.5.1. Types of Flight
 - 2.5.2. Observed Navigation
 - 2.5.2.1. Dead Reckoning Navigation
- 2.6. Navigation: Supports and Equipment
 - 2.6.1. Navigation Aids
 - 2.6.2. Applications
 - 2.6.3. Equipment for Flights with RPAS
- 2.7. Limitations of Altitude and Distance. Use of Airspace
 - 2.7.1. VLOS
 - 2.7.2. BVLOS
 - 2.7.3. EVLOS
- 2.8. GNSS. Use and Limitations
 - 2.8.1. Description
 - 2.8.2. Operation
 - 2.8.3. Control and Accuracy. Limitations
- 2.9. GPS
 - 2.9.1. Fundamentals and Functions of GLONASS and GPS
 - 2.9.2. Differences Between GLONASS and GPS
 - 2.9.3. GPS
- 2.10. AIP-ENAIRES Maps
 - 2.10.1. ENAIRES (The Spanish Air Navigation Manager)
 - 2.10.2. INSIGNIA. Online Aeronautical Information Maps
 - 2.10.3. INSIGNIA VFR. Online Aeronautical Information Maps for VFR Flights

Module 3. Aeronautical

- 3.1. Radiophonist Qualification for Remote Pilots
 - 3.1.1. Theoretical Requirements
 - 3.1.2. Practical Requirements
 - 3.1.3. Programming
- 3.2. Emitters, Receptors and Antennae
 - 3.2.1. Emitter
 - 3.2.2. Receptors
 - 3.2.3. Antennae
- 3.3. General Principles of Radio Transmission
 - 3.3.1. Radio Transmission
 - 3.3.2. Causality of Radio Communication
 - 3.3.3. Radio Frequency Justification
- 3.4. Use of Radio
 - 3.4.1. Guide to Radiophony at Uncontrolled Aerodromes
 - 3.4.2. Practical Communication Guide
 - 3.4.3. The Q Code
 - 3.4.3.1. Aeronautical
 - 3.4.3.2. Maritime
 - 3.4.4. International Alphabet for Radio Communication
- 3.5. Aeronautical Vocabulary
 - 3.5.1. Aeronautical Phrasing Applicable to Drones
 - 3.5.2. English-Spanish
 - 3.5.3. Spanish-English
- 3.6. Use of Radio Spectrum Frequencies
 - 3.6.1. Definition of the Radio Spectrum
 - 3.6.2. CNAF (Spanish National Frequency Allocation Chart)
 - 3.6.3. Services

- 3.7. Aeronautical Mobile Service
 - 3.7.1. Limitations
 - 3.7.2. Messages
 - 3.7.3. Cancellations
- 3.8. Radio-Telephonic Procedures
 - 3.8.1. Language
 - 3.8.2. Transmission, Verification and Pronunciation of Numbers
 - 3.8.3. Message Transmission Technique
- 3.9. Communications With Air Traffic Control
 - 3.9.1. Communications and Listening
 - 3.9.2. Communications Failure in Airfield Traffic
 - 3.9.3. Communications Failure in VMC or at Night
- 3.10. Air Transit Services
 - 3.10.1. Classification of Airspace
 - 3.10.2. Aeronautical Information Documents: NOTAM and AIP
 - 3.10.3. Organization of ATS in Spain
 - 3.10.4. Controlled, Uncontrolled and Segregated Airspace
 - 3.10.5. ATC Instructions





“

*Take this 100% online
Postgraduate Diploma and get the
opportunity to learn without the
need to leave your own home"*

05

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.





“

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.



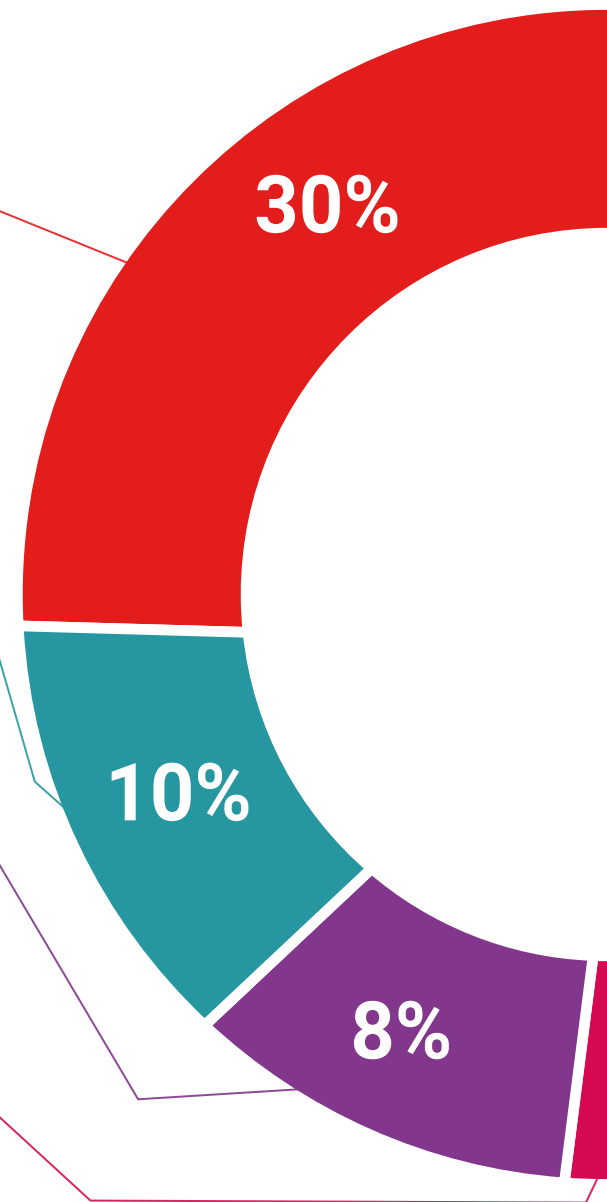
Practising Skills and Abilities

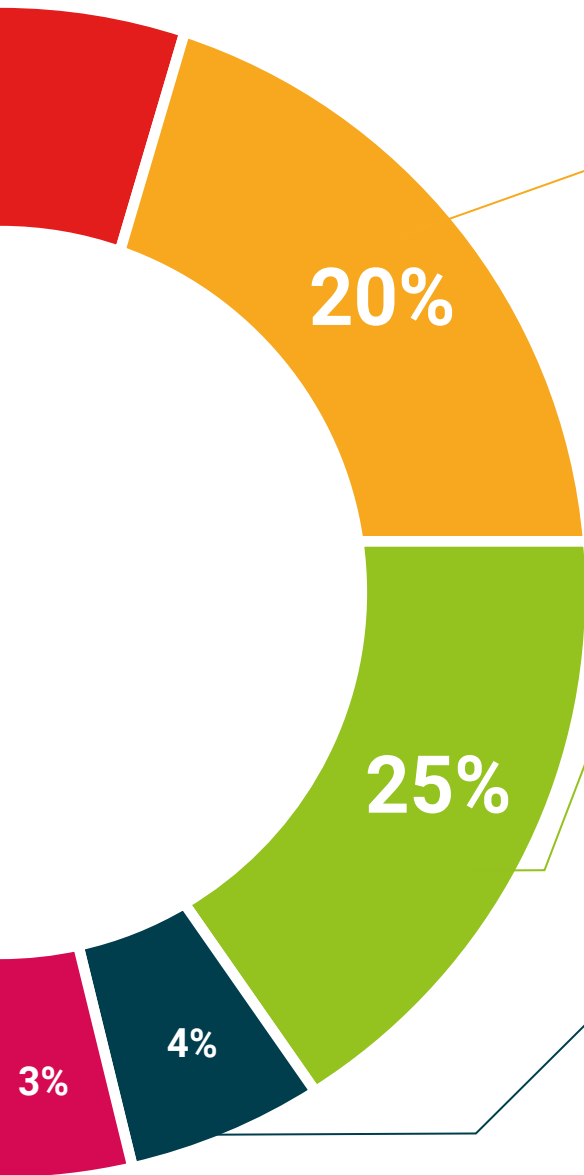
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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.



06

Certificate

The Postgraduate Diploma in Drone Piloting guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.



“

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 **Postgraduate 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: **Postgraduate Diploma in Drone Piloting**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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



Postgraduate Diploma Drone Piloting

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Postgraduate Diploma Drone Piloting

